Diseases of winter : on consumption, coughs, colds, asthma, and other diseases of the chest : their remedial and avertive treatment : addressed in popular language to non-medical readers, with copious observations on the diet and regimen necessary for invalids : also an appendix containing two hundred formulae of the latest and most approved remedies, many valuable domestic recipes, and full directions for the practice of inhalation / by R.J. Culverwell.

GPO 16—67244-1

DISEASES OF WINTER.

ON CONSUMPTION,

COUGHS, COLDS ASTHMA,

AND OTHER DISEASES OF THE CHEST;

THEIR

REMEDIAL AND AVERTIVE TREATMENT;

ADDRESSED IN POPULAR LANGUAGE TO NON-MEDICAL READERS,

WITH COPIOUS OBSERVATIONS ON

THE DIET AND REGIMEN NECESSARY FOR INVALIDS.

ALSO,

AN APPENDIX,

CONTAINING TWO HUNDRED FORMULÆ OF THE LATEST AND MOST APPROVED REMEDIES, MANY VALUABLE DOMESTIC RECIPES, AND FULL DIRECTIONS FOR THE PRACTICE OF INHALATION.

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NEW YORK:
PUBLISHED BY J. S. REDFIELD, CLINTON HALL,
CORNER OF NASSAU AND BEEKMAN STREETS.

1850.

PREFACE

TO

THE ENGLISH EDITION.

The plan I proposed to myself, in the production of this little book, was to present in the simplest form a description of the most prominent diseases incident to the organs of the chest and the air-passages — detailing their several "causes" with a view to their avoidance, explaining their "symptoms," that one affection might not be confounded with others, and exhibiting a brief outline of the general "treatment" commonly prescribed under the most approved practice of the present day.

It will hardly be imagined that my professed object is to place within the power of domestic management a means of curing, in every stage and degree, those maladies which require for their treatment (and which are hourly baffling) the profoundest skill of the most eminent medical practitioner. This supposition were too ridiculous to be seriously entertained. My chief aim has been to impart a knowledge which, opportunely exercised, may avert such disorders entirely, or, when in their incipient states, prevent further extension. The physician who can most speedily and radically effect the cure of disease is worthy of all honor, but he who can prevent it is of higher deserts still; carefulness saves from the flames more houses than all the fire-engines that ever have been, are being, or shall be invented. It is far more easy to prevent an attack of illness, than, when established, to arrest or remove it; and if, by the adoption of certain precautionary measures, easily attainable, such attacks may be either averted or effectually checked, those who are acquainted with them will be possessed of a power infinitely more valuable than all the professional talent in the world.

Although in giving a brief history of most of the affections of the chest I have glanced at the customary general "treatment," particulars have not, of course, been enumerated, because, where the disease assumes a character of decided severity, and presents a perplexity of symptoms which can only be rightly understood and require to be closely watched by an experienced eye, it would be madness to trust to domestic trifling. It is in mild and early, or threatened attacks alone, that the substance of the advice now offered will be found of practical benefit: where the complaint possesses that energy of

character which is not easily misunderstood, the patient must flee for succor beyond these pages: let him have immediate recourse to his own medical adviser—idle *hope* will be no justification for a moment's tampering or delay.

Under the head of "Avertive Measures" I have endeavored to point out the importance of certain physical and moral influences upon vital existence, as being conducive to the maintenance and improvement of health, and preventive of its disturbance; upon a strict and rigid attention to those influences I place more faith than upon any means which the ingenuity of art can devise; and, indeed, the enforcement of its necessity has been my primary object.

For the use of those who are actually invalided I have given in the Appendix a very copious list of medicinal formulæ for "home" administration in several conditions of the diseases described; to these prescriptions—many of them selected from the very first authorities, and of whose value I have myself had practical experience—are subscribed such directions and observations as I hope can not mislead. Some useful diet tables, and a number of approved recipes for the lighter kinds of nourishment, are also added, which together constitute a code of hospital laws that can not fail, I sincerely believe, in being generally acceptable. A great point is gained if human sufferings under disease can be alleviated, though the disease itself, by long establishment or intensity, be incurable; and I trust that the information contained in this division of the work will be found exceedingly useful in mitigating the symptoms to which they are severally applicable.

As some account of the important discoveries of auscultation and percussion (as a means of detecting the nature, seat, and extent of disease in the organs of the chest) might be interesting, I have briefly described the manner of their employment, not certainly with a view to domestic use, but to point out to the patient the mode by which he can remove both doubt and anxiety as to the real character of his complaint. The practised ear of a professional man will relieve him of a load of miserable suspense.

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DISEASES OF WINTER.

PRELIMINARY OBSERVATIONS.

To the variable climate of England have been attributed the prevalence and fatality of those derangements of the human constitution comprehended under the title of *diseases of the chest*. This generally-entertained opinion has, itself, done much harm; for as we are all too apt to regard with a passive indifference whatever error or prejudice has held to be resistless, the evil is ultimately regarded so much as a thing of course, that even the commonest caution is scarcely practised to prevent it. The doctrine is very doubtful. "God tempers the wind to the shorn lamb;" and the history of all the nations of the earth sufficiently attests the fact that Nature adapts the creature to the climate, whatever be its peculiarity, and supplies him with powers of resistance to most of its baleful influences, if he chooses to exert those powers. Though much may depend on climate as an exciting cause to disease, it is very questionable whether its fatal aggravation does not much more depend on inattention to the premonitory symptoms of its appearance. Ills of the greatest magnitude may date their origin from most trivial causes, especially under circumstances favorable to their augmentation. A "slight cold," which, to many, implies merely the employment of an extra square of cambric or two while it lasts, is frequently the precursor of very dangerous, sometimes fatal results, which a moderate degree of care and providence, exercised in due season, would have prevented; and, when the afflicted person is fated to indulge in death-bed ruminations, the pang of his philosophizing is not the less sharp that the abridgment of life is owing to a "slight cold," which slight precaution would have averted. If neglect be so fraught with danger, a great deal also must necessarily depend upon ignorance of the means by which original symptoms may be timely dispersed. There can be no doubt that much of the sacrifice of human life from disease of the chest is to be ascribed to the indiscreet application of nostrums which the philanthropy of friendly advisers foists upon the attention, as well as to the misemployment of those remedies which, properly administered, would have been of salutary effect.

Among the whole phalanx of kindred, friends, and acquaintance, by which all of us to a greater or less degree are surrounded, there is not one in any dozen that possesses the remotest notion of the nature of the attack, or the structures involved, or the situation of the organs necessarily about to become implicated. They will prattle about the lungs with the most innocent familiarity, and discourse you most eloquent music as to the throat and chest, and the manner of their clothing, the best diet to be adopted, the unquestionable superiority of rum and hot butter to treacle, vinegar, and other discutients, the magical effects of sweet-marjory decoction as compared with the ounce of

salts the first thing in the morning; and, in short, all the host of "whereabouts" connected with the attack. And the rich humor of the thing consists in their stupendous ignorance of every matter concerned in the anatomy of the parts affected. They know no more of the lungs as an organ than of the liver; they shall be incapable of describing the situation of either; they can not tell which cavity of the body the one or the other occupies; nay, they shall not answer how many cavities there are,* and yet will they give you most erudite advice, and offer recipes, for whose efficacy they can adduce the testimony of convalescent scores. It is not a little remarkable that there is scarcely a complaint known which the first man you meet feels the smallest compunction in prescribing for—no matter about its complexity, seat, difficulty, or danger. With the most imperturbable gravity, he will dole out his advice, which, if you will but carefully follow, shall be sure to remove the disorder as by enchantment; and it is often to this easy-minded adoption, by invalids, of the weak-minded recommendations of irresponsible advisers, that the silent and insidious incursions of disease become so fearful, and itself so unmanageable.

The object of this little work is to afford to the non-medical reader (there are works enough already for the practitioner to consult, and I address myself not now to him) an acquaintance with the general character of thoracic disorders, their variety and comparative importance, and the general remedial treatment adapted to each. In order to make the subject clear to the apprehension of those who are ignorant of the respiratory apparatus, it will be necessary to describe a little of the anatomy of the organs connected with it; and this I will endeavor to do in the simplest manner possible (divested, as much as may be, of technical narrative), and just so much of it only as will be sufficient to explain the nature, operations, derangement, and treatment, under disorganization, of that most important part of the animal economy.

With respect to the treatment of this class of disorders, without a knowledge of the parts affected, it would be absurd to consider it, so much depends upon the exact seat of the disturbance, as indicated by the symptoms, upon the gradual transition of one state of disease to another, and the new character it is, in such a case, about to assume. This knowledge also will have the effect of showing the grossly ridiculous treatment which prevails among those whom I have alluded to as being ignorant though kindly-meaning advisers in the distribution of the pharmacocothical treasures. It will exhibit the very questionable virtues of treacle-posset foisted upon the innocent stomach (the tenant of one habitation) for arresting the purulent secretions going forward in the membranes which line the air-cells of the lungs (the in-dwellers of another region), and enable the patient to understand pretty nearly the exact amount of wisdom displayed by his own medical attendant in the treatment of more advanced stages of disease in the pulmonary organs. The stoppage of a watch is a marvellous affair to him who knows not the principle of its movements, and the mystic inspection of the repairer removes little of the obscurity; but, if the owner will only take the trouble to acquire a little knowledge about its mechanism, he will soon ascertain the nature of the damage, and the skill of the artificer to whose management he has confided the repair. It is no easy matter to induce the non-medical reader to travel into anatomical details—and whether I shall succeed in the "soft persuasion" is another affair—but of this I am confident, that the patient who is suffering under any one of the diseases enumerated in these pages, whatever be its degree; or he—the *susceptible*—who has before experienced incipient attacks, and anticipates fresh aggressions, according as the circumstance of

* Even that droll and recondite lawyer, Sir C—— W——, in a late trial, mistook the *thorax* for the *throat*, till set right by Mr. (now Lord) Brougham.

weather, situation, or peculiarity of constitution, shall favor—will derive both positive and negative advantage from being acquainted with them: positive, by adhering to those avertive measures, or remedial treatments, which common reason will show are soundly correct; negative, by abstaining from all descriptions of domestic and neighboring quackery, which, originating in the best feeling, not unfrequently terminates in the most disastrous consequences.

Every corporeal ailment that occurs tends to impair, and does impair to a degree proportioned to its severity, the balance and harmony of the vital functions, which, when duly maintained, properly constitute health. Its effects may be insensible, but they are nevertheless certain. In whatever organ or structure disease has once been established, there exists ever after a disposition to its recurrence; and at each instance an exciting cause, slighter than its predecessor, will be found sufficient to establish an equal, perhaps even a greater, amount of injury, than the last. This proneness, by slow and insidious gradations, becomes more and more serious, till at length life itself sinks beneath the accumulated aggressions. As in the material world, so with the human structure, it is in the very nature of all things to *wear out* and decay with a rapidity proportioned to abuse, while those, conversely, which are more carefully treated, have the best chance of lasting longest. "We know not the value of health till it is lost;" he who possesses it heeds it not while it endures; it is only when disease appears, that alarm makes him deplore the imprudence or the incaution to which its visitation may be attributed.

It is not a little strange that health—the greatest of all earthly blessings, on which so much of human happiness depends, without which wealth, title, glory, splendor, luxury, all that honorable ambition can aspire to in this world, were worthless—should thus be so disregarded. Is it that possession generates indifference? The matured are often as reckless as childhood itself of securing its continuance, though reflection, the common attribute of maturity, would, it might be supposed, induce a greater providence of action: than these none are more ready to respond to the wise saw of experience, that "prevention is better than cure;" yet how do they let its wisdom pass with the moment of its utterance!

Judging from the tenacity of life which characterizes animal nature universally, in simply a physical sense, and the desire incident to humanity itself in a moral point of view, existence in a state of undisturbed health is the greatest happiness which man can ask at the hands of his Creator; its preservation elicits his greatest thankfulness; its endurance his continual supplication. Yet how often does man devoutly pray for the blessing, which in the ordinary course of nature he may himself command, by an obedience to the fundamental laws which govern his being! How often will he deprecate the consequences of his own acts, such and so great is the blindness of his folly! If he expose his undefended body to inclement weather, or his stomach to intemperate diet, can he suppose that the effects of such wilful mismanagement are to be stayed by a miraculous interposition, when by common precaution he might himself have averted the mischief?

Half the maladies incident to the human frame are consequent upon our own mismanagement. The substances which, taken in moderation, are designed to support and repair it, become (if taken in inordinate quantities) the source of actual disease. Excess of nutrition is as baleful, by destroying the balance of vital action, as its absence—repletion giving growth to unnecessary substance, as starvation is the cause of waste. Unbounded exercise may be as pernicious as total inactivity; yet nutrition, abstinence, exercise, and repose, are all, duly employed, so many means by which that balance may

be maintained. The abuse of these means is not only productive of immediate derangement to health in a degree, but assuredly takes something from the term of animal existence: we know not how much, but something. Upon the repetition of such abuse, local disease will by-and-by supervene. Some part of the fabric gives way, and some one of the organs important to life becomes affected; and, upon its functions being changed or suspended, vitality is arrested, and existence ultimately ceases. The want of attention to secure health and longevity so universally exhibited is not only egregious folly, it is more—an act of deep moral guilt; for no man has a right to curtail the life which God has given him by one year, one day, one hour.

I am not an alarmist: and should regret making others alarmists, because it is the very property of fear to aggravate the symptoms of a disease; but, as it is impossible for any human foresight to determine when, or in what manner, an illness of even the slightest character shall terminate, it is the bounden duty of every individual to exercise that reasonable apprehension which should induce instant recourse to avertive measures. He need not alarm himself; but he may surely seek such and the readiest succor which common prudence dictates. Indolence, or rash confidence in the "strength of the constitution," are too often allowed to exert their influence in fanning light ailments into a flame, which, when created, all the tardy attention that can be given may be insufficient to quench.

Regardless of sneer or sarcasm, the patient, on the very first hour of its appearance, should resist the incursion of disease by a submission to the advice of his own medical attendant. Never at any period in the history of medicine has that science assumed so commanding a position as at present; never have medical practitioners generally deserved, by the extent of their knowledge and skill, so unlimited a confidence as may now be reposed in them. In reputation and in numbers, there is no lack of professional men now-a-day; and, where such abundant opportunities are afforded, a timely application will be found to save much money and medicine-taking; while a few hours of procrastination, by allowing disease to fix itself firmly in the constitution, may produce fearful consequences, which the united talents of the whole multitude were insufficient to avert.

Many of the diseases of which the causes, description, and symptoms, have been given, are specifically of a dangerous character; and, though sometimes consequent upon those which in themselves are of slighter moment, will originate without precursion. It is not to be supposed that where the chief skill of a medical practitioner lies in carefully watching the changing or alternating symptoms of a disease, and in regulating his treatment to those changes promptly and variously, according to their appearance, any directions could be properly offered to a non-medical patient, who must be alike ignorant of their nature and of the influences of the medicine to be recommended. Physic is a dangerous weapon in uneducated hands. It is only in the earlier stages of the complaints before described, or rather in their incipient attacks, that the domestic administration of such prescriptions as may be afterward named, is recommended. The main object I have in view is, by describing such diseases, to enable the reader to understand their nature by their symptoms; by knowing the causes to avoid them, and to adopt such avertive measures at the earliest period as shall prevent, if possible, their further and more dangerous progress.

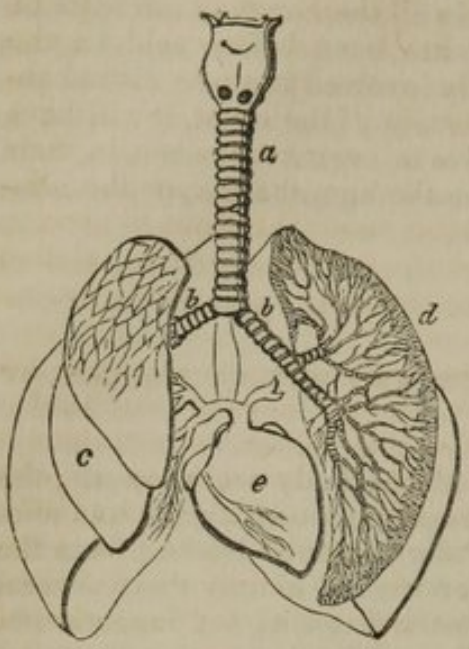
It has been deemed necessary to particularize the most important diseases to which the viscera of the chest are liable, their respective causes, and the prevailing symptoms that accompany each, with a view to enable the invalid to detect, with somewhat more precision than is usually exercised by domestic non-medical advisers, under what affection, or stage of an affection, he

may be laboring. It is not to be supposed that, varying as each person does in peculiarity of constitution, induced by habit, employment, accident, or physical organization, the same treatment can, in all the common ailments of life, be successfully adopted; but, from what has been before said on the nature and character of the structures generally involved in those disturbances which come under the denomination of diseases of the chest, it will have been inferred probably that the treatment, active or avertive, can not, in their primary stages, be very dissimilar, whatever be the age, the sex, or the idiosyncrasies, of those attacked.

ANATOMY OF THE RESPIRATORY APPARATUS, AND THE PATHOLOGY OF ITS DISEASES.

The contents of the chest or upper cavity of the body are, properly, the heart and lungs only: the windpipe, blood-vessels, glands, ducts, &c., contained therein, being (with the exception of the gullet-tube leading from the mouth to the stomach, which occupies a lower region) simply their several appendages. The interior surface of the chest is lined with a fine, smooth, tense membrane, called the *pleura*, which adheres closely to every part, except the diaphragm, or muscular partition-wall between the two great cavities of the body, where its continuation ceases. It is so arranged as to divide the interior of the chest longitudinally into two parts, each part containing and investing the lobes of the lungs, which consequently occupy both sides of the cavity, the heart lying between the two portions. The lungs are thus divided into two large lobes—the lobe on the left side of the chest, which is the smaller, being subdivided into two lobules, and the lobe situated in the right side into three lobules. The substance of the lungs is spongeous or vesiculous, composed of an infinite number of lobes, various in figure and magnitude, their surfaces so adapted to one another as to admit but very few and small interstices. These lobes are disposed like so many bunches of grapes upon the sides of the windpipe in its minute ramifications, and each little lobe contains within its own proper membranes an infinite number of small orbicular vessels, which leave little interstices between them. Upon the ultimate vesicles, or air-cells, thus composing the substance of the organ, the capillary blood-vessels, into which the great trunks springing from the heart ramify, called the pulmonary arteries and veins, are spread like a net; and each cell, minute as its capacity may be, is invested with its own proper nerve, artery, and vein. From these cells arise the ramifications of the bronchial tubes, branches of the windpipe, whose upper orifice opens into the mouth; and each of these tubes, which are minute and innumerable, terminates in an air-cell of its own. A tree in full foliage is, in state, though not in figure, no bad illustration, each leaf representing an air vesicle, and the myriad branches that emanate from the great trunk in their multitudinous ramifications indicating the bronchial tubes. The term *trachea*, or windpipe, is attached to that portion of the breathing canal where the two great bronchiæ become confluent, and, rising out of the chest into the centre of the neck, becomes at its vocal extremity (the *larynx*) connected with and terminates in the back part of the mouth. The tube of the trachea is made up of segments of horizontal circles, or cartilaginous rings, so disposed as to form a canal open on the back part, the cartilage not going quite round, the circumference being completed by a soft glandular membrane; these hoops are connected to each other by a strong, elastic, membranous ligament, fixed to their edges. The canal of the trachea is lined on the inside by a mem-

brane partly muscular, partly ligamentary, perforated by an infinite number of small orifices more or less imperceptible, through which a mucilaginous fluid continually passes to defend the inner surface against the acrimony of the air we breathe; and so highly irritable is this organ, so delicate its structure, that, by deleterious air, or the presence of a foreign substance, however small, which may accidentally enter by escape from its neighboring canal, the gullet, or by respiration, a violent cough is set up as the agent by which the intruder may be expelled, and the undisturbed function defended.



The trachea, its branches, the bronchial tubes, and the air-cells, thus described, constitute the respiratory apparatus, by means of which the blood is brought into contact with the atmospheric air, imbibing nutrition and exhaling those gaseous matters which are either inessential or pernicious.

This rapid outline of the anatomy of the thoracic viscera—the heart and its appendages needing no particular description—will be sufficient to enable the reader to understand the nature of those changes which are produced in them by disease, and the remedial treatment when disease supervenes. In the above diagram, which will serve to illustrate the preceding description, *a* is the trachea; *b b*, the bronchial tubes; *c*, the lungs; *d*, minute ramifications of the bronchial tubes; *e*, the heart.

Pathology.—Whatever be its character, disease in the lungs can of course affect but three parts of the substance of that organ before described: namely, the air-cells or vesicles in which the bronchial tubes terminate; the walls or inner surface of these cells, composed of a thin membrane, on which the vessels and nerves ramify in a state of great minuteness; and the interstitial tissue, a membrane deposited upon and between the external surfaces of the air-cells.

The diseases which affect the pulmonary substance, as thus composed, are reducible to three distinct kinds: 1. Disorders of the Capillary Circulation, in which the substance is affected by what is called *engorgement*, or congestion of blood in the air-cells of the lungs and the bronchial capillary tubes, that tends to contract the area of the cavities, and to induce a glutinous secretion therein, which, tinged with blood, constitutes the characteristic expectoration of this state; by *solidification* of the substance, by which the walls of the air-cells and minute tubes become tumefied so as to cause an obliteration of these cavities; by *purulent infiltration*, dependent principally on pus in the capillary extremities; by *gangrene*, the conversion of living into dead matter, indicated by the dark and dirty color of the expectoration, and the horrible fetor of the breath; by *local* (pulmonary) *apoplexy* consequent upon the rupture of the vessels, or exhalation of blood into the air-cells and minute bronchial tubes, portions whereof are voided by expectoration; and by *inadequate sanguification*. 2. Disorders of Nutrition, involving an undue *augmentation* of the number and size of the air-cells, resulting from the affected portion performing "supplementary respiration" for another part of the lungs in a state of imperfection or obstruction; the *obliteration* or diminution in number of the cells, and the thickening and hardening of their walls, attributable to non-employment consequent upon some impediment to the ingress of air; and the *perversion of nutrition*, consisting

in transformation of the cellular membrane into cartilaginous and sometimes, though rarely, osseous matter—actual depositions of bone! 3. Disorders of SECRETION, comprehending the *infiltration of purulent fluid*, or deposite of purulent matter from the blood, common after the performance of great surgical operations, probably consequent upon a coagulation of blood in the pulmonary vessels, and its ultimate conversion into another state; *abscess*, the pus or *matter* breaking up the cellular tissues, much less common than generally believed; the formation of *tubercles*, and the presence of *air* in the interstitial cellular membrane, occasionally extravasated by rupture of vesicles, caused either by the prolonged retention of a full breath during violent muscular action, as in cough or fits of passion, or by the spontaneous evolution of gaseous fluid.

Before considering what and how various those disturbances are, by which the organs above described may be affected, it will be proper to premise that whenever inflammation is established in the lining membrane of the chest—the pleura—constituting that disorder called *Pleurisy*, its secretions at once assume a morbid action, and become modified in both quality and quantity, the fluid consisting of two parts, one taking a concrete character, the other remaining liquid. The thickening of the deposition increases with the inflammation, and tends to agglutinate the opposite surfaces; the formation of a false membrane then takes place, and the remarkable consequence ensues of *organization* in this false membrane, by which a variety of morbid alterations or changes is effected.

If the mucous membrane which lines the air-passages be attacked with inflammation—producing the disorder termed *Bronchitis*—the morbid states are precisely similar along the whole course of the windpipe, from the commencement to its termination in the air-cells of the lungs, whatever portion of the tube or its ramifications be affected. Ulcerations may exist in the whole of this range, but they are most commonly confined to the upper part or capital of the column, called the larynx, or apparatus of voice. Dilatation also of the branches of this great tube is common, and presents several varieties, and frequently proceeds to great extent; this state arises from the expansive pressure of chronic cough.

Membranous concretions mark this disease (of which difficulty of breathing and a sense of suffocation are the consequences), intercepting the ingress of air, and preventing the arterialization of blood.

Such is the pathology of disease in the mucous membranes of the air-passages when originating in inflammatory action.

AUSCULTATION AND PERCUSSION.

THE movements of the several organs situated in the cavity of the chest, the inspiration and expiration of air through the air-passages into and from the lungs, the action of the heart, &c., produce certain determinate sounds perceptible to the sense of hearing, of a specific character in health, and necessarily varying according to the condition of the contained structures: these states are easily detected by a practised listener; and as a true diagnosis—the accurate distinguishment of one complaint from another—is of the utmost consequence in determining on the plan of treatment, it will be evident how vastly important must be the employment of a means by which internal derangements are brought within the sphere of sensory detection, their nature made clearly intelligible, and doubt and suspense saved to both patient and practitioner.

It is well known, to those who are acquainted with the science of acoustics, that sounds are more readily transmissible through certain agents than others, and that where the vibrations of air are confined within a certain area, the perceived sound must necessarily be more intense than when diffused, as evidenced by the cylindrical ear-trumpet, and the tick of a watch at one end of a long piece of wood, distinguished by the ear applied at the other. A little instrument was with this view devised by the celebrated French physician Laennec, within the last twenty years: it is called a stethoscope, and consists of a simple hollow tube, about a foot long and a couple of inches in diameter. If one end be placed on a spot in the region of the chest, and the ear applied at the other, the sounds communicated by the action of the viscera within will enable the listener to determine, from the peculiarity of the signs, not only the nature but the very seat of the disturbance.

This process of auscultation is in many instances considerably assisted by percussion, striking or rather tapping with the fingers upon the skin over the part to be explored.* The character of the sounds thus imparted affords the means by which a system of signs is made up, and which, if properly understood, may be regarded as equivalent to a new sense to the practitioner, who, instead of being misled by the crude, confused, and deceiving statements usually made by patients, can hereby exactly define the precise situation and nature of the lesion established in parts inamenable to the organ of vision.

The visible external signs of internal derangement are generally of too ambiguous a description to warrant any positive conclusion. The face may be pale, the pulse rapid, lassitude or pain extensive; yet it does not necessarily follow that this or that disease may be present. Unless perceptible to one or other of our faculties of sense, we walk in uncertainty and are misguided by error. The doubt thus induced exercises a pernicious influence on the mind of the invalid, as well as materially circumscribes the power of the medical attendant; one symptom (in itself merely characteristic of an important attack) may be mistaken for the indication of a serious disease, and the mental depression thus unnecessarily occasioned be made to act as a powerful predisposition to really alarming affections. The application of the stethoscope, by determining with accuracy the seat, extent, and nature of an attack, at once removes all obscurity; and the skill of the physician is brought to bear immediately on a comprehended disease, while the patient is relieved from the oppression of uncertainty and alarm.

The value, importance, and advantages derivable by such means, need little comment. It is true that it does not range within the powers of domestic management; but where so great an auxiliary to the detection of disease exists, it behooves every invalid to remove the distressing perplexity under which he may happen to labor, by a timely application to those who possess the power of ascertaining to what extent it may have proceeded.

INHALATION.

Among the improvements in modern practice, there are few which promise to be of more ultimate importance than the revival of inhalation for the cure

* The same mode by which the carpenter detects the comparative substantiality or the cavity existing behind a screen of wood or brick-work, from the sound emitted by the tap of the hammer or knuckles (percussion), is adopted by the physician to ascertain the state of the thoracic organs, which are hidden from every sense but that of hearing; he does not, indeed, employ the same instrument, but the delicate finger-tapping, aided by a well-practised ear, will, with great precision, develop the condition of the structures within.

of diseases in the lungs and air-passages. The very first principle of medical science is to apply a remedial agent to the diseased part, as directly as circumstances may permit; and, where this can not be done without involving others, a corresponding degree of violence must be offered to the unoffending organs. To attack a chest-affection through the agency of the stomach, by administering medicines to an undisordered member, must needs be attended by a complicated injury to a greater or less extent. The relative positions of the lungs and the stomach are quite sufficient to show the very indirect mode by which the cure or palliation of local disorder is effected through the general circulation; and, if any possible means exist to avoid this evil, common prudence would indicate its employment and cultivation. By inhalation, we have the power of exhibiting, in pulmonary complaints, medical substances directly to the structure affected: and, although to the inefficacy of those which, up to a very recent period, having been tried, may be ascribed the almost total abandonment of inhalation, yet modern discoverers in chymical science having brought to light new agents that have been found to exert a beneficial influence in this disastrous malady, the brightest prospect begins to dawn, that some such substance will, ere long, be discovered, which, supplied in a gaseous form, shall have the property of reducing pulmonary consumption to a manageable extent, and of making it subservient to medical skill. It is well known that some of the distressing symptoms of phthisis have been materially mitigated by the employment of various kinds of fumigations and gaseous fluids exhibited in an inhalent form; and, where temporary palliation alone can be afforded, it at least has the secondary advantage of reducing the amount of physical suffering.

Medical writers are too prone to vaunt, and in turn decry, any newly-devised scheme for the cure of disease; too elated, and in turn too depressed; where hope first appears and then dies again. Because consumption has hitherto resisted medical power, it is therefore ever so to do: now this is neither logic nor philosophy. If gout and phthisis have heretofore baffled the art of the practitioner, are they therefore for all time coming to remain ungovernable? Has the science of medicine arrived at that perfected state, or have its professors attained that maximum of mental ingenuity, that neither it nor they can make further advancement? Such a proposition can surely require no serious refutation. It is amusing to see with what humility the most eminent physicians of even the present day advert to the subject of consumption; the amount of all their address has been avowedly to relieve the urgency of the symptoms, "to assert that they have cured an organic disease in the lungs would be more than foolish;" all their claims to gratitude rest upon the sole ground of simply having in some cases arrested its progress. Few disturbances to which the animal frame is liable, have given way to plans suddenly devised. Step by step, improvement upon improvement has advanced, till at length, by wisdom gained from experience, they have been made to succumb to the power of art. So shall it be with respect to these two great opprobia: and as nature is prolific in the supply of antagonist influences, it is sound analogical reason to deduce as a conclusion, that the power, though yet possibly unknown, will one day be discovered, by means of which these two all-subduing evils shall be themselves subdued, as others have been.

Inhalation certainly appears a most rational mode of administering medical agents for the suppression of disturbance in the lungs and air-passages, and in many exerts a positive and salutary influence. A variety of substances have been called into employment with more or less effect, among which are those of chlorine and iodine for the cure of phthisis. It is hard to get at truth when prepossessed minds are at variance: while some authors boldly main-

tain that cures have been effected among phthisical patients by such means; others, who can not disprove convalescence, as boldly assert that pure tuberculous consumption could not have been present, and that therefore, though "cured," the cure could not be for that particular disease. I have myself witnessed the administration of these substances, and with decidedly beneficial effect, in cases which, from examination, I had every reason to refer to consumption. I have also met with others in which their employment was unattended with any advantage; but enough has been evidenced to convince me that it may be most profitably exercised, and that inhalation will be found a most powerful adjuvant in the alleviation, if not the cure of pulmonary disorders. It may, I think, be fairly admitted, that one step in advance has been made, and who shall say to what the next may not lead?

I advert to the subject of inhalation, because its employment will be found recommended in some of the affections treated of in these pages; but its adoption with reference to the most important medical substances would be attended with too much risk to be left to non-professional administration.

Several ingenious mechanical contrivances are vended as inhaling apparatus, but the use of them is generally attended with distress to the patient from the labor occasioned to the respiration; nothing better, and certainly nothing simpler, can in my opinion be employed for the inhalation of vapor in cases of catarrh and inflammation of the air-passages than the following:—Take a common washing-basin or a wide-mouth mug, into which pour boiling water; throw a piece of flannel or woollen cloth over the head, sufficiently large to prevent the escape of the steam or vapor arising from the water, and, holding the face over it, inhale. By this means the patient can regulate the temperature of the vapor by bringing the mouth nearer to, or further from the surface of the water, according as his own feelings shall prompt; and respiration being performed as ordinarily it is, the oppression consequent upon breathing through a narrow tube is averted. Vinegar, herbs, or any necessary medicinal agent, can easily be put into the water, and be together renewed as occasion or convenience requires: the facility with which this can be managed gives to it all the advantages of domestic comfort, without involving the "fuss" and parade (so frequently disagreeable to an irritable invalid) that attend a special apparatus. In cases of common cold (as before said), of "stoppage in the nose," hoarseness, loss of voice, sore throat, and the collateral affections, the employment of inhalation (for formula, see Appendix) will be found a most valuable remedial adjuvant.

But the vapor-bath also affords another and most valuable means of inhalation; and when administered under professional management, will be found to possess the two-fold advantage of affording relief to the lungs and air-passages, as well as acting sedatively upon the system generally. The head and face being, as well as the body, immersed in vapor of one uniform temperature, respiration is performed without oppression, and a soothing and agreeable influence is excited by the sympathetic action of the cutaneous and pulmonary organs. It is besides an ascertained fact, that, where medicated gases are to be administered remedially, a greater amount of efficacy has resulted from diffusing them equally in an apartment than when offered in the more direct, loaded, and concentrated state by any of the common and inhaling apparatus. The vapor-bath, from its capacity and the consequent diffusion of the aeriform fluid, affords this; and its superiority to almost every other mode of inhalation, when properly employed, must be strikingly obvious.

With this amount of information, compressed as it is, the reader will be in a situation to comprehend the manner in which diseases of the chest are produced, a very important means of ascertaining their precise nature, and the curative, prophylactic, or avertive treatment most effective in arresting or

preventing them. Various persons have various constitutional peculiarities or temperaments; and as in some a regular and steady progression of disease, from the mild to the severer forms, would take place, so in others that gradual sequent train is often found to be interrupted, and capricious terminations follow.

It is not to be understood that, in the enumeration of diseases about to be considerated, each follows the other in their natural consecutive order, or as they range in respect of severity or danger. Though the list commences with catarrh and terminates with consumption, the presence of the former assuming the mildest character, while that of the latter too frequently partakes of the severest, the arrangement is in other respects so far arbitrary. As, however, catarrhal affection, or common "cold," as it is denominated, may be deemed, not so much precursory to as inductive of thoracic disorders of the most fatal tendency, no other could be so fitly chosen as a leader.

COLD, OR COMMON CATARRH.

The climate of this country seems peculiarly adapted, by its condition, vicissitudes of temperature, and the suddenness of barometrical changes, for the production of this universal ailment. There are three ways by which catarrh may be produced, by *moist atmosphere*, by *damp covering*, and by *currents of air*. The organs of respiration are in an extraordinary degree liable to be affected by moist cold atmosphere. From common experience and the observation of some medical writers, founded upon statistical returns, it is sufficiently clear that an atmosphere loaded with humid particles is not consequently deleterious; for wet warm seasons have been found as healthful as even fine dry weather. But, where *cold* accompanies a moist atmosphere, the deleterious effects of the combination are great and universally felt. The destructive ailments which follow upon cold foggy weather are proverbial; and their attacks, modified as they may be by individual constitution, are almost universal.

Causes.—Catarrh may be mainly if not wholly attributable to the inordinate extrication of animal heat set up as a resistance to the pernicious power of external cold, produced by evaporation. The great capacity of evaporating fluid for caloric, or the matter of heat is well understood and daily evinced in many domestic operations, every lady-professor of the laundry well knowing the value of a blast of cold air on her washed linen, as it hangs in its snowy purity fresh from the tub-suds. The action on the human body surrounded and, as far as the respiratory organs are concerned, injected, as it is with humid air, is precisely similar. Those organs in which the production of animal heat is supposed to take place—the lungs—are thus necessarily chilled and oppressed by the abstraction of caloric, and by the exhaustive influence of extraordinary exertion, employed to produce an amount of animal heat sufficient to maintain the required supply, and which so delicately formed and highly vascular an apparatus can afford but at great sacrifice. The constitution itself also is made to suffer through the *circulation*, by reason of the air, designed for the nutriment of the blood, being charged with deleterious particles.

For the same reason, damp clothing, damp bed-linen or covering of any kind, is a fertile producer of "cold," the low temperature caused by the evaporation of moisture, calling into inordinate action those powers which evolve the animal heat, for an antagonist supply. And it is precisely on the same principle that persons take cold after violent perspiration, by the

evaporation of that fluid from the surface of their bodies, and the change of temperature thus suddenly produced.

The evil which so often ensues from wet feet must not be omitted in this enumeration. Nothing is more common (from indolence or inattention, rather than inability) than persons continuing to wear shoes and stockings in a wet state, though the consequence, a cold, is almost inevitable. While the feet continued warm, from the muscular effort of walking, no harm could result were they to walk for hours in a running gutter; but the moment they become chilled, from inaction, and the evaporation of the moisture, then follow the consequences of transition of temperature. This gross want of caution is the more extraordinary, from the positive discomfort that cold feet produce, a corresponding coldness in any other portion of the body being totally insufficient to impart that general sense of chilliness which wet feet invariably occasion. No person ever thinks of his *cold face* on a winter's day, though his nose be blue and his teeth chatter; but the most robust laborer deems it no degradation to the dignity of his hardihood to stamp warmth into his feet with all the pedatory energy he can muster. While persons of all ages and constitutions are more or less the subjects of cold, there are some who seem to be peculiarily liable to be affected, while in others there exists either a habitual catarrh of a formal character, or such a predisposition to be affected by catarrh as practically to amount to a like condition of the parts.

In some persons, there appears to be such a susceptibility to be affected by cold, and "to catch cold," that they can scarcely ever be said to be free from it. The least change of dress, the slightest draught of air, the most trifling dampness of shoes and stockings, or even standing for a minute on a stone floor, will give an instantaneous chill, and produce an immediate and sensible change in the condition of the bronchial membrane. In many persons, this morbid susceptibility to cold, fostered and perpetuated as it is by improper management, arises to so great a height as to be extremely inconvenient. In the case of persons in easy circumstances, we sometimes see the susceptibility to cold so great or so exaggerated by the hypochondriacal apprehensions of the patient, that life is almost devoted to the one object of escaping cold, and, it must be owned, with very indifferent success.

The mischievous effects of draughts, or currents of cold air, need little proof. These must be consequent upon the principle of refrigeration above alluded to. Dr. Currie, in his account of experiments on the cold bath, places the refrigerating effects of currents of cold air beyond all doubt. In one of the trials made, he says that little or no diminution of the animal heat was exhibited by the experimenter, in rising from the cold bath (after fifteen minutes immersion) into the air in a perfect calm, though during a frost; while the like exposure in a second trial, under similar circumstances, but with a northeast wind blowing sharply, produced a rapid diminution of the animal heat, though the air was many degrees warmer than in the preceding experiment.

Symptoms.—Such then are the causes of catarrh. What are the effects? The premonitory symptoms of the presence of cold are not always alike in different individuals; this may be accounted for by dissimilarities of temperament. Some are *so susceptible*, that the merest trifle is sufficient to induce the ailment, and a train of indications follow in due course; others are so constitutionally strong as to require the exciting cause to be of greater power, and, when affected, exhibit indications of a somewhat altered character. But, generally speaking, the symptoms, though modified, stimulate each other in both cases, though differently perceived. The nose usually gives first notice, by the more than ordinary exactions upon attention; a thin crystal-like fluid proceeds from the nostrils, which becomes gradually more

and more copious, requiring the employment of the handkerchief more frequently than comports with the beauty of that conspicuous feature; frequent sneezing takes place, and the sense of smell becomes dormant; shivering and a sense of general chilliness pervade the patient, though to the touch a feverish heat of the skin is perceptible to others; the joints and limbs ache and become stiff; perspiration is wholly suspended; the skin becomes dry and hot; tenderness of the surface, heaviness about the head, and headache, are experienced, and a certain degree of stupor supervenes; the eyes smart and water; the taste becomes impaired; and a ticklish sensation about the side of the uvula and tonsils of the throat is perceived, followed by some degree of hoarseness, cough, and tenderness in the chest, sore throat, and sometimes loss of voice. As the "cold" advances the viscid effusions become increased, and the symptoms, as above enumerated, more aggravated; and general debility, restlessness, and a sense of "being ill," follow.

The various discharges are consequent upon the inflammation which in cold exists in a portion of the mucous membrane that lines the air passages from the tonsils to the bronchial tubes, the nose, and the conjunctive of the eyes. When we regard the length and capacity of the canal, and the *extent of surface* it presents, the importance of the attack (however slight), well deserves serious consideration; for from the sympathy between all parts of the mucous membrane with each other, and the difficulty of foreseeing to what extent its natural secretions throughout its course may become impaired or changed, we know not where the attack may stop, how long it will continue, or what chronic organic disturbance may not be produced.

It will be seen by referring to the description hereafter given of the diseases incident to the air-passages and lungs, that a great part of the morbid action going forward in the inflammatory attacks that characterize them is owing to a change or modification in the secretions of the mucous membrane, by which this many-branching canal is lined; so that any inattention or any mismanagement (which comprehends inattention), may allow the slight cold *that is already in possession of this identical membrane*, to make a gradual but steady incursion on some important function, which will become difficult to repel under even the most expert treatment that science can adopt.

Treatment.—It has long been the opprobrium of medicine, that the doctors do not know how to cure a cold. While every old nurse has her specific, the poor doctors are obliged to be the butt of every sneerer, because they can not name the pill or mixture that will eradicate this complaint with the same facility that they can empty the stomach by an emetic. Before we laugh too heartily at the medical practitioner, let us see, from what has been before said, how we stand as respects the subject under consideration.

We find that "cold" is produced in consequence of the shock sustained by the body passing from one remote degree of temperature to another, and by the exhaustion that follows an inordinate elaboration of animal heat; that in this way inflammation is set up in the mucous membrane which lines the air-passages; and that, by reason of this inflammation, the natural secretions of the membrane become morbidly changed in character and operation, sometimes acting by their acridity upon the membrane itself—the accompanying symptoms, as enumerated, existing as a sympathetic general disturbance of the healthy functions. Now, the very first principle upon which sound medical practice is founded is, to discover, by the existing symptoms, the cause of whatever disease may be present; and, that cause discovered, to address ourselves to its immediate removal through the instrumentality of every function that can be made subservient to such a purpose. An irritating substance in the alimentary canal is sometimes speedily enough got rid of by a dose of physic; the liver is put to rights by a little calomel;

a toothache is removed by the abstraction of the offending bone. All this is plain sailing; but very different is it with the fever case of typhus for instance, before which every organ and every function becomes prostrated. Here the stomach has to do its share of work in effecting repair; that great emunctory, the skin, is called into requisition; the blood-vessels are to be kept in proper order, and, in short, applications general, local, and various in degree, must be resorted to, by which the equilibrium of the circulation can be maintained, and its healthy character restored. And just so it is with common cold; the seat of the complaint is too important to be neglected or misused, at least it ought to be considered so; and not only the most immediate attention should be given, but those many measures (one alone would be sadly insufficient) be adopted for the arrestment of the disturbance.

What, then, are the indications of cure? Inflammation always presumes derangement of the circulation and consequently all those means which are most conducive to remove the inflammatory process, and to restore the impaired circulation, must of course be resorted to. One of the most common characteristics of catarrh is, the suppression of the perspirable fluid, and the heat and the constriction of the skin. It is a fact which experiment has elicited, that in every twenty-four hours the average quantity of perspiration (*insensible* perspiration as it is called) passing off in the state of imperceptible aeriform fluid, evolved from the body of a healthy male adult, amounts to one pound fourteen ounces, so that it is easy to understand how much disturbance must exist in the circulation by the congestion thus produced by suppressed perspiration. Whatever means, therefore, can be beneficially employed for the reproduction of this most necessary discharge, must be adopted; and whether we find an exciting cause thereto in the vapor-bath, in diaphoretic medicines, in hot and dry stimulants, or in muscular action, each and all may be variously availed of for the one great purpose.

The friendly advice of non-professional people in the cure of cold, is of doubtful efficacy; professional quacks (to use an anomalous expression) practise their mystery for money; and so far they are instigated to do as much good and avert as much evil as they can, for their pocket's sake. But domestic quackery springs, nine times out of ten, from mental vanity; and if evil arise from their prescriptions, they lift up their eyebrows, and are only astonished at the perverseness of nature. It is full of danger.

The obstinacy of catarrhal affections is so universally proverbial, and their resistance to all known medical treatment so determined, that no practitioner feels inclined to peril his professional reputation by asserting the efficacy of any one plan. From the general inertness of medicines, their recommendation is commonly despised, and slops, "nursing," and little domestic acts of carefulness and attention, are all that are deemed efficacious. Among many persons, the use of spirituous preparations—warm wine, burnt brandy, rum, etc.—is highly extolled; and it can not be denied that they have sometimes proved certainly beneficial. This fact has been subservient to the inclinations of those who are pleased with any apology for the gratification of their sense of taste, who, with greater rashness than wisdom, proclaim intoxication as a specific. Counter-irritants are certainly very excellent in a variety of complaints; and the inflammation of the air passages consequent upon catarrh, may be neutralized by inducing a species of inflammation in the stomach; but though it is *possible* that the affection may be relieved, the benefit is of rather an equivocal nature.

Where difficulty of breathing supervenes, as sometimes it will in severe cases, moderate employment of sedatives and diaphoretics will be found of service. Purgatives are of great efficacy where diarrhœa is not present, as tending to regulate the secretions. Any of the domestic medicines will

answer this purpose: but those stated in the appendix will prove very effective.

But of all remedies, fancied or real, that have been prescribed in cases of catarrh, none can approach the efficacy of warm water or medicated* vapor-bathing, the soothing and sedative effects of which, as well as acting restoratively to the perspiration, exercise a most decisive and salutary influence on the complaint. I know of no remedial agent which possesses so much the character of a specific in any disease as the bath in catarrhal affections, having witnessed numerous instances where attacks have given way under this plan of treatment. I shall make no apology for transcribing a passage from a work† which I published some time ago upon this subject, as being declaratory of the opinion I then had long entertained, and which opinion, during the interval of years since elapsed, has had most ample and most satisfactory confirmation.

"The body being wholly immersed in an equalized temperature of heated vapor, every pore or every part of its surface is exposed to its salutary influence; it expands the skin and insinuates itself among all interstices of its laminated structure; and, the pores being by this means directly opened to its action, the perspiratory fluid is excited and ultimately bursts forth in profuse and unobstructed streams. Nature becomes at once relieved. The circulation of the blood is no longer deranged; the congestion of the internal organs is removed; the general irritability is allayed: and 'cold' no longer exists to work a passage for the fearful evils which follow in its train. In cases of common cold, where no great febrile excitement exists, the vapor-bath must necessarily produce these beneficial effects; and the efficacy of it will be in proportion as the interval between the adoption of it and the first attacks of the disorder is either lessened or protracted. The more immediately it is availed of, the more speedily will relief be experienced." Every day convinces me of the soundness of this opinion; and I recommend this plan of treatment with a strength and confidence which nothing but successful experience could justify.‡

We all know how much more some persons are liable to catarrhal attacks than others. This predisposition, however, does not always exist from constitutional conditions. The comforts of life are always a source of evil if abused; and indolence, too often considered a chief one, is so sweet that few would labor unless spurred by compulsion. The fillip given to the circulation by judicious exercise is sure to be attended with good, while its non-employment acts as a powerful abettor to the induction of a vast variety of physical ailments, by retarding the circulation and relaxing the vital powers. Persons who thus indulge in sedentary habits are generally found to be of weak, chilly, susceptible, easily-disturbed constitutions, affected by the slightest variation of temperature, and unable to resist the weakest impressions of damp or cold. Of course, the blame is attached to "nature," and not to their own indiscreet indulgences, when by a little prudence and well-directed energy they might easily prevent this susceptibility, and secure to themselves uninterrupted health. Sponging the body, especially the chest, with cold water every morning, or even twice a day, or the use of cold, shower, or plunge bath, will tend greatly to invigorate the powers of the body, and to lessen the sensibility of the mucous membranes. Where hoarseness or loss of voice is incident to the attack, great relief will be experienced from inhaling the steam of hot water; and the simplest form of application is by

* See Appendix. † Treatise on Bathing.

‡ Connected as I have been, for so long a period of time, with the Broad street bathing establishment, I have had abundant opportunities of judging of the efficacy of the vapor-bath in cases of simple catarrh, which in recent, and even in protracted instances, have totally subsided on the third application.

pouring the water into a basin and holding the face (enveloping the head in a hood-like covering of any woollen material) over it, renewing the water when the vapor begins to subside. This plan will be found of considerable service in "stoppage of the nose," which is commonly present in some of the stages of catarrh.

BRONCHITIS.

The mucous membrane as a structure, is very *apt* to become inflamed, and, when inflammation is once set up in a small portion, it requires very little additional irritation to produce its extension. Nothing is more easy than to fan into a blaze the inflammation that exists in a common cold; an inconsiderate exposure to any of the numerous exciting causes of cold, while suffering under its effects, sufficient to produce new accessions, will subject the patient to those severer symptoms which constitute bronchitis.

Cause.—This affection is owing to the mucous lining of the wind-pipe, and its ultimate branches, as they extend into the lungs, becoming in a more active state of inflammation; and the danger thence arising, may be inferred from the fact, that it has been known to terminate fatally within a week or two from its first appearance.

Symptoms.—The symptoms are of course more aggravated than those which exhibit themselves in "cold;" there is a sense of great pain and "tightness" about the chest; the breathing is of course materially affected from the highly irritable state of the lining membrane, and the excitement of its surface by the air inhaled. The patient is incapable of deep inspiration, and, not unusually, the ordinary intervals are lessened to a great degree, so that he breathes softly and hurriedly. From the great irritability present, the local secretion becomes augmented in quantity, and altered in quality. From being first thin, it speedily acquires a firmness and thickness that makes the expectoration more difficult. It is no longer a colorless fluid, but assumes a diversity of tints, varying from yellow, blue, green, gray, and even soot-black: and the quantity is so great, that the parts, to use a quaint phrase that has been aptly applied, become actually drowned in it. These accumulations in the air-passages cause respiration to be performed with unusual noises—a murmur, a wheezing, crepitation, or rattle—by the current of air inhaled or expired mixing itself with the viscid fluid deposited on the interior surface, as though the patient breathed (as in fact he does breathe) through froth.

The parts of the face usually colored, the cheeks and the lips, are more or less blue or livid, according to the extent of the bronchial membrane affected, and the quantity of secretion in them, which prevents the oxygenation of blood. The means employed by nature to rid them of these superabundant trifling secretions, is by an expulsory cough, the spasmodic action of the muscles; but the cough attendant on this complaint is chiefly consequent upon reaction, the secretions themselves enhancing the irritability already present; and so great and painful becomes this symptom that patients suffer intensely during the fits, the face becoming tinged and purple-black, the veins of the neck and temple swelling as though they would burst, the eyes red and protruding at each convulsive effort, and the whole body indicating general internal disturbance. Splitting head-ache and occasional drowsiness are common concomitants; and the fever symptoms of furred tongue, weak pulse, hot skin, and remitting sweats, are generally present. Emaciation follows; the brain itself not unfrequently participates in the general derangement, by

congestion, and the most alarming symptoms are exhibited. If the debility which must needs ensue from this condition becomes considerable, and the accumulations of secretion great, the patient dies by suffocation.

When the attack begins to subside, neither the cough nor the secretions abate to any considerable extent; but less difficulty and less pain are experienced in the efforts of expectoration; the severity of all the symptoms, gradually but slowly fade one by one away; and though recovery takes place, it leaves long debility, and the sufferer is ever after liable to an easily-excited recurrence of the disease on every accession of cold.

Where the season is favorable, the weather warm and dry, and the remedial treatment *sufficiently inert* to keep the disorder in abeyance only, relapse is sure to occur; and the wet and cold weather of winter is a powerful auxiliary to its reproduction in all its original severity; or, at all events, in a somewhat mitigated form. The common "winter-cough," to which some individuals are subject, and which they as regularly anticipate as the season recurs, is nothing more than gentle bronchitis in a chronic state. It is seldom, when it assumes this character, that the symptoms decrease with each new attack: more frequently they become aggravated, and in the end prove fatal by terminating probably in consumption. A most erroneous notion prevails, that the symptoms of this disease are those which characterize asthma; but when that subject is treated of, it will be seen that, though the appearances of the one may, to a certain degree, simulate those of the other, the two are essentially unlike.

Treatment.—A great deal will depend upon the constitutional strength of the patient under an attack of this affection. Depression of the vital powers is necessarily produced to a greater or a less extent by an affection in which a free performance of the respiratory process is partially impeded. As the air can not freely penetrate the lungs by the loaded state of the passages, it is impossible that the blood can undergo the requisite changes, so that the vital powers themselves become affected.

When congestion or feverish excitement prevails (and the state of the pulse and general sensations will indicate this), blood-letting will be found of service; but the medical attendant will be a better arbiter than the opinion of the patient upon this point. Weakness is one of the chief characteristics of this complaint, and great caution should be used in having recourse to bleeding; which might rather increase the general prostration of the patient, than change the inflammatory action of the bronchial vessels.

The expectoration incident to an attack is not a salutary discharge set up by nature for relief, but a morbid secretion of the membrane involved, which must be counteracted; and for this purpose some cathartic medicine may be resorted to, in order to determine the circulation to other parts. It is only where secretion is very viscid or thick, and the strength of the patient insufficient to bring it up, that expectorants are admissible. In such cases, from three to five grains of the carbonate of ammonia given in camphor-mixture, and taken every hour or half hour, according to its operation, will tend to diminish the cough that so frequently depresses the patient's strength, and relieve the difficulty of breathing.

The inhalation of medicated, or even simple vapors, is found of much value in soothing and allaying the urgency of the symptoms. The vapors arising from warm water, or linseed tea, will often assuage most distressing symptoms, and enable the invalid to expectorate the morbid matter which is secreted, and which his strength is insufficient to eject unassistedly. The vapors of tar, of turpentine, resins, camphor, vinegar, etc., have received a very various approbation among medical writers; and the pernicious effect of their inhalation, as noticed by some in contradistinction to the success which others

have asserted to result therefrom, is attributable mainly to an abuse of the remedy, by employing it either inordinately or in too concentrated a form. In cases where the vapor has been diffused in moderate quantities in the air of the sitting-room, marked beneficial effects have followed, while mischief has been produced by too severe an administration of the fumes diffused in a more contracted area.

Great relief will be experienced from sponging the surface of the chest with cold water, or a solution of a common salt in water, especially if the patient be relaxed and debilitated; and the effect will be more beneficial if the water be first used in a tepid state, and be succeeded by cold water.

The advantages of change of air are rarely more conspicuously seen than in this affection, and a residence in some district possessing a dry, mild atmosphere, should, if possible, be adopted. Great care should be taken to protect the external surface of the chest. The patient must, during the winter and spring seasons, wear flannel next the skin, and be strict in his attention to warm clothing. The diet should not be of too stimulating a nature; jellies, light soups, fish, and the lighter kinds of animal food—the "middle diet" of the Appendix—will be probably sufficient to support the patient's strength without producing mischievous consequences. It can not be too mild or simple. Fermented liquors must be altogether interdicted.

Extremes of temperature, improper clothing, exposure to wet and to night air, and all those circumstances to which the first invasion of the disease may be ascribed, must of course be carefully avoided. From the ease and rapidity with which a relapse may be induced, the patient can not be too cautious during convalescence, in abstaining from whatever may tend to retard his recovery.

SPITTING OF BLOOD.

This affection is dependent on a "disturbance of circulation." The organs subservient to respiration, from both their organization and the nature of their functions, are more frequently than any other the subject of hæmorrhage.

The mucous membrane is a tissue the most richly furnished with exhalent capillary vessels of any in the animal economy, and, dispersed as it is over the very extensive surface of the air-cells of the lungs, subjected to the irritation of vicissitudes of temperature and vitiated air, and to the immediate effects of irregular or disturbed circulation, consequent upon the proximity of that organ to the heart, it is not surprising that hæmorrhage so frequently occurs.

Causes.—Spitting of blood may arise from the rupture of a vessel in the stomach, in the air-passages and lungs, or from an exhalation of blood from the mucous membrane of the bronchi or air-cells. When it proceeds from the stomach the blood is dark and grumous, from having been lodged there for a sufficient time to form a coagulum; but, when it occurs from the congested state of any part of the respiratory apparatus, the color is bright and florid, and the expectoration frothy from its combination with air.

Independently of its being the result of organic lesion of the lungs, it may proceed from lesion of either the larynx or the trachea. External injury also may produce it to an aggravated extent. The act of coughing, singing, loud speaking, blowing wind instruments, exercise in either running or jumping, gymnastic efforts, irregular living, excessive drinking, breathing rarefied or deleterious air, and mental excitement, are likewise severally so many exciting causes.

Spitting of blood from the lungs occurs more particularly in persons of fine soft skin, soft hair, and of a sanguineous temperament. Though no period of life is exempt from it, still it more frequently occurs between the ages of fifteen and thirty. Those persons also are most liable to it whose employment requires a bent position of the body, which by interrupting the balance of the circulation throws an unusual quantity of blood upon the lungs; thus, tailors are much subject to this affection, their constant sitting posture, with the body bent and head leaned forward, and with the abdominal viscera so compressed as to admit a less than natural quantity of blood into them, favors the production of pulmonary hæmorrhage.

Congestion of an organ so important as the lungs, or disturbance in the functions of the mucous membrane associated with the air-passages, must ever be regarded with alarm; for, of all morbid hæmorrhages, this is accompanied with most danger. It so commonly ushers in that frightful complaint, consumption, that the greatest care should be taken and the most active means employed to subdue the attack. The nervous agitation which generally accompanies hæmorrhage, tends much to increase the general disturbance, and hence the necessity of repose, of both mind and body. Despair not only accelerates the action by the influence which the play of passion has upon the heart, but is to a degree irrational, because in numberless instances fatal effects do not follow pulmonary hæmorrhage. An instance within my own recollection which occurred some nine or ten years since, will bear out this assertion. A patient spat blood for several days to a considerable amount; but the attack yielded to active measures promptly applied and persevered in. The individual is at this moment in perfect robust health, and is engaged in a laborious profession. He has never experienced the slightest indication of a relapse.

Treatment.—Blood-letting, local or general, is important in the treatment, or the forced determination of blood by cupping or sinapisms. The diet must be carefully attended to, avoiding every article, solid or fluid, possessing a stimulating property. Active purgatives will be found to exert a most beneficial influence. Cases which have resisted the effects of repeated bleeding often yield under the administration of purging medicines, and where general debility does not contra-indicate their use, the adoption of such a course will be found in most instances of eminent service, as not only alleviating a present, but as preventing a future attack.

ANGINA PECTORIS, OR SUFFOCATIVE BREAST-PANG.

Little of a very satisfactory nature is known about this disease excepting the symptoms. The proximate cause has been ascribed to various lesions of the pectoral viscera; but the most careful examinations have hitherto led to nothing but hypothesis.

Causes.—The most rational opinion is that maintained by Dr. Chapman, who asserts that the disease is a species of neuralgia. The derangement of the heart and other structures, with which it is sometimes associated, he holds to be coincidences or effects, and not the cause. The disease has undoubtedly prevailed, independently of such organic lesions, and conversely, these have existed without occasioning it; and it seems on the whole to be derived from irregular gout, which misplaced, thus operates as an irritant of the nerves; probably first of those of the stomach.*

* The stomach is generally oppressed with flatus (wind), during and before the paroxysm; and, as relief is almost always obtained upon its expulsion, it is not irrational to infer that the generation of gas in the stomach or intestines may be more a cause than a consequence.

Angina pectoris is more likely to be confounded with asthma than with any other disease, and is frequently mistaken for it; but a little attention to the phenomena attending upon the paroxysms of the respective diseases, will disclose the great difference between them. An attack of angina is oftea preceded by considerable derangement of the digestive organs, pains in the limbs, and occasional spasms in the region of the chest. It occasionally occurs without any premonitory symptoms, particularly if the patient be ascending a hill, walking up stairs, or walking after a hearty meal. In its acute form, he is seized with a painful constriction of the chest, a little to the left of the pit of the stomach, extending to the shoulder, elbow, and wrist. In the more violent form, the constrictory pain in the chest, and left arm (which frequently extends to the right), amounts to excruciating agony, accompanied by a feeling of suffocation, great anxiety, and a sense of approaching dissolution. During the fit, the pulse sinks in a greater or less degree, and becomes irregular, the face and extremities are pale and bathed in a cold sweat, and for awhile the patient is perhaps deprived of the powers of sense and voluntary motion.

Though this disease is generally characterized by a fatal, sometimes suddenly fatal termination, it is occasionally found not to affect the constitution even where the paroxysms have been attended by intense agony. Its protracted continuance, however, never fails so to affect the vital energies that they ultimately sink under it. The attacks are usually confined to the middle-aged; and males are found to be more subject to them than females.

Treatment.—The treatment must be considered with reference to the two conditions of this disorder—the paroxysms, and the intervals between their recurrence; and in both cases it will depend wholly upon the peculiarities of the attack and the patient's constitutional disposition.

Than this there is probably no complaint which demands from the practitioner a more intimate knowledge of the patient's habits, constitution, and the probable cause to which the attack is referrible.

During the paroxysms anodynes have been more generally employed than their very dubious success would appear to justify; their indiscriminate use is rarely attended with advantage, while on the other hand antispasmodics and cordials have been found of considerable service by directly relieving the urgency of the attack, expelling the gaseous fluid which oppresses the stomach, and indirectly invigorating the system generally. With this view, the antispasmodic mixture (see appendix) has been given with marked benefit; it acts promptly in assisting the efforts of the patient to remove the flatus by eructation, and in some cases I have known it to give complete and immediate relief.

During the interval, great care must be taken to avoid every exciting cause—fatiguing exercise, walking up ascents, stooping, etc. The patient's sleeping-room should be on the same floor with his sitting-room, to prevent the necessity of walking up stairs to it. His diet should not be too nutritive, nor on the other hand too low; but every article of food likely to prove indigestive (and his own habits of food will probably enable him to estimate its effect), should most rigorously be abstained from. To relieve the overloaded vessels, active purgatives should from time to time be taken; and for the same object, bleeding will be in many cases an important auxiliary; but this course will be best determined by the medical attendant, as also the application of counter-irritants, issues, cataplasms, etc., which may be indicated by the patient's state.

EMPHYSEMA OF THE LUNGS.

This term implies the presence of air in the structure of the lungs, and the disorder is but a variety of asthma. There are two species; the first formed by the dilatation of the minute bronchi and air-cells, or by the rupture of several contiguous cells which are thereby thrown into one: the second, by the infiltration of air into the cellular tissue investing and connecting the air-cells together.

Causes.—Among the causes of pulmonary emphysema may be enumerated violent efforts of any kind which cause the long-continued retention of breath, such as repeated attacks of catarrh, bronchitis, asthma, or other diseases of the lungs or air-passages, attended with difficulty of breathing or violent coughing. From being primarily an effect, it becomes in turn an actual cause and tends to maintain the disease by which it was originally excited; so that where it occurs as a consequence of asthma it is also found to act as a reproducer of that complaint.

Mechanical injury, fracture of ribs, wounds, &c., are also among the causes.

Symptoms.—The difficulty of breathing attendant on emphysema is constant, and of course increased by those circumstances which induce the loss of breath under ordinary conditions, such as strong exercise, straining, running, coughing, crying, anxiety, rarefied atmosphere, an attack of catarrh, &c. In slight cases the complexion and habit of body are little altered; but when more considerable, the skin usually assumes a dull earthy hue, checkered with a tinge of lead color; the lips become livid, thick, and swollen, and a slight cough and expectoration supervene, of which the patient is, himself, scarcely conscious.

The escape of air into the cellular tissue is attended with this consequence, that as the prolongations of this tissue throughout the body are continuous, and communicate freely with each other, when once air is effused in any part of it, the effusion may extend wherever cellular tissue exists. A recent case which occurred in Paris, presents a very interesting and remarkable illustration of emphysematous affection. The patient was a man twenty-five years of age; he had been ill for a fortnight, and was admitted into the Hôpital Cochin, with symptoms of typhus fever. He died; the whole body was found to be in an emphysematous state. The air or gas, contained in various parts was found to be inflammable, *and took fire from the flame of a taper*. A puncture was made in the abdomen, and the gas which escaped took fire and burned for some time, the flame being blue at the base, and white at the summit; the combustion extended to the edges of the puncture, which were consumed, and the aperture itself enlarged to double it original size.

Whether this gas may be considered as the product of a chemical action on matter in a putrescent state contained in the body, or as morbid secretion from vital action, it is difficult to determine; but the fact, which may be safely relied on, is a sufficient exposition of the means by which spontaneous combustion is effected in the human body. It must not of course be inferred from this case that in all emphysematous affections that description of gas is generated which admits of combustion; it is adduced simply with a view to account for an extraordinary circumstance (and lucky it is that it should be extraordinary) upon which many persons to this hour are incredulous.

Treatment.—For obvious reasons no notice need here be taken of cases which require a surgical operation, though such cases often occur. With respect to the palliative treatment, care must be taken to avoid the recur-

rence of those causes to which the attack owes it origin; bleeding has been recommended, and very judiciously, as a means of diminishing the congestion and spasmodic stricture of the bronchia; the internal employment of sub-carbonate of iron has been adopted for the attainment of the same object, and with considerable effect. Narcotics are often resorted to, with a view to allay the attendant pain and irritation, by retarding the act of respiration as much as prudence will justify. When the breathing is not much oppressed, frictions with oil over the tumid parts, or some stimulating embrocation, will be found beneficial; but greater advantage will be derived from sponging the chest every morning with vinegar and water—one part of the former to two parts of the latter—and afterward dry-rubbing it with flannel. Great attention ought to be paid to diet; and no food of a stimulating character must be indulged in. Warm and sufficient clothing should be worn, and every care taken to prevent the accession of cold. Where the breathing has become painful to any considerable extent, change of air and climate will be found to exercise a very beneficial influence on the complaint.

EMPYEMA, OR WATER ON THE CHEST.

This term is used to denote the presence of fluid in the cavity of the chest. In strictness, it designates the effusion of purulent matter only into the pleura—other terms being applied as the effusion presents the character of water, blood, or gaseous matters; but, as a generic term, it serves to denote all the varieties of effused fluids. In most cases, however, it may be considered to proceed from a morbid exhalation or secretion of the pleura, the result of a pre-existing disease.

Causes.—These collections may occur from the bursting of a turberculous abscess into the pleuritic sac, or as an exudation from the surface of the pleura, accumulating in various quantities, often to a considerable, sometimes to an enormous extent; instances having been recorded where from ten to twelve pints of fluids were abstracted. The presence of various substances, which may happen to find their way into the pleura, will frequently give rise to the affection, as well as hæmorrhage into the cavity of the chest from wounded vessels.

The symptoms by which the nature of the attack may be detected are various. The collection of fluid to any considerable extent must necessarily have the effect of compressing the lung, and thereby preventing the free performance of its functions. Difficulty of breathing is commonly, though not invariably, exerienced in proportion to the degree of pressure sustained by the lungs; indeed, in many cases, this symptom is not at all present, while in others it occurs at intervals only. As almost all affections of the respiratory apparatus are accompanied by this sign, it can only in empyema be taken as a collateral or corroborative symptom. The pressure thus occasioned imparts a sense of fullness and oppression in the chest, almost amounting to suffocation, especially if the patient lies on the *sound* side; and he is compelled to accommodate his position accordingly. The affected side is enlarged in size corresponding to the quantity of fluid enclosed, and presents a marked difference to the healthy side, the ribs maintaining the extension produced by a full inspiration, and the interspaces often projecting beyond them; and this dilatation of the side of the cavity in which the effusion has taken place is, where it does occur, a most characteristic symptom. But, of all others, the most constant and least equivocal sign of pleuritic effusion, is the displacement of the heart from its natural position, and, when taken

in conjunction with those already mentioned, it may be regarded as truly distinctive. Fluctuation also, the agitation of fluid within, may frequently be perceived most distinctly, especially in persons of spare habit. Ausculation and percussion, in connexion with other modes of examination, offer a ready means of correctly discriminating this complaint from any other, and rarely fails to indicate it to the experienced ear of the practitioner.

The attack is usually attended by a short cough, and the expectoration of a peculiar smell; the fever symptoms incident to an attack vary considerably, there being in the acute forms of the complaint general irritation burning heat of the skin, and rapid pulse; while in the chronic forms, the degree of excitement is scarcely perceptible, and is produced only by accidental circumstances.

Treatment.—This disorder so generally terminates fatally, that it is difficult to offer a favorable prognostic; and as all medical aid, in whatever diversity exhibited, has hitherto failed in specifically arresting it, little need be said beyond the mention of those palliatory means by which the urgency of the symptoms may possibly be abated.

When absorption of the effused fluid does not take place, there are but two modes of evacuating it; one natural, the other artificial. The latter is termed *paracentesis*, or tapping, and comes so exclusively within the province of surgical operation, that it would be useless to make detailed allusion to it here; the former is by the escape of the matter either through the bronchial tubes or through the walls of the chest externally, by one or several passages. In both instances, relief is immediately afforded; but though, in some few cases, the abscess becomes obliterated upon the discharge being effected, in the majority, it and the fistulous passages have been known to remain unclosed for many months, even for several years, before the suppurative process finally terminated.

Cupping or applying leeches over the affected part is often attended with considerable advantage, lessening the pain and averting a fresh accession of fever symptoms. Where fever is present, every possible means must be adopted to subdue it; and few will be found more effective than an adherence—a rigid adherence—to abstinence in diet. Nothing more surely tends to increase the aggravation of febrile symptoms than inattention to regimen.

On the subsidence of fever, light nutritious food may be taken in moderation, the patient carefully abstaining from tonics, which may have the effect of reproducing the paroxysms; for the same purpose also, in this stage recourse is usually had to counter-irritants, blisters, setons, issues, &c.; but great care must guide their employment.

Diaphoretics and expectorants (see Appendix) may in some cases afford relief, though they are rarely of more than temporary advantage.

But empyema is one of those disorders which require the profoundest medical skill, and comes so little within the scope of domestic treatment, that it would be unprofitable to enter here upon any further explanatory details.

DIFFICULTY OF BREATHING—ASTHMA.

Pains of an acute kind, accompanied by difficulty of breathing, are often experienced in the chest by persons who otherwise appear to be in the enjoyment of perfect health: these are sometimes transitory, sometimes of long duration, intermittent, diffused, fluctuating, and shooting. They are frequently mistaken for an indication of some organic disturbance, though

clearly a single nervous affection, remediable by the use of tonics, proper attention to diet, exercise, and the employment of those measures which are most commonly adopted for the relief of nervous conditions.

Asthma essentially consists in a spasm of the muscular fibres of the bronchia. To this definition of the complaint, many eminent authorities have objected; but from anatomical investigation, pathological phenomena, analogy, and probability, the profession generally entertain the opinion of its accuracy. One of our first physiologists, Dr. Wilson Philip, distinctly describes it as being, not a disease of the lungs themselves, but of the parts of the upper extremity of the wind-pipe, in which the contraction of the passage of the air, by spasm of its muscles, produces the violent struggling for breath which attends its paroxysms. It is very commonly dependent on a diseased state of the bronchial membrane, and the attacks are frequently induced by an increase of this state. It must not be, however, assumed that the spasms constituting the asthmatic paroxysms are confined to the bronchia, for the same disordered action of remote parts is likewise involved. In all spasmodic diseases there is a disposition toward extension from the original position, forasmuch as that the muscles, whose actions are at all associated, are very liable to suffer generally when one or more of the class are morbidly affected.

This disease has been very judiciously divided into two classes, *nervous* asthma and *catarrhal* asthma. The idiosyncrasy of individuals subject to the former, consists in the extreme susceptibility of their nervous system: they are called "nervous," and evidently possess what is termed "the nervous temperament." Moral causes alone frequently induce a paroxysm. Numerous instances are recorded of the influence of the nervous system over the attack; and some curious examples are given in illustration. Laennec, the first authority in affections of the chest, narrates a very singular fact connected with an asthmatic patient: A man forty years of age, slightly hypochondriacal, but otherwise in good health, wished to go on horseback to pay a visit some leagues distant from his house. As soon as he left the town where he resided, which is situated in an extensive plain, he felt an immoderate oppression of the chest, apparently the effect of the country air. He took no notice of this at first, but the difficulty of breathing having greatly increased, and being now attended by a sense of faintness, he determined on returning home. He had scarcely turned his horse when he found himself better; and in a few minutes he recovered both his breath and his strength. Not suspecting any relation between this momentary uneasiness and his journey, he once more attempted to advance, and was again soon attacked with the dispnœa and the faintness. On turning toward town, these passed off. After having made repeated attempts to proceed, and always with the same result, he finally returned, and in just as good health as when he at first set out." In another case an old asthmatic, subject to slight catarrh, was invariably seized with a paroxysm if his lamp happened to go out during the night, although he was asleep at the time. In a case of old and well-marked asthma, a paroxysm was known to be immediately removed by fright. These instances sufficiently prove the influence of mental agitation in this disease.

A singular instance of the influence of the nerves in producing asthma, without any local disease of the lungs themselves, is furnished by an affection prevalent in the East, among persons addicted to the abuse of opium. On being suddenly deprived of the habitual dose, the patient is seized with extreme breathlessness, exactly resembling that of asthma: the countenance becomes haggard, the pulse rapid, and the eyes such as we should expect to find in a patient affected with delirium. Some opium administered in time

will immediately remove all these symptoms; but, if relief be not afforded, the attack proves fatal in a few hours.

Though catarrhal affections may have been often experienced, without leaving any discernible effect on the action of the air-passages, yet sooner or later the bronchial membrane becomes disordered permanently; and it is this local disease therein, together with the general liability to be affected by cold, which constitutes catarrhal asthma. The peculiar irritability of this membrane frequently remains in a latent state until excited by certain stimulants. Some individuals are affected by only one kind of substance; others, by two or more. Ipecacuanha seems the substance which of all others exerts the greatest influence in cases of this kind. Some individuals, in whom this peculiarity is strong, are unable to remain in a room where a vessel containing powdered ipecacuanha is opened, without becoming immediately affected with difficulty of breathing, resembling asthma. Others, unaffected by this substance, suffer similar inconvenience from different ones in a state of minute diffusion in the atmosphere, such as the smoke of sealing-wax, the fumes of various gases, the effluvia from hay, &c. With respect to the last-named exciting cause, several cases are recorded of a curious asthmatical affection called the "hay fever," some of which, although distressing to those who suffer, are very ludicrous. The attacks chiefly occur on approaching a newly-mown grass-field, or meeting a current of air which, having traversed a hay-field, has become impregnated with the effluvia, and they are indicated by sneezing, a running at the eyes and nose, and a great difficulty of breathing, strongly stimulating the asth matic paroxysm. Though the complaint is most prevalent among the predisposed during the hay season, the same train of sensations is experienced by them on passing a hay-rick, on packing baskets with hay, or on entering a stable where hay is deposited. Some of the accounts are scarcely credible, from the statements made of the susceptibility of individuals to contract the complaint under circumstances the most extraordinary.

Among the predisposing causes of asthma, hereditary transmission is, perhaps, the most common; but like other hereditary diseases the course is capricious and irregular. Peculiarity of structure in the respiratory organs. and malformation of the chest, are also among the number. Many diseases predispose the individual in whom they occur to asthmatic affections, such as gout, diseases of the skin, and most particularly dyspepsia; but of all the list, inflammatory catarrhal affections of the bronchial membrane are by far the most frequent.

Under the head of exciting causes must be comprehended all those circumstances which induce catarrh, and which may generally be considered as some form or modification of cold applied to the whole body or to part of it. "Asthmatics," says Willis, "can bear nothing violent or unusual. From excess of heat, or cold, from any great bodily exertion or mental emotion, from change of season or of weather, from errors even of a slight kind in the non-naturals, and from a thousand things besides, they fall into fits of dyspnœa."

It rarely occurs that an attack of asthma comes on without previous warning. Occasional instances are known; but most commonly those who are subject to it have some warning of an approaching paroxysm. The most usual precursory symptoms are, a feeling of general languor and oppression, yawning, heaviness of the head or drowsiness, flatulent distention of the stomach, a feeling of constriction, "tightness" across the lower part of the chest, depression of spirits, and other lesser indications of derangement. The primary disturbance most usually becomes aggravated at night, and the patient retires to bed in the anticipation of coming evil. In some cases, he

does not awake immediately on an invasion of the attack, but continues in a state of half-consciousness approaching to night-mare, sensible of the attack and yet unable to resist it. He raises himself up or gets out of bed, panting and gasping for breath, and wheezing so loud that he may be heard at a considerable distance. If attended, he calls and makes signs to have the doors and windows opened, and frequently sits at the latter for hours together, regardless of bodily cold, so that he can inhale the cool air of night. Instances have been recorded of patients not merely remaining at the open window, but leaning over it, resting on the sill, with the arm hanging over the outside, for several nights together, even during the winter season; and what renders the fact more extraordinary, is that patients, though at other times very susceptible, rarely experience any ill effects from this rash exposure, proving how extensively involved the whole nervous system must be during an asthmatic paroxysm. The body is generally bedewed with perspiration, though the extremities are almost always clay-cold. During the fit, the countenance becomes anxious, pale, and haggard. It will sometimes last for several hours; and the only consolation the patient can derive in this extremity of suffering, is the knowledge of its limit in duration, and the hope of its speedy cessation. An attack usually terminates by the inspiration becoming of easier performance, the cough less distressing, and a (sometimes) copious expectoration, at once the sign and means of his relief, and, when it is over, sleep succeeds the exhaustion of suffering: and the patient, on awakening, not unfrequently experiences a perfect restoration. It sometimes happens that a recurrence takes place on the following night; but this is commonly a rare circumstance.

After a longer or shorter interval of time, the paroxysm returns with all its former characteristics, and is again in turn succeeded by a period of cure. In this alternation of comparative health and suffering, many years, and even the greatest part of a long life, are consumed, the paroxysm returning at intervals of every variety of extent, once in a week, a month, a year, on alternate or only every seventh year. The recurrences are seldom exhibited at any definite period; yet instances have occurred, wherein the disease has made its attacks with singular uniformity. They sometimes continue for many years successively, and then cease entirely; but this is not usual. They are most frequently renewed periodically, induced by particular circumstances, states of the weather, situation, or the other exciting causes before enumerated. Some persons are thus afflicted only in cold weather; some in damp, foggy, and moist states of the atmosphere; others, again, experience it only in the summer season, their health being improved during cold weather. Many asthmatics find a dry country air most beneficial; while not a few, again, seek for the greatest ease in the crowded smoky city.

It is remarkable how the disease varies in its consequences to different individuals. I once knew two patients, uncle and nephew, who were affected with asthma; but the complaint in each was attended with different indications. The nephew was very fond of attending theatres (not from any particular delight in dramatic performances), but because the atmosphere of a full house invariably produced relief; while to the uncle a casual visit was in the highest degree distressing, so much so, indeed, as to amount to an ultimate interdiction. The uncle was one of those who gasped for the freshest, coldest air, while the nephew I have seen in the hottest afternoon in summer, with his silk handkerchief applied to his mouth to modify the irritation caused by the air even at that high temperature.

Asthma affects both sexes; but it is more rare in females than in males. It occurs in every stage of life, though more commonly in middle life. It attacks persons of every variety of constitution and temperament, but those

of a nervous temperament are most prone to it. It is not confined to any condition of life or station in society; though those who, by an inordinate exercise of their vocal organs, addiction to tobacco-smoking, the inhalation of acrid fumes and substances in a state of minute mechanical division, who are exposed to great and sudden changes of temperature, whose positions mechanically impede the free movements of the chest, etc., are said to be most of all subject to asthmatical affections; but this opinion is very doubtful.

The attacks are rarely of a fatal character; indeed, asthmatics are proverbially considered to have taken out a charter of long life. This idea is a popular error too great to need a sérious refutation. If it seldom proves fatal as *asthma*, its frequent recurrence must necessarily lead to the production of those constitutional disturbances which terminate in death, such as emphysema or inflation of the lungs, dilatations of the heart, water on the chest, and other forms of dropsy.

Treatment.—Asthma has long been the opprobrium of medical art. Though it is seldom if ever cured, the paroxysms may be so far modified in severity as to afford consolatory mitigation to the patient. It need hardly be said, that the resistance of this disease to the skill of the legitimate practitioner, has been a fertile source of profit to ignorant charlatans, whose professions are generally proportioned to their ignorance.

Yet, has asthma baffled both the science of medicine and the accident of quackery; and nothing beyond mere palliatives seem to have been discovered. To this end, narcotics have been extensively employed; stramonium, opium, tobacco (smoked or taken internally), beginning with small doses and increasing them gradually, with a view to lessen the degree of respiration within prudent bounds. Smoking is decidedly one of the most efficacious alleviatives, when resorted to in time to prevent an approaching paroxysm; it is seldom serviceable, however, unless it provokes nausea or free expectoration. The inhalation of medicated vapors into the lungs, also, is attended with the best effects, and, when properly managed, rarely fails to afford relief (see formulæ). The preparations of iodine and chlorine, are used with great advantage in this as well as in several other affections of the chest; but they are substances of too irritating a nature to be trusted to domestic employment, and I have, therefore, abstained from giving any formulæ for their employment.

The vapor-bath is another agent of great value; and, from its sedative and diaphoretic operation, not only on the respiratory apparatus in particular, but on the system generally, it acts as a most powerful palliatory means. Dry cupping has been highly extolled.

Emetics, in a paroxysm of asthma, are highly serviceable, by at once removing both the phlegm and the spasm; and, as they act by directly influencing the nervous system, they are often followed by an immediate alleviation of the patient's distress. Ipecacuanha, and some of the preparations of zinc (see appendix) exercise the most beneficial action of any form of emetics.

It would be useless to enumerate those medicinal agents which are indicated by various conditions of this distressing complaint, all of very judicious and effective employment in their way, but which mismanaged by inexperience would most probably be attended with deleterious rather than beneficial effects. Where medicines, in their various complications, are needed, as intimated by the attack being connected with other disturbances of the system, the patient will act most discreetly in relying less upon his own discrimination than on the judgment of his medical attendant. In exercising a strict attention to diet and regimen, he will have enough occasion

to exhibit the extent of his own prudence; as much of the mitigation of his sufferings will depend upon his caution and providence. His food, chiefly farinaceous, must be of the most light and digestible nature, consistent with necessary nutrition; indeed, where the constitution will permit it, rigid abstinence has been found to be the most salutary plan that could be adopted. Coffee is so identified with this complaint, that its use need not be alluded to.

During the intervals between the attacks, cold bathing and sponging the chest with cold water, will be attended with marked benefit. The patient should commence by using water of a temperature rather lower than that of tepid, and gradually reducing it as the shock becomes diminished, till he can support it at its natural coldness. He will thus, little by little, endure it without distress; till at length he will be enabled to have recourse to the cold shower bath, a means which, by giving a tone to the system, and by lessening the patient's susceptibility to cold, will prove of great value as a palliative. Although this recommendation may possibly surprise many asthmatics, it is made under the conviction of my own experience, and sanctioned by the practice of high authorities.

By the adoption of such a course, by proper moderate exercise; by the avoidance of deleterious atmospheres; by the occasional use of some domestic aperient medicines when required; and by a careful attention to those wholesome precautionary regulations in self-management, which are more easily understood than enumerated, the attacks of this complaint may be much modified in severity, and the accession of its paroxysms greatly diminished in frequency.

PALPITATION.

Palpitation—the increase in either force or frequency of the beats of the heart—is dependent on a large variety of causes. It is invariably consequent upon an over-excitement of the nerves which supply that organ, stimulated by the blood arriving in excess, as in violent exercise, plethora or fulness of habit, by engorging the cavities, or by being of too stimulant a character from the nature of the diet. Mental emotion indirectly produces a similar effect.

Causes.—Among the physical causes of this affection, are diseases in the substance of that organ, a dilatation of its cavities, disorder of the valves, and the inflammatory adhesion of the membrane with which it is invested. The physical external causes are, an acceleration of the circulation by muscular action, a plethoric state of the system, fits of convulsion, epilepsy, or hysterics, corpulency, obstructions in the lungs, and tight-lacing, by preventing the free action of the abdominal and thoracic organs. Independently of these, there are other causes which operate purely through the nervous system, and which, when they occur, excite great anxiety and alarm.

Symptoms.—Nervous palpitation is dependent as well on mental excitement, or naturally irritable temperament, as upon the several affections of dyspepsia, hypochondriasis, hysteria, and gout, of which it is frequently symptomatic. The most common forms of the attack are characterized by a tumbling or rolling motion of the heart; by a momentary feeling of fulness, tightness, and oppression; by a series of quick, weak, fluttering, irregular beats, occurring at distant intervals, and supervening mostly at bedtime; and by that perfect and continuous palpitation, which consists in an augmented impulse of the heart, pumping, and an increase in sound and frequency of the beats. To those who are of a nervous temperament, a word, a

look, a sound, a thought, a movement, the most frugal meal, the most gentle stimulant, is sufficient to induce a paroxysm, which may be accompanied with heat, flushes, and distressing difficulty of breathing; but irregularities of action in the heart are often experienced, without being accompanied by any disturbances in the general health.

In affections of the lungs, palpitation is produced by the obstruction in that organ, subjecting the right side of the heart to the stimulus of over-distension from being unduly charged with blood; while the same obstruction prevents the left side from receiving its proper supply.

Treatment.—Palpitation, as coming within the range of chest-affections, must be considered less as a primary complaint, than as being symptomatic of the organic disturbances before alluded to, such as disease of the heart or of the large arteries, dyspepsia, plethora, or congestion of the blood-vessels, derangement of the nervous system, and so on; in all which cases, the treatment must, of course, be directed to the original affection.

Where palpitation occurs as symptomatic of indigestion, it must be obvious that the treatment should be directed to the primary disorder; the regimen, therefore, must be made to apply to the condition of the stomach and the alimentary canal, as, until they are relieved, it will be in vain to expect a cessation of the palpitation.

When it is consequent upon a plethoric state of the blood-vessels, the loss of blood and purgative medicines will be found the most effective treatment.

The object of this course is to lessen the blood in quantity and quality; and the patient must abstain from every kind of diet likely to reinduce a plethoric condition of body. Animal food and fermented liquors should be especially forbidden. The patient ought carefully to abstain from too great an indulgence in sleep, as being eminently conducive to plethora; while, on the other hand, any excessive exercise must be avoided, as tending to aggravate the paroxysms of palpitation.

When the attacks are consequent upon irritability of the nervous temperament, means must be adopted to allay the excitement under which the individual labors, by change of air and of scene, by bathing, frictions, the adoption of tonic diet, mixing in cheerful company, and whatever can tranquillize the mind and invigorate the body. With respect to the medicinal treatment, tonics, chalybeates, and mineral waters, in the progress of convalescence, are recommended as being singularly beneficial.

If the palpitation be referable to organic structural derangement, it will of course be totally beyond domestic management; and in such cases the patient must submit to the guidance of the medical practitioner. If from circumstances which the invalid may obviate by voluntary determination, such as excessive muscular action, corpulency occasioned by acts of luxury and indolence, tight-lacing, &c., it need hardly be mentioned that, as the cause may be rolled away by mental effort, the sooner the resolution is so formed the better for the patient's personal health and comfort.

PLEURISY.

Several circumstances concur in making this one of the most easily distinguishable diseases of the chest; and, if promptly attended to, curable with the least difficulty of any.

Causes.—The inflammation attendant on this complaint produces a thickening of the membrane, and an adhesion, in extent of surface proportioned to the inflammation, between the pleura covering the lungs and lining the

ribs. The facility with which the attack is induced, may be inferred, from the fact of such adhesions being commonly found in post-mortem examinations, though the individual during life never betrayed or was conscious of any symptoms to indicate such a state. Of the predisposing causes, the principal are the immoderate use of spirits, tubercles in the lungs, and narrowness of the chest; while the direct causes may spring from mechanical injuries, inclemency of weather, or the succession of cold to physical heat produced by violent exercise.

Symptoms.—Pleurisy in an *acute* form is indicated by severe stabbing pains, especially on deep inspiration, and sometimes even on the act of speaking; by quickness of pulse, shiverings, dry cough, and general disturbance. The respiration becomes short and quick, the patient often being unable to lie down on the side affected. The seat of pain is capricious, being not always confined to the affected part, but flying from side to side, and frequently residing in a portion of the membrane opposite to that in which the marks of inflammation are found after death. In this state, the disease is popularly mistaken for rheumatism, in frequent instances; but the profuse sweating and constitutional disturbances which mark rheumatism are not found in pleurisy. The "stitch" in the side is one of the most familiar indications.

In the *chronic* form the affection is very insidious, and makes its incursions so stealthily, but surely, that it is generally mistaken for consumption by the symptoms of hectic emaciation, cough, and expectoration, exhibited. In this affection, "the disturbance of secretion," spoken of in an early page, is distinctly marked, from the effusion of pus or serum poured forth. The accumulation of the fluid is, in severe cases, so great, that the capacity of the chest becomes enlarged, and so gorged that the heart itself is actually pushed from its proper seat, and its pulsations distinguished only on the *right* side instead of the left. A corresponding compression, of course, occurs in the substance of the lungs, from which they may never recover. When the inflammation has subsided, and the effusion has been absorbed or abstracted by medical heat, the walls of the chest begin to contract, the ribs on the affected side fall close together, the shoulder follows the descent, the spinal column yields, the muscles shrink; and deformity to a greater or less extent results.

By means of auscultation, the seat of the attack, and the presence or absence of this effusion are readily and precisely detected. A symptom which would excite the risibility of the listener, if it were in good taste to laugh at the sufferings of a fellow-creature, attends the acute stage of this complaint, called *ægophonism*, or goat voice. When effusion is present, percussion yields a dull heavy sound, nothing of the murmur which is heard on respiration produced by the passage of the air in a healthy lung: but if the effusion be inconsiderable, there is this phenomenon, that, when the patient speaks, the noise in the chest resembles the well-known tones of our school-boy friend Punch's voice—the nasal twang of which, once heard, is not soon forgotten. This symptom is very little known; for our domestic nurses do not appear to be yet illuminated upon the subject of the stethoscope. When the march of medical philosophy shall arrive at them, as in due season it doubtless will, they will be amazed at the strange discoveries which the simple act of *listening* will enable them to make.

Treatment.—The employment of the lancet and cupping necessary to be resorted to in the more aggravated stages of this affection will, of course, be best determined by the medical attendant. Subsequent to the local and general bleeding, adopted for allaying the pain and fever present, tartar emetic in large doses will be found very serviceable as contributing to subdue the inflammatory action. The patient must endeavor to keep an erect rather than a recumbent posture, supporting himself, if his strength be in any

degree prostrated, by cushions and pillows. He must be particularly strict with regard to his regimen, maintaining the greatest possible amount of abstinence that can be borne without endangering the strength of the invalid. Medical treatment exerts a powerful influence on this affection; though Nature will unassistedly subdue by her own powers what art effects with difficulty.

PNEUMONIA.

This term applies to that disease of the lungs which consists in simple inflammation of their structure. It is the most common of all dangerous inflammations, and till very recently was often confounded with pleurisy; the modern advance of medical science, however, has shown them to be two distinct affections.

Causes.—Pneumonia may result from, or accompany, several diseases; such as pleurisy, bronchitis, small-pox, erysipelas, gout, rheumatism, inflammation of the stomach or bowels. It sometimes occurs after amputation and other great surgical operations. It is this complication of one disease with another, which constitutes the difficulty in treatment, the patient himself being ignorant of the existence of pleural disorder, and wrongly assuming the belief of its being simple consumption.

The lungs have been supposed to be subjected to congestion from the blood gravitating into their lowermost portions when the organ is too enfeebled to assist in the circulation with due energy. Pulmonary symptoms have been observed to supervene in the course of malignant inflammation of the bowels; and pneumonias which occur in the course of malignant fevers are almost always latent: nothing is more common than this complication, especially in winter.

Confinement to bed, and the remaining in long-continued positions, are also supposed sufficient to induce this congestive state, by permitting the blood to gravitate toward exclusive portions of the substance of the lungs for too long a period. Even in a state of perfect health, the horizontal pos ture is held to occasion a certain degree of this congestion; for it is found that on awaking from a long sleep, the back parts of the chest have less resonance on percussion, and give out a more imperfect respiratory murmur than at other times.

Whatever be the exciting cause, when the balance of the circulation is destroyed, and the tonic power of the pulmonary vessels affected, they become the seat of a congestive load of blood. Inflammation is thus primarily set up; and the usual consequences follow, destructive of the substance in which it is seated—local apoplexy, solidification of the substance, suppuration, gangrene. The obstruction which the inflammation thus causes to the functions of pulmonary circulation operates prejudicially to the circulating powers, as indicated by symptoms, varying, of course, as the disorder increases or diminishes in intensity; hence the affection may become self-aggravated.

Symptoms.—The attack and the accompanying symptoms—difficulty of breathing, cough, pulse, and pain—though not to be overlooked, do not always determine the character of the complaint. When expectoration takes place, which is not invariably the case, it bespeaks the nature and violence of the inflammatory attack. There is viscidity and rusty tinge, in the sputa or matter of expectoration, which is proportioned to the degree of inflammation present; when it begins to assume a dirty or brown watery character, or

contains purulent matter, much danger may be predicted; and if fœtor or gangrenous odor accompanies it, it indicates a state of great peril. The general suppression of expectoration, when it exists, is another unfavorable sign; for, unless it be the obvious result of diminished inflammation, it generally tends to increase it. The character of the expectoration may be modified by the presence of other affections, such as bronchitis, common cold, pulmonary consumption, and then the indications are less certain. The application of the stethoscope materially assists in determining the degree of inflammation present. When a general mucous rattle in the chest is discovered, it proves that the muscular powers are inadequate to expel the accumulating matter from the bronchial tubes, and hence an unfavorable issue may be feared.

The general symptoms are a feeling of great depression and languor, with pains in the back and limbs. A disordered state of the stomach and bowels precedes the attack; then a shivering fit comes on, followed by a violent reaction, with great heat of the skin; and during this hot stage, the local symptoms of heat, pain, and oppression in the chest, with more or less cough, are developed. This pain is variable in degree, being sometimes intense and circumscribed, sometimes diffused and dull, frequently a deep-seated feeling of heat and weight, rather than a positive pain. The cough, which commonly aggravates the pain, is at first dry, or the expectoration so slight as to be unnoticed. The difficulty of breathing very much exhibits the intensity of the attack, the number of respirations, which in health is about twenty per minute, in the adult increasing to thirty, and in severe cases occasionally exceeding sixty. As the attack increases, the symptoms become more urgent; the cough, hitherto dry, is now accompanied by the expectoration of the reddish or rusty tinge before mentioned; the color varies from a light reddish or greenish yellow to a deep orange red, proceeding from the various proportions of blood combined with the bronchial secretions. The difficulty of breathing becomes increased, and, if the attack be extensive, the oppression becomes very urgent, though the pain may be actually diminished. This formidable increase of the disease about the third or fourth day begins to manifest itself in increased difficulty of breathing, amounting to great distress, obliging the patient to have his head and shoulders raised; and the respirations are effected by sudden elevations and depressions of the ribs. The cough is aggravated, the pulse quickens, and a great and general depression of the bodily powers ensues; the tongue is often loaded and dry, and the skin harsh and hot. Sometimes delirium and torpor supervene, and these are dangerous symptoms, especially in elderly persons.

When the disease terminates favorably, the amendment is generally marked by some critical evacuation, followed by a general alleviation of the symptoms. The pain and breathing are relieved; the cough is less distressing; the expectoration less viscid and rusty-colored; the skin becomes cooler and moist; the tongue gets clearer; and the thirst abates; the patient becomes fully sensible of his amendment; each day brings fresh strength, and convalescence is rapid.

Treatment.—Pneumonia is generally too energetic a complaint to be trusted to domestic treatment; and, in urging the patient to confide in the skill of his medical attendant, I need do no more than just remark upon the practice which most obtains among the best authorities in the profession.

This affection is attended by fever from its commencement, as indicated by the flushed countenance, determination of blood, and other congestions. Though rarely at the present day accompanied by bilious affection, compared with the frequency of the union which seems to have characterized it

at the close of the last century, they are often, but erroneously, supposed, from the nature and color of the expectorations, to be connected.

All practitioners seem to concur in the propriety of bleeding, even in very advanced stages of the attack, from the marked success with which it is attended. Even in conditions where feebleness would seem to contra-indicate the use of the lancet, the prostration of strength is often more apparent than real; but this point must be determined by the medical attendant alone. The irritation incident to the attack is too powerful to be subdued by cupping, leeches, or blisters; and they are rarely resorted to. The administration of emetics in conjunction with blood-letting is much in vogue, and of very excellent effect. Expectorants, squills, mucilaginous drinks, tonics, and similar medicines, are of great advantage in certain stages; opium also, and calomel, either separately or conjoined, as constituting most powerful auxiliaries to the best antiphlogistic measures, are in very extensive employment. But all these things must be left to the judgment of the medical attendant; the complaint being, as before stated, too severe to be left to do mestic management.

The patient will do well to debar himself from every kind of aliment except the mucilaginous matters which enter into the composition of his drinks. (See Appendix.)

CONSUMPTION.

This disease is no less frightful from its severity than from its prevalence; it is estimated that no fewer than sixty thousand persons annually die of it in Great Britain. All classes of persons seem equally subject to it: neither rank, nor age, nor sex, is spared.

It is the angel of death, that breathes the breath of pestilence alike in the chambers of the great and cabins of the wretched. The good, the beautiful, the young, the dissolute, and the aged, all bow down alike before it. The inmates of the palace and prison, the idle, the laborious, the needy, and the rich, are all liable to the swoop of this destroyer in its relentless visitations.

The reflections which crowd upon the mind in dwelling upon the devastations of this fatal complaint, and the misery so widely diffused by the bereavements it occasions, are sad and painful to even those who have but witnessed without personally experiencing them. The blighted happiness of the domestic circle, the smiling content converted into anguish, the gladness of infancy turned to orphans' tears, the pleasant prospects of the future changed to the realities of long years of sorrow; the widow bereft of her only comfort, support, and protection; the husband lamenting for her who has wasted into death before him—are images that arise in melancholy array before the eye as it surveys the withering influences of this great scourge of our country.

No living being is born with all his organs in a perfect condition; each contains in itself the germs of its own destruction, which only require some favoring circumstance to be called into fatal activity. When the balance of health is destroyed by some general shock, the weakest portion first gives way; incipient decomposition begins, and, unless arrested in its course, terminates in the death of every structure. The celerity which marks the progress of this decay depends upon the powers of resistance which the substance inherently possesses, or has communicated to it; and in proportion to the importance of an organ, so does the local disturbance affect, in a more or less accelerated degree, the duration of the existence of all.

Various mental and physical causes produce the impairment or diminution of these energies; and the structures affected become of course altered in their action, the secreting or assimilating functions being consequently imperfectly performed, depraved, or wholly vitiated. There is a certain general depravity of the constitution (in some individuals inherited from birth, in others imbibed from accident), which, by affecting the solids of the body, the circulating fluids, and the secretions, renders it inapt for vital existence; and this depravity is found to exist also in local structures. The term *scrofula* designates this vitiated habit of action; and when the seat of scrofulous taint happens to be in the lungs, and disease becomes established there, that disease is denominated CONSUMPTION. By consumption is meant, not a simple inflammation of the lungs, nor an abscess, which may result from common inflammation, but a scrofulous disease therein, which, commencing in tubercles, terminates in ulceration, and ultimate change of substance, producing death. Death may supervene on pleurisy or pneumonia, or any of the attacks before enumerated under aggravated forms; but the death arising from consumption is consequent upon that alteration of structure now named.

The disease consists of a deposition of scrofulous substance in the lung*—minute granules of a grayish color, semi-transparent, firm, lying close to each other in groups—and all those changes to which its presence gives rise. As the disease advances, these depositions (called miliary tubercles, from their resemblance to millet-seeds) increase in size and number, the groups ultimately coalescing and forming one entire mass; they then lose their transparency, and become thick and of a yellow tinge. A great deal of mystery yet exists about the formation of tubercles; and, as mystery is ever a prolific source of contention among the learnedly curious, much angry disputation has of course taken place on the subject. An ingenious theory, however, has been recently started, which it may not be out of place to mention here.

It is well known, that in the lungs and liver of sheep and other lower animals, is frequently found a very singular animalcular production called *hydatids*, and that, though differing in degree, living animals of analogous growth are frequently found in the human subject. In the latter case, these hydatids, which are formed of a bag or bladder distended with fluid, appear to be propagated by internal buds or growths thrown off from the inner sur face of the parent-animal, and may be compared to a nest of boxes one with in another. Now, an examination of the lungs of creatures that have died of a species of consumption, has led to the belief of the degeneration or conversion of these living substances into tubercles. The irritation induced by the presence of each hydatid causes a cyst to be formed around it, which becomes strong, fibrous, and sometimes cartilaginous; and from the inner surface of this cyst is secreted a viscid manner—the primitive tuberculous deposite—which, becoming thicker and thicker, gradually solidifies, squeezing and killing the enclosed animal, and thus giving rise to a nucleus of tubercles. All this, however, is hypothesis; and in my opinion a very doubtful one. The most practically rational deduction, however, is, that tubercles are one among the many formations† that depend upon morbid or deranged secretion, and are adventitiously produced by a perverted action of the vital powers. These tubercles come on in successive crops, so that, on inspection, the lung will exhibit them after death in three distinct appearances: the young or newly-germinated tubercle not larger than the head of a pin—in

* For an elaborate inquiry into the causes of scrofula, see "*Lugol on Scrofula*," translated by A. Sidney Doane, A. M., M. D., and published by J. S. Redfield, New York, 1849.

† Such as puriform matter, intestinal worms, chalk-stones (in gout), tumors, fatty and various coloring matters, cancerous indurations, false membranes, preternatural ossification, and other phenomena, all indicative of a vitiated condition of the vital powers.

which state it is conjectured they remain for some time, without occasioning any symptomatic indication of their existence; the larger or more advanced crop, increased in size from the gradual deposition of a whitish substance within them, which subsequently softens to the consistence of curd; and the matured state effected by this softening being entirely melted down, the ramifications of the bronchial tubes becoming obliterated by the tuberculous matter in which they are involved.

The size of the tubercles varies from the minute granules before mentioned to that of an almond; but the union of the groups may produce a mass that will occupy the whole lung. After an indefinite time, the tubercular mass softens (generally commencing in the centre) into the fluid before described, in which state it resembles pus, or yellow "matter;" the surrounding membranes give way, and the contents are so discharged into the air-cells or bronchial tubes, whence it is voided by expectoration, the sides of the cavity thus formed still continuing to secrete a fluid similar to what has been ejected. Where the lung is loaded with tubercles, they will be found in all their stages, some on the point of suppuration, others less advanced, and a third crop just deposited. In the majority of instances the tubercles commence usually in the highermost part of the upper lobes of the lung, although it might be supposed, from the gravitation or congestion of the blood to the lowermost part of the lungs when feeble in structure, that the most depending portion would most likely be the seat of the original disturbance; and it is here that the tuberculous excavations are found in vast sizes.

In proportion as one lung, or parts of a lung, become thus affected, supplemental duty of course devolves upon the other in the respiratory process, and (independently of the exhaustive drain thus established in the affected lung) the patient becomes exceedingly debilitated, and unable to endure the slightest exertion. Where both lungs participate in the disease, respiration is performed in some cases by one quarter part of each, thus increasing the patient's distress, and injuring, by over-labor, the healthy portions.

Causes.—The causes of this disease are numerous and various. It may be constitutional, or it may arise from hereditary transmission. The scrofulous taint which is inherited by children from their parents, displays itself at some period of their life, either in inflammation of some gland that suppurates and breaks externally, or in tubercles in the lungs, that proceed to suppuration and ulceration, and terminate in consumption. Alternation of heat and cold, and the exposure to wet and cold, are also among the most frequent causes. The effect of cold applied to any extensive surface of the skin, closing so many pores, determining so great a quantity of blood to other channels, causing disturbance everywhere, especially in a part so delicate and complicated in its organization as the lungs, and so subject as they are to inflammation of the intensest kind, must be obvious.

The inhalation of air loaded with deleterious particles, as evidenced by the health of residents in unwholesome atmospheres, and of artificers whose daily occupations compel them to breathe contaminating vapors,* is another great cause of this disease. The great majority of persons who inhabit large towns and cities, may be considered as following sedentary employments, employments certainly sedentary compared with what nature manifestly designed. The sphere of action varies in extent, certainly; but how widely different it is from that exercise in a pure and undefiled air which the country and a "country life" make so truly and proverbially healthful! It is of no use to quarrel with what can not be altered; else much might be said

* The fumes of metals and minerals which impregnate the air in many of our manufactories are highly pernicious. More than half the Cornwall miners are said also to fall a sacrifice to the mephitic state of the atmosphere in what are called *damps*, while working there.

upon the folly of huddling houses together in all the beautiful confusion of lanes, courts, alleys, and other narrow neighborhoods, to the interest of builders and plot-holders, but to the terrible prejudice of the dwellers therein. "God made the country, and man made the town;" and if wealth may more readily be obtained, or labor more profitably employed, in the close and vitiated dens where art works her money-making marvels, thither poor sordid human flesh will ever be most prone to congregate.

Though the sudden and great changes in atmospheric temperature, to which this climate is subject, are among the most prolific causes of the frequency and prevalence of this disease, a great abettor of this evil will be found in the improper attire, or rather injudicious clothing of the body that so generally prevails, especially among females moving in the middle and upper classes of society. Either to the foolish daring, or to the absence of common discretion, exhibited by "the gentler sex" (who, from the greater delicacy of structural organization, are naturally more subject to this disease than men, in their clothing and conduct) may be ascribed much of its severity in half the cases that occur. From the light, flimsy, and insufficient texture of modern modish costume adopted by them, and their rash exposure to vicissitudes of temperature, it might almost be imagined, that an invasion of this fatal complaint were actually courted.

Symptoms.—The symptoms of consumption vary according to the progression of the tubercles. It is, for the most part, a very slow insidious affection, so that it is very common for the individual, long before any other symptom occurs, to be seized with spitting of blood of a frothy character, scarlet, sometimes profuse, but most usually to no great amount; and this will recur several times before any more distinct symptom of the complaint shows itself, upon which the expectoration usually subsides. One of the primitive symptoms is a short tickling cough, at first so slight that the patient is the last person to notice it. This cough is presently accompanied by a little mucous expectoration. He will probably next complain of a "stitch" in one or other of his sides, generally low-seated; the cough becomes worse upon his being chilled as he passes from one room into another, if it happen to be of a lower temperature than the former, or as he gets into bed, from the coldness of the sheets. On any exertion, however slight, the patient finds that his breath is "not so good," as it used to be, and he complains of languor. The flesh palpably loses its firmness, the arms become flabby, the hair gets thin and weak, and is easily detached by even a gentle use of the comb. A certain degree of feverishness supervenes, the pulse is quicker than natural, and a palpitation of the heart is induced on the slightest unusual exertion. On awakening from sleep, some part of the surface—the chest, face, or forehead—is found bedewed with perspiration. The power of withstanding cold is diminished, and chilliness is complained of, even if a window or door chance to be open. The spitting, which was originally mucous, becomes next streaked with blood; more cough, more difficulty of breathing, and more weakness than before is now perceptible; and the patient begins to find that he lies more easily on one side than on the other. His strength visibly decreases, and he is unable to endure the slightest fatigue. As the symptoms proceed, the ends of the fingers become enlarged, and the joints look larger. There is another very remarkable symptom in the incurvation of the nail; it becomes particularly prominent, assuming the shape of a divided filbert-shell, and softer than when in health. The eyes, too, become very clear and transparent; and hectic flushes are frequent. The weakness of the hair is now such, that it falls off spontaneously in large quantities. The expectoration becomes altered in character and color—sometimes of a green, sometimes of a yellow tint—and more abun-

dant; and the act of breathing or of talking being easier in proportion as free expectoration takes place. The sputa—the matter of expectoration—is occasionally fetid; and if examined will be found heavy enough to sink in water. The patient will perspire on every occasion; and at night, however lightly covered with bed-clothes, the perspiration will exhale in profuse abundance. The tongue is sometimes pale, but often looks healthy.

The mind and the appetite all this time remain unimpaired. It is remarkable how seldom consumptive patients are depressed in spirits as to the result of the complaint; and how slow to anticipate a fatal termination when their friends in despair can see the sure imprint of death upon their countenance. This feeling is quite characteristic of the disease; and is often entertained by the most intelligent persons, and even by medical men, though fast sinking under its attacks, to whom, in practice, this symptomatic delusion has been quite familiar. The digestion often remains good to the very last, the patient eating as heartily as when in good health.

As the disease approaches to its termination, occasional purging will sometimes be noticed. The sputa will become more yellow and green than before, and more abundant still; the cough more severe, the leg puffy, and the body, from excessive perspiration, greatly emaciated. The hectic flush is seen upon the face more frequently, and the patient will suddenly and quietly expire, even in a moment of apparent ease, and in the midst of conversation with those around him; or the disease may be prolonged until life terminates as gradually as an expiring lamp. The duration of all the symptoms just enumerated is variable: they may sometimes exist many years, being suspended by a variety of causes, or may run through their course in a few weeks; in which case the disease is known, in common language, as a "galloping consumption."

Treatment.—The most eminent medical authorities have doubted the possibility of curing pulmonary consumption: and so powerful is the resistance of this disease to every known medicine, every form of combination, every variety of practice, that their doubts have been fully justified. The belief of those, even, who are bold enough to run counter to the prevailing opinion of the profession, by admitting the possibility of a cure, has been discreetly expressed under certain qualifications: that the cure can be effected only after the tubercles have become softened, or during certain stages of the disease, or under certain changes of climate, and so on. And it certainly does require no little boldness to maintain views to which the greatest number are so emphatically opposed. That consumption has been cured is a fact which can be proved, from the appearance of the lungs of individuals who have died from other causes, in which distinct marks of cicatrization, loss of pulmonary substance, and collapsed cavities, indicative of the formation of tuberculous masses, can be traced, the truth of the inference being fully corroborated by the history of the symptoms experienced by the patients and obtained from themselves during life. But whether the remedies were supplied by the unassisted efforts of nature, or by medical skill, is a point not so certainly decided. Such cases sufficiently attest the existence and the removal of these tuberculous deposites, and lead to the important deduction that the presence of tubercles in the lungs is not necessarily fatal. Surely then consumption is a curable disease: the only difficulty is to explain by what instrumentality.

The development of tubercles is certainly the result of a general condition of the body, the perverted or depraved action of the vital powers before alluded to. Now if this perverted action can, in many instances, be traced to causes which positively produce, or which tend to produce it, such as deficient or improper food, impure air, cold, depressing passions, etc., the in

ference is surely sound, that whatever, on the other hand, tends to neutralize or remove such cause (of which this perverted action is but the effect), without endangering life or increasing physical evil, may be legitimately regarded as at least a manageable means toward inducing a healthy action of the vital powers; in other words, that a remedial agent is attainable. Where the cause happens to be *hereditary predisposition*, every effort of art may be frustrated; but where it originates in any of the accidents above adverted to, the practitioner has, I think, fair ground of assumption that a means lies within his reach, by which, properly exercised, the cause may be neutralized and the disease quenched.

The skeptic may urge, that if a tubercle, as such, is curable at all, one case must come as much within the power of medicine as another; but this position is not fairly tenable. If the taint be hereditary, the vice of vital action being consequent upon original communication, the disposition to tuberculous productions exists, as it were, under functional laws inherently operating, and, therefore, capable of opposing a successful resistance to all preventive interference: but, where such a disposition is accidentally induced by controllable circumstances, that resistance is of far less force; because the vital powers have only to be restored to their primitive healthy action, and the adventitious productions become removed, and their return prevented. That it lies within the powers of medicine, in numberless instances, to restore a contaminated constitution to health need hardly be enforced. Why, then, should it augur ignorance, conceit, or rashness, to assert that consumption is, within certain limits, a curable malady, by artificial agency?

Practice has sufficiently proved that there is no one particular specific which can be empirically employed for the cure of consumption in all cases; but experience establishes the fact, that there are several agents, which, applied under favorable conditions, possess a powerful influence in palliating the symptoms, in affording relief, arresting the progress of the disturbance, and, if we are not wholly to refuse assent to assertions made by writers whose testimony deserves the greatest credit, to cure it. The mere circumstance of any one medicine, or mode of living, possessing the power of diminishing or of aggravating the disease, ought to secure our faith that it is at all events manageable to a certain extent; and, this position attained, the practitioner is warranted in assuming that alleviation may proceed to a total extinction of the symptoms, under treatment indicated by a history of the particular case. The inhalation of certain gaseous substances, such as chlorine and iodine has been attended by most favorable results; but it does not, therefore, follow, that in all cases, under all conditions, and in every stage of the complaint, the inhalation of such vapors must necessarily be followed by the same consequences. Everything must depend upon the peculiarities of individual cases; and it is only the possession of an intimate knowledge of these peculiarities, that justifies the employment of certain means as likely to have a remedial influence. There is no course, for instance, more commonly adopted (and none, properly pursued, more efficient) than change of air, travelling, sea-voyages, &c.: but there can not be a question that in certain stages of the disease the irritation produced by such a course must be attended by the most injurious effects: and such a recommendation would therein be unpardonable.

The plans that have been recommended are opposite and innumerable; and it is only by their indiscriminate employment, probably, that they have severally proved inert or baneful. To urge one particular plan of treatment, without knowing precisely the peculiarities of the patient's constitution, would be as gross an act of absurdity as the recommendation of a

quack-pill for the removal of all disorders among all the varieties of mankind; and to state the various treatment applicable under various circumstances would be to write what no non-professional reader could understand, or what, if understood, might be dangerous from misapplication.

As, therefore, I am not writing for the profession, I must necessarily abstain from doing more than simply remarking upon what is usually resorted to, reserving my observations upon the avertive treatment for the section bearing that title.

Every species of counter-irritant has been used, from that terrible practice, the actual cautery, to the common issue and blister. No means is certainly more advantageous as an adjuvant than counter-irritation when properly resorted to; but, both this and the inhaling process (a practice just now of almost universal adoption, and brought into recent popularity more particularly by the mal-practice of a certain luckless rubber, now obscure), generally of conjoined employment, are too dangerous to be trusted to unskilful hands. Chlorine; iodine; naphtha; lime and sulphurous waters, natural and artificial, and used internally and externally; sal ammoniac; subcarbonate of ammoniac; nitrate of potass; hydrochlorate of soda, and other agents—have been severally employed and with various advantage, as tending to heal the ulcers and promote the expectoration. In the Appendix will be found specific formulæ for their administration; but, I repeat they ought not to be resorted to except under professional superintendence.

When the formation of tuberculous matter was reputed to depend upon the presence of inflammation, repeated bleedings, originally in small quantities and gradually diminished, was adopted, as being calculated to allay the inflammatory action; but, besides augmenting the debility always attendant upon the disease, it was found that the abstraction of blood never prevented the formation of tubercles, nor cured them when formed; and the practice is now generally abandoned.

The advantages of sea-air have long been considered great; and a residence at some sheltered part of the coast is resorted to in many cases, as the only remaining means by which the symptoms of the disease can be palliated. That sea-air is of very considerable service there can be little doubt; and the remark has been made by observers best qualified to advance an opinion on the subject, naval surgeons, that phthisis rarely, if ever, occurs during sea-voyages; and it is alleged, moreover, that where consumptive symptoms were distinctly perceptible at the time of sailing, they have yielded to the effects of the voyage.

Consumption is popularly considered to be contagious; and sleeping in the same bed with a phthisical patient is, on this account, generally interdicted; but the question of contagion is very doubtful. Dr. Forbes asserts, that, although himself skeptical as to the contagious powers of phthisis, from never having witnessed, among thousands of cases, one unequivocal instance of the fact, it must be admitted that the thing is in itself neither impossible nor even improbable. At all events it must be unwholesome to inhale air impregnated with the vapor arising from the profuse night-perspirations, which prevail in this disease; and such a practice ought not, for prudential reasons, to be allowed.

Everything must be done, that can tend to invigorate the constitution, to impart nutrition, to sustain the spirits, to tranquillize and amuse the mind, and bring all the functions into healthy action. Travelling and change of air are deservedly estimated to impart essential benefit to the consumptive; but these will be more fully considered in another page. It is scarcely necessary to urge the avoidance of those matters which the consumptive invalid sensitively and intuitively perceives to be pernicious, such as cold

draughts of air, night air, fatiguing exercises, damp atmosphere, and a careful attention to those circumstances which injuriously influence his symptoms; and a resolute avoidance of them, even though the spirits be so light and elastic that he dares the encounter, will be his best defence and protection.

With reference to those general palliative measures which it will be advisable to adopt in this, as well as in other affections of the chest, the treatment will be detailed in the subsequent pages. I can do no more here than repeat the observations before made, that consumption is a disease which, especially in its incipient stages, comes within the remedial power of art; but that each peculiar case requires a plan peculiar to itself.

AVERTIVE MEASURES.

"O how unjust to nature and himself
Is thoughtless, thankless, inconsistent man!"

Though disease in the structures of the human frame may and does arise from many intrinsic and extrinsic causes uncontrollable by man, yet it is unquestionable that by his own acts solely, in the greater number of instances, are the vital endowments injured, and their functions consequently deranged. To the abuse or to the neglect of those means which are designed for the support of animal life, and for the prevention of premature decay, may be chiefly ascribed the disturbances that are most common to its organization. This is a melancholy, but an incontrovertible truth. How often do we impair the vital energies directly by the misuse or mismanagement of those agents which are wisely and beneficially supplied for their sustentation, or indirectly by promoting such a condition of body as is most favorable for the ready reception of disease where it accidentally presents itself—by creating, as it were, a soil wherein its seeds shall most prolifically germinate! How often do we lament over our physical sufferings, and endure long periods of bodily anguish, which a little common prudence, or foresight, or abstinence, would have averted!

Nature is, indeed, bountiful in her gifts to man; and when wisely applied, they all contribute to his welfare; but there is not one of them which, wrongfully appropriated, is not pregnant with certain mischief. Comfort, judging from the movements of the multitude, would seem to be the great last aim of mere humanity; and he who can secure to himself its greatest amount, is esteemed the most fortunate; but comfort is a dangerous toy, and not one in a million can discreetly play with it. The pleasures and the luxuries of life, how delightful are they. But to the many, how perilous is their enjoyment! The capacity of our desires is illimitable; we are constantly striving after the means of present personal gratification (and very miserable do we most commonly make ourselves in the heat of the pursuit), but, so that it is attained, we heed not its distant results. Choice foods variously exquisite, the inspiriting wine, social revelry, indolence, fashion, fêtes, ease —in short all that constitutes the cultivated pleasures of life—teem, indeed, with instant satisfaction; we have large hearts for their enjoyment—appetites all but insatiable; yet there is not one among all the train of them that, used in excess, does not derange that harmony of the organic system which constitutes health. Whatever tends to excite, to depress, or to exhaust the vital energies assuredly impairs them; and he who by inordinate indulgence tortures into pleasurable excitement, that which was destined for simple good by sober use alone, effects by his own instrumentality a certain ulti-

mate injury to his own health, and transforms thereby a blessing into a curse. This, it is admitted, arises not so much from wilfulness as from ignorance or sheer want of thought; and to such an extremity of folly is this sometimes carried, that, when prostrated by sickness of our own production, the consequence solely of our own mismanagement, we affect, nay cheat ourselves into the belief that we really feel a pious resignation under the supposed heaven-sent infliction, and bow with meek submission to a visitation permitted for some wise end, but for which, in truth, we may thank our own improvidence alone.

The approach of evil is seldom supposed till it is present with us. By some blind fatuity, we appear to demand as an inalienable right the continuance of present good, without taking any personal measures to insure it. We see death, disease, and pain, around us in every direction. We have a sigh for the suffering; our bosoms are moved to pity and condolence for the bodily calamities of others; but, while ourselves remain unassailed, we seem incapable of interpreting, as we ought, the language their maladies address to us. By an inconceivable error of mind, we imagine ourselves in the possession of some especial immunity from the attacks of illness, and use scarcely the slightest precaution to prevent its appearance "at home." It is true, that we keep aloof from contagion, and flee from pestilence with due celerity. We avoid the sick-chamber as much as charitable decency will permit. We are horrified at fever; and our fears and prudent foresight are ever ready to invest the commonest illness with infective powers, which as self-preservation is the first law of nature (what sound philosophers we all are where "self" is concerned!) must, of course, be shunned, as by duty impelled. In all these, we see a something palpably, tangibly, dangerous, and avoid it accordingly; but it rarely occurs to us, to pause and reflect and inquire whether by our own actions we may not actually, at such a moment, be affording the main facilities to the induction of what so much alarms us; whether by our own mismanagement and perversion of the agents supplied to us by nature for the support and preservation of health, we are not putting our bodies into that very condition which most surely fits them for the reception or generation of disease.

A man may be very far from being ill, though not precisely "the thing." Perhaps he has eaten too much, or partaken of something that does not exactly agree with his stomach, though very nice, and what he is very fond of. Perhaps he is cold and chilly from having foolishly got wet, which an umbrella would have prevented, had he thought it worth the trouble of bringing. Perhaps he is not clothed as he would wish to be; he has not taken sufficient exercise of late; he has slept too much or too little; he has kept late hours, and the night air was sharp or moist as he returned home; a slight headache and tremor are present though the wine last night was supreme; he has been in some towering passions of late which have set his blood bounding; or depressed by some anxious cares that have made the current sluggish—any of these may have been experienced, but what have they to do with sickness? He thanks Heaven he is in very good health, and hopes long to continue so, and never suspects that they, one and all, possess a specific tendency to destroy the harmony of the vital functions, which, once deranged, may, for aught he knows, never be restored. But he pettishly exclaims, "If we are to worry ourselves about every trivial matter that occurs, and be wretched at every idle nonsense that timid fear magnifies into portentous evil, life would not be worth holding on such terms." That is no affair of the doctor's; it is enough for him to know the indisputable fact, that trivialities such as these exert a dangerous influence over the vital powers, that they induce morbid action in the human structure, that they open up

channels for the influx of diseases, and that they diminish the period of animal existence. If health, when present, is not worth retaining at the cost of a little attention, let the negligent abridge it or subvert it at their pleasure; their recklessness does not render the "trifle" less certainly pernicious.

All that I desire to urge is, that disease may be either averted or induced, according to the existing condition of the vital energies; that those energies may be impaired or improved accordingly as we adhere to or depart from the laws which nature has established for their support; and that every act of abuse, or of misuse, mental or physical, is irreparably injurious, as tending to diminish their duration and power.

By proper diet, we repair the constantly wasting structures of the body.

By proper air, we vivify the blood into which diet is converted.

By proper exercise, we promote the necessary circulation of the blood.

By proper sleep, repose is afforded to the exhausted powers of the body.

By proper clothing, we protect the frame from external injury.

By proper recreation, that gentle relief is imparted to the nervous manifestations which the cares of life tend to depress.

But let any one of these necessary auxiliaries to vital action be applied out of the course which nature has decreed, and the harmony of action that ought to be maintained in the complicated functions of the animal structure becomes at once deranged; organic disturbance is set up, and the vital energy itself deleteriously affected. Whenever injury is once sustained in the animal body, however much or minute its degree, if at all reparable, it can be repaired only by neutralization—the neutralizing of one injury by another; and the fact can not be too strongly promulgated, that medicine, whatever be its variety, as containing nothing of a nutritious property, nothing as essentially necessary to animal life, is but a neutralizing injury. Properly prescribed, it may exert a specific power in counteracting the immediately destructive influence of another disease; but still it is, at best, but a countervailing poison, and the *occasion* for its employment is a disaster which we ought to exercise every available means of avoiding, were it only for the avoidance of the pernicious physic required for its removal.

There are numberless living instances, in even these days of artificial existence, of persons who, by rigidly conforming to the immutable laws instituted for our self-government—and with happiness in their obedience to them beyond what any temporary infraction could afford—have experienced the blessing of unalloyed health, and known of its disturbances but by name. The mental serenity, and the corporeal ease which invariably characterize such instances, are a bitter satire upon the false, dearly-bought, evanescent gratifications which the defiance of those laws may occasionally yield, and would teach a profitable lesson, but that mankind are, in the mass, not overmuch disposed to deeds of prospective philosophy. How should it be expected? If the remonstrance of a sick-bed fail (as too often it does), by what channel may wisdom enter the human brain?

It must be great or long-continued excesses that lead *directly* to the establishment of disease; but to this gross and unpardonable perversion of nature's habits, I am not so much alluding, as to the minor acts of negligence and attention by which the body is brought into a state of aptitude for its reception. The glutton and the gamester, by bodily or by mental intemperance, may perish by their own immediate acts. Let them go; they are irreclaimable: but on those of gentler depravity, whose chief misdemeanors are the (almost venial) desire to enjoy themselves a little now and then, to do as everybody does, to live as everybody lives, and the thoughtlessness that leads to lesser perversions of the vital powers, I would urge habits of reflection and abstinence. "All causes, as well as all the effects they pro-

duce, must have an intimate relation to the condition of the living structures." Contagious disorders attack those only whose condition of body is fitted to receive them by predisposition, else the infection would be universal. The drunkard, the dissolute, the poor, the tainted, are ever more prone to disease where it rages, than those in whom the energy of the vital powers has not been impaired by mismanagement. The healthy man, by a voluntary act, may as readily predispose his body to receive distempers as others; and he has only to indulge in a series of petty excesses, or irregularities of habit, of no apparent moment in themselves, to become a victim to the first disease that floats in the air he breathes.

We have abundant evidence of the impotent condition of the human frame under the attacks of disease, where predisposition happens to be established. How readily do those who possess the scrofulous taint become affected by its causes! How prone, while convalescing, are invalids to relapses! How susceptible to all the common ailments of every-day life are the weak and the luxurious! We have abundant evidence that this state of predisposition is consequent, not upon hereditary transmission only, but upon pernicious modes of living; and yet how very few are led to the inference, that improprieties of habit (very pleasant probably at the moment of indulgence) are the certain prelude to on-coming evils. We have abundant evidence of the danger of incipient disease, in the rapidity with which symptom after symptom makes its appearance, each more aggravated than its precursor, unless the vital energies are sufficiently powerful to repel the attack, or immediate medicinal means are taken to resist the invasion. Surely these facts should induce discretion.

There can not be a doubt that the magnitude or the fatality of the disturbance may be, in a vast variety of instances, ascribed solely to the foolish, the inexcusable, the unpardonable neglect of early symptoms. It is a poor consolation to the occupant of a sick-bed that he imagined the first premonitory signs of his present illness to be unimportant; that he trusted to hope for their subsidence, instead of to his own instant attention. One day's nursing would oftentimes save months of bodily suffering; half-a-dozen little acts of domestic carefulness "taken in time" (words of common use, yet pregnant with wisdom) would oftentimes avert death to the attacked, and long sorrow to survivors.

The observations which follow will be found to apply, not only to such habits of general attention as are adapted to sustain health in an undisturbed condition under the many extrinsic and intrinsic circumstances which else might affect it, but also to the avertive measures necessary to be adopted in the early stages of disease, as indicated by premonitory symptoms.* I have been particular in enumerating the variety of such signs yielded under the several affections of the respiratory organs, before particularly described, with a view to make more distinctly clear the nature of those personal attentions, and the medicinal (domestic) treatment most applicable to the degree or kind of the attack as exhibited by the symptoms.

All the most important conditions, states, and modes of living, which, affect the functions of animal structure, are noticed; and, where I have not descended into minute particulars, I have endeavored that the invalid should be led to infer them from the general tenor of my remarks.

But I can not too strongly, too earnestly, insist upon the necessity of an immediate attention to the first indications of disorder, as the most effectual repellant. Promptitude in this respect is of more value than the after-consultation of a score of doctors.

Diet.—From the peculiar and extraordinary powers of the digestive ap-

* Vide Formulæ.

paratus to convert and assimilate food into the blood, by which the animal structures are supported, repaired, or injured, as well as from the nervous sympathy that subsists between the stomach and every organ of the body, it is very evident that any vicious disturbance of its office must necessarily act as a powerful exciting cause to local or general disease, and most especially so when a predisposition thereto exists. The various effects of food and drink upon the human frame, as regards both quantity and quality, are daily and hourly manifested among us by the constantly-occurring petty derangements of health which range under the common technic—*indigestion*. Whether we excite the stomach by too much, too various, or too stimulating a food—or whether we depress and debilitate its powers by insufficiency of supply—the general health of body must needs become deranged; and those in whom lurks a predisposition to some local disease, rarely continue long as simple dyspeptics—dyspepsia indeed may be present in combination with the ailment it originally induced; but where the predisposition existed it soon ceases to be the primary disorder.

Unless illness is positively established, it is seldom that we pay much regard to the stomach or to the effects upon it of our ordinary food. Very few persons of even mature age bestow common pains to ascertain those effects by reflection; whereas, if we more commonly watched our sensations after meals, and by *noting* the consequences of various foods regulated our diet accordingly, we should save ourselves a great deal of uneasiness at a very small expenditure of trouble; yet how rarely is this little act of prudence done!

The stomach not only varies under different constitutions, instanced by the varieties of appetite, but it is occasionally subjected to morbid changes of action, so that the diet which most usually "agrees with it" may become irksome and offensive. It is these peculiarities which render any general dietetic laws of such variable value; and, unless we prepare a code founded upon self-practical experience, an abidance by the regulations of others may prove of little service. We know, indeed, that certain foods and drinks exercise (*generally*) specific influences; salted provisions, for instance, give rise to scurvy and chronic diarrhœa—excess of spirituous liquors to drunkenness; but experience shows us, moreover, that the food which to one individual affords the best nutriment, and is least difficult of digestion, operates adversely to another. These general influences are well understood, and form the bases of all the dietary tables that are extant. It is well to know them, but it is better, knowing them, to inquire by personal examination, whether the effects of divers foods upon our own stomachs correspond with those which they have upon the general stomach, and to chart out our own tables accordingly. In a little work which I recently published,* the various subtances which enter into the composition of ordinary diet and their influences on the animal economy are elaborately considered, and to it for particular information upon the subject, I must refer, confining myself here to observations of a more general character.

Though by mental attributes and mental culture man is placed in a state of immeasurable superiority to the lower animals, it is remarkable in how few instances he cultivates a superiority to bodily health. It is rare that the brute species suffer from dietary excesses; an instinctive perception (would that man possessed the blessing!) seems to guide them in the exercise of their feeding powers, by which the "what" and the "enough" are clearly prescribed and never exceeded; so that throughout all the tribes of beasts, birds, fishes, insects, and animalculæ, it is very questionable, whether one solitary dyspeptic patient could be found. They almost all (unless prematurely de-

* Guide to Health and Long Life, or what to Eat, Drink, and Avoid.

stroyed by the strength or strategy of others *for food themselves*, or by accident) attain to the utmost limit of life; and, while it endures, they enjoy a state of sound health by the use of those powers which man delights to abuse.

It is by excess and by variety in feeding, that we lords of the creation are so miserably inferior to our despised vassals in point of animal condition; and, although the thought is not a little humiliating, we shall ever continue in that inferiority so long as we voluntarily sacrifice health t appetite. Civilized life has reached with us a pitch of refinement, that, in the eye of *mind*, the body is too worthless and contemptible to be solicitous about; and accordingly the avowal of a fit of intoxication, or an act of epicurean repletion, is a thing to smile and joke, but not to blush at!

As in all pleasures, it seems to be their very property to lead to excess of enjoyment, so is it with the pleasures of the table. How rarely in present health are they resisted! Yet in these, as well as in every other, the greatest amount will be found in moderation. Were our daily diet to consist of simpler articles and smaller quantities, we should prolong life, and most certainly secure one of its chiefest gifts, health; but while we continue to pamper the appetite with the savory dishes, luxurious viands, stimulating condiments, dainty cookeries, various and spirituous drinks, in every variety of condition, which characterize the table of present times, disease, direct or indirect, must inevitably result: and the worst of all this is that we know it, and, knowing, will not abstain. Repletion of any kind is deleterious, whether in eating or drinking. If the food be innutritious, it needs no very refined philosophy to prove the evil; but if it be nutritious, even highly nutritious, it is not to be supposed that the more we take of it the more health we shall secure, the better we shall be. Food is to be employed simply to supply the continual waste of the animal substance, to form so much new blood as will be sufficient to replace the quantity lost, and to repair what has been rendered unfit for the purposes of vitality. Now a redundancy of blood may be as highly pernicious to the health as a paucity of blood, the result being the same, though the effects are varied; and it is not very difficult to infer, that over-quantities when "made" must be very hurtful to persons predisposed to pulmonary disturbances; for, as every drop in the body is passing continually into the lungs to give out its gathered impurities, and to become revivified for further uses, the supplemental duty which that organ has therefore to perform must of necessity produce (what over-labor always produces) debility and exhaustion. The ultimate effects of repletion are actually anticipated by present *sensation*, the oppression and discomfort invariably perceived after "too hearty" a meal; and, in proportion as the excess is repeated, by so much the more speedily, does general disturbance of the health become permanently established. Intoxication is not less pardonable in a moral point of view than dietary indulgences, though the result of intemperance is perhaps more immediately visible in the former than the latter. While the one is more rapid in its effects—the rotten liver, nervous prostration, mental imbecility—the other is slower in degree but not less certain. Slight fits of "indigestion" are at first felt, with the usual accompaniments of a little headache, a little heart-burn, a little pain, low spirits, oppression, qualmishness, distress; then come paroxysms more severe and more prolonged, shortness of breath, fulness, corpulency, blotched skin, restless nights, and days of wretchedness; the appetite becoming all the time more and more depraved in its cravings, still yearning for what has imparted it, and what, if granted, must increase the injury. The system now begins to sink, and if there be any predisposition to general or local disturbance, especially among the organs of the chest, some

resisting power gives way, and the rudiments of disease begin to exhibit themselves—when, or to be at all eradicated, who may tell?

While alluding to intemperance, or the want of proper forbearance in the use of food, the abuse of drink, too frequently its accompaniment, may, perhaps, not be improperly adverted to. That water was originally designed by nature to supply the waste of the animal fluid secretions, is evidenced by the singular and almost universal disrelish which every creature, below humanity, exhibits toward other liquids. No other fluid so effectually allays thirst as water, or more powerfully assists the process of digestion; in fact, whatever drink we take, however compounded, nature extracts the *water* for her purposes, leaving behind the substances held in combination, to act according to their specific influences upon the alimentary canal. But, when once we appreciate the effects of dietary stimulants, it is rare that unadulterated water continues to be palatable; and the impetus of social artificial habits becomes of sufficient force to generate a total disrelish for pure water, and a craving for drink of greater stimulation. If once this craving become established to any inordinate extent, the strongest constitutions will become prostrated; and where there exists a predisposition to disease, especially of a pulmonary character, the most rapidly fatally consequences are to be apprehended.

So far as appetancy alone is concerned, intemperance, either in drink or diet, is an act of egregious folly, because we know that the amount of gratification which results from it is greatly counterbalanced by the extent of penal suffering which is sure to follow. But intemperance is worse than folly; it is assuredly an act of deep criminality. It leads to premature decay, and the guilty creature who, by his own suicidal hand, suddenly arrests the life he has made insupportable by his own misconduct, is not many degrees more culpable, in a moral point of view, than he who by long-continued intemperance perishes beneath the slow but certain poison of dietary excesses. People do not eat and drink, to be sure, with the aim of self-destruction. Perhaps they have been often conscious of their excesses, and have resolved to abstain; they may often have determined to resist the cravings of their passion and to follow a better course of life; but "the things they could but purpose they postponed," and all at once they find themselves on a compensating bed of sickness, where they heroically resolve, and re-resolve, when resolution may come too late.

Although these observations are somewhat severe, I am satisfied of their justice; and I wish it to be understood that in making them I am not so much alluding to the professed sot and glutton, as to him who is "only" occasionally freshened and excited by such indulgences. The soundness of these views may be denied, by those who are disposed to instance the cases of those "hard livers and deep drinkers" of advanced age, now and then met with in the world; but I am persuaded that there is scarcely a single example in which it will not be found that the individual signalized has been engaged in some of those hardy and healthful employments of life which fortify and invigorate the body, and enable it to resist the injurious impressions of such abuses. It is to the person of sedentary habits, the resident in enervating cities and manufacturing towns, where the body may be said to merely vegetate, that these impressions have such a fatal tendency; to such persons, indeed to all, and most especially to those of delicate health, I would denounce the use of spirituous liquors as the most ruinous "gratification" that can be experienced; if they could see what is daily witnessed in this city, during post-mortem examinations, of the appearances presented by the livers of persons who have been addicted to ardent *spirits*, varying from that of the professed dram-drinker to the one or two grog man, in all

their shades of intermediate distinction, they would label every brandy, rum, and gin bottle in their cellars with the word "POISON."

While too full or too rich a diet oppresses the digestive powers, a poverty or insufficiency of food will prove injurious by the proper degree of nutriment for the repair of the animal machine being withheld; and patients upon the first approach of illness (not decidedly of an inflammatory character) should not be induced to deny themselves that proper supply which the waste of the various secretions will require.

Great attention should at all times be paid to regularity of habit in the several meals, particularly the dinner. However nutritious the food may be and proper in quantity, if it be taken at irregular hours—dining at three o'clock one day, and seven the next, and so on—ill consequences are sure to betide. The stomach is easily educated to expect its supplies at a given hour; and at this hour it will be found in the *best condition* for the performance of its office. Its energies become paralysed if played with; when its strength is best fitted for labor its healthy cravings should never be disregarded.

It will be well never, if possible, to subject ourselves to violent changes in our modes of living, proceeding suddenly from a simple to a complicated diet, or conversely; particularly if we happen to have turned from active to sedentary employments, or from tranquil and regular habits to a life of bustle and comparative confusion.

Moderation, simplicity, and regularity, in all matters pertaining to diet, are the three great laws, which, if implicitly obeyed, will most certainly conduce to the maintenance of present health, and to its restoration where symptoms of impairment are experienced; acting upon these fundamental laws, and if the suggestion before thrown out of each individual noting the various effects of his daily diet be attended to, I am satisfied that the most salutary consequences will be experienced.

In the appendix will be found three little dietary tables for the guidance of invalids, that I have long been in the habit of recommending.

TEMPERATURE—CLOTHING.—The amount of animal heat in the internal parts of the human body in all countries, in every variety of climate and every change of season, in summer and in winter, under the burning atmosphere of the torrid zone and in icy Lapland, is the same. By the efforts of both nature and art is this internal temperature maintained, and its disturbance resisted; in hot climates or seasons, cutaneous perspiration is set up to a degree proportioned to atmospheric heat; in cold, recourse is had as well to artificial clothing and artificial heat as to the increase of organic activity, in order to preserve the animal temperature at one uniform and equable state; and whatever disturbs this state of necessity, interferes most perniciously with the corporeal functions. Though the healthy and robust possess strong powers of resistance to such influences, yet we have daily evidences to what an extent the physical energies of invalids are prostrated by them; to the one the cold and bracing air of a winter's day imparts that elasticity of action, that general glow of animation, which removes the sense of labor from even violent exertion; while to the other the same degree of atmospheric temperature is either insupportable or attended with the most injurious consequences.

We can not have a nearer or more direct proof of the effect of low atmospheric temperatures, in the abstraction of animal heat from parts of the human body that are exposed thereto, than the familiar example of our own red noses on a frosty day. No sooner is that most conspicuous feature made sensible of the presence of cold than it immediately sends off to the sensorium a message of the attack, accompanied by a call for succor; the brain

promptly issues its commands, and a plentiful supply of blood is straightway directed to the capillary vessels of the injured organ, and an *inflammatory process* is at once established by way of resistance to the enemy. And as with the nose, so is it with all other parts of the body directly exposed to cold in a state of nudity, or indirectly, to a degree, by insufficient clothing. Wherever proper protection is not afforded, the abstraction of heat is the consequence, and, if it proceed to excess, disturbance of health comes on as a concomitant.

The costume of all countries was originally adapted to the peculiarities of climate, and, whatever be the diversity of modes, designed as a protection to the body against atmospheric inclemency, vicissitudes, condition, and changes. In proportion as the atmospheric temperature is low or high so will be the clothing regulated for imparting warmth. Fashion and caprice are continually changing the manner of dress; but the amount of clothing will always depend upon the degree of cold present in the climate. The sense of cold is of relative signification, depending not so much upon a thing *imparted* as upon the disposition of the air or any other substance to abstract from the body the caloric present. The bar of iron that we touch is not colder than a piece of wool, both being of the same temperature; but the impression of contact is dependent upon the relative conducting power being greater in one than the other; the iron imbibes the matter of heat with great rapidity, and hence we have a vivid sense of cold directly on touching that substance; while on the other hand we bear with composure and with even little impression the contact of wool, in consequence of its being inapt for the transmission of heat.

The skin exists, not only as a simple covering to the body, it has a very important office to perform in the animal economy in allowing the free escape of altered fluid; and anything that interrupts its free exudation materially disturbs the harmony of the circulation. The effect of cold on the skin, is seen in the constriction that immediately takes place in all parts that may happen to be exposed to it; and the appearance which it assumes, known by the name of *goose-skin*, is an evidence of this constriction; as the skin thus becomes shrunken and contracted in extent, the *pores* must necessarily become closed to a degree that prevents the escape of the perspiration; and this unnatural detention must, of course, affect the balance of power that ought to be maintained in the circulation: this great function becomes immediately thwarted, and wherever functional derangement of any kind is produced, something is sure to give way, some part is sure to suffer.

The great object of clothing is to afford that protection to the skin, which shall prevent the loss of an undue portion of the animal heat, and to allow the unobstructed escape of what is called *insensible perspiration*, perspiration which passes off in invisible vapor, and is constantly occurring from all parts of the body. Human art has done marvels in the fabrication of materials of clothing as a substitution for the fish-skins and furs employed by man in his primitive state. The great desideratum in clothing is that it shall impart warmth, or, more correctly speaking, resist the escape of caloric from the body, without burdening it with a weakening load of heavy substances, which would interfere with the activity of the limbs and cripple their motions.

When poverty does not prevent, nor fashion interpose, we find that every one is so clad as best comports with the claim which nature makes for clothing, according to the variation of the temperature, or the climate in which he lives; he does not, to be sure, add to or diminish from the quantity at each degree of the thermometrical change; but, at every important variation, so will he vary his clothing as perception, the sense of comfort, dic-

tates. It is in the upper classes of society, and especially among the female portion of European nations, that, moved by the iron laws of *ton*, this pernicious abandonment of salutary attention is most conspicuous. It were ungallant to question the wisdom of lady legislators in our own country; else it would be interesting to inquire into the extraordinary principles of action by which, in relation to dress, the fair sex seem to be guided in this intellectual century. If truth could be fairly stripped, it is most likely we should see, that the costume of either sex depends in character and mode upon what each deems most pleasing to the other's eye; and yet we must surmise that this can not be, else surely ladies would never dress as they do. Look at that *nil ultra* of their hopes, a slender waist, one glance at which to a medical eye is as a paroxysm of suffocation. With what anxiety and at what cost of comfort do they not strive to attain to the smallest possible amount of diameter! And yet there is not one man in a million (however much the study of beauty, as displayed in human conformation, may have been his delight) who esteems it a grace.

If there be one part of the human frame more than another that most needs the protection of covering, it is assuredly the whole region of the thorax, and this of all others seems most neglected. The upper lobes of the lungs are located as high within the chest as the collar-bones, so that a very considerable portion of that organ possesses ordinarily no other clothing than the integuments with which nature has girded them, while those portions which are contained in the lower parts of the bust are comparatively protected in an inordinate degree; and when we consider the very extensive surface of the skin comprised in the throat, neck, shoulders, and upper back, which indomitable fashion has legislated shall be denuded of almost all artificial covering—the sensibility of the surface to atmospheric changes—and the sympathy that exists between it and the organs, so complex in structure, and so important in functions within—it is not very surprising, that the constitution should become impaired through this capital neglect. The dress of females* is unfortunately, in most seasons, an inadequate security against the weather, more especially in the winter and spring; and by one of those caprices of taste, which are so unaccountable to sober-thinking people, it is the custom to be over-clad in one part of the day and under-clad in another. If we compare the high dresses usually worn in the morning, the neck carefully protected, and the chest duly defended against the few aggressions which can be made in the regular temperature of home apartments, seldom quitted in the earlier portion of the day, with the afternoon and evening attire, when the surface of that important region of the body is carefully unclad, and either not protected at all, or covered by fragmental fabrics of such gossamer texture, that their entity is more than doubtful, it will not be difficult to imagine how highly pernicious must be that undress which is, by a strange misnomer, denominated "dress," not only directed in relation to its present inaptitude, but indirectly, by contrast with the discarded warmer habiliments of the morning.

How many hundreds of victims to pulmonary consumption may trace its origin to a "London season," for instance, the *gayeties* of which may only be enjoyed by the perilous exposure to daily and nightly alternations of temperature in insufficient clothing! Emerging from apartments heated by numbers and action, into a temperature twenty or thirty degrees lower; and in their ride homeward inhaling an atmospheric cold, moist, and pregnant

* It has been remarked, that females belonging to the denomination of the Society of Friends, are less subject to phthisical ailments than most other young women; and this appears chiefly attributable to their dress, the simplicity of which, as well as the protection it affords to the neck and chest, is well worthy of imitation; and, together with many of their habits, is highly conducive to the maintenance of health.

with all manner of evil, the miracle is not how pulmonary disease should, under such circumstances, be induced, but rather how it could be otherwise. How little do mothers think, as they bend in anxious solicitude over the sick-bed of a beloved child, that her wasted frame and ruined health are the consequences of parental incaution, the inevitable result of the neglect of clothing in atmospheric alterations, which, instead of prohibiting, she perhaps more than countenanced! But no man ever yet stemmed the tide by talking; and he may with much about the same success rail against the ordinances of that Moloch—Fashion. If, however, he can not cure the evil, it is no reason why he should not proclaim it; and, if young ladies must be gay on such wise, they ought at least to be made sensible of the costly price of their ecstasies. Nature is wonderfully provident in all her designs; but, though she permits the African savage to live unclad, it does not follow that our Kamtschatkan brethren may dispense with their furs and fish-skins. We must conform ourselves to the climate we live in, be it torrid or frigid. We have the power of accommodating ourselves to extraordinary changes of temperature and condition *by degrees;* by degrees, we might accustom ourselves to inspire the fresh breezes of the north-pole with Captain Ross, or to discuss our mutton-chop with M. Chabert, in a baker's oven of 220° Fahrenheit; yet, when heated to the perspiring point, we dare not *suddenly* swallow an ice-cream, but at the body's peril. If we live in a variable climate, we must adapt ourselves to every important atmospheric transition; or the neglect, sooner or later, will inevitably lead to the disturbance of health.

There is another point which ought to receive much attention; namely, the importance of wearing shoes and stockings of stronger material than is generally employed, even though it do somewhat conceal the beauty of a finely-turned ankle. These portions, especially, of a lady's attire are generally far too thin and fragile to resist the cold and damp which so often occur in this climate. There is a wonderful sympathy between the feet and the surface of the body; so that if the former be cold the whole skin is wont to be affected in temperature; and from the consent existing between the skin and lungs, the frequency of coughs, colds, and chest affections, arising from getting wet or damp or cold in the feet, is attributable. In wet or damp weather especial care should therefore be adopted, by wearing leather clogs and thicker stockings, so as not only to prevent the *wet*, but to retain the natural heat of the foot. This precaution will be found an effectual antagonist to the aggression of "colds." The blamable absurdity of sitting in damp shoes or stockings is too proverbial to be dilated upon.

It is surely unnecessary for me to go into every particular of common attire; the *feelings* of every individual, healthy or invalided, will be the best criterion of the description and quantity of clothing most suitable to their condition and to the changes of climate, season, or situation in which they may find themselves. If they will but pause and reflect awhile, prudence, like the voice of conscience. will whisper what is wisest, and they must be prepared to take the consequence of every violation of its commands.

Though insufficient clothing is necessarily attended by evil consequences, we must not proceed to the other extreme, of using an incrdinate quantity of clothing, which is equally pernicious, as tending to relax the system, and to produce a vitiated susceptibility to injurious external impressions, together with a predisposition to those diseases which most readily attack persons of debilitated constitutions. Too much care, also, can not be taken to avoid alternations of light and heavy clothing; the shocks imparted to the frame by such changes, the sudden chills consequent thereupon, and the checks given to cutaneous perspiration, are dangers of too great importance to be overlooked. The attire should always be adapted to the climate, season,

and situation in which we happen to be placed. SENSATION will be an unerring guide in regulating it. The silly daring which some persons evince in disregarding this wholesome attention to dress is very perilous; it must lead to ill consequences, experienced perhaps not at the moment, but to be experienced at a future day, most certainly.

Young persons are generally apt to be too inconsiderate, or too confident in the strength of their constitutions; too disposod to jeer at the musty regulations of discreet maturity; but, if this sound caution in matters of dress can not be induced through the agency of reason, parents and heads of families at all solicitous about the health of such giddy folks should have recourse to a little gentle compulsion, by way of enforcing the disagreeable necessity.

While I am alluding to the attire of young persons, I can not repress a few remarks on a habit as common as it is absurd—tight-lacing and tight-buckling—and now-a-days unfortunately prevalent among the adolescent or both sexes.

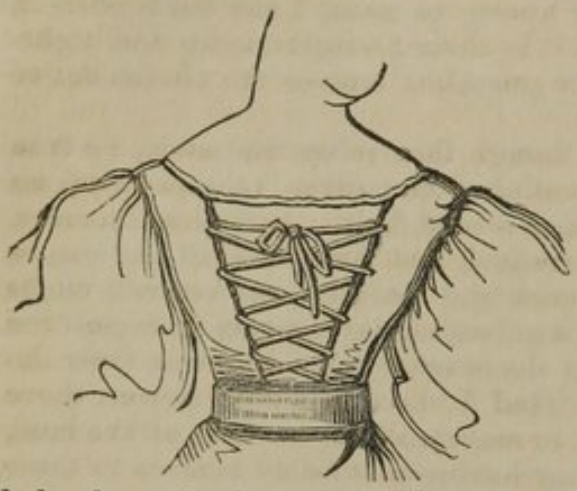
In whomsoever rests the sovereign power that rules the mode, be it in lady, lady's maid, seamstress, or the cunning in pattern, that power is no less despotic than its wisdom is oftentimes sore at fault. In civilized society, NATURE, poor thing, is most uncivilly treated, and ART does all she can to abuse her. Where the former is in such sad disfavor, her votaries ought manfully to stand forth in her defence, and, without arrogating to myself the character of a champion, I can not but do as other folks do when their desires are frustrated, *enter my protest.* Had I the compelling power, there should not be a milliner, corset-maker, or *marchande de mode* in all the land, entitled to practise her profession without having previously entered to three courses of lectures at the least on the science of physiology; in order that, being made acquainted with the murderous work they are about to perpetrate, they should not afterward assign, in extenuation, innocence of intent or ignorance of the effects of those barbarities of civilization which are displayed in fashioning female costume.

I can not but advert to that instrument of torture and premature destruction—STAYS; and I know it is necessary to approach the subject as gingerly as may be. The flexibility of the ribs admits of their contraction by artificial means; and when pressure is applied externally, the cavern of the chest is of course proportionally lessened in capacity. The chest, as before stated, is the habitation of the lungs, and from the peculiarity in action of that organ, an ever-continuous expansion and contraction are necessary to the performance of their functions.

It is evident, from their very structure, that nature designs this alternation in capacity and content of surface, to be freely performed in carrying on the process of life (to make a phrase), and that any disturbance or impediment to their exercise would be dangerous to the vital powers. Nature is a wonderful economist, and never makes a thing to waste; and unless such an extent of internal surface were necessary, it would not have been afforded. Now, with all possible respect to those non-natural dames whose vocation is in the fabrication of corsets, I would ask them whether any contrivance could be more capitally devised to obstruct the functions of the lungs (and, by obstructing them, destroy life) than a pair of corsets—if I am right in assuming they go in pairs. I do not go to impute to these *artistes* a wilful intention to either destroy life or impair health; neither is it my business to inquire into the motives by which they are actuated. "Support," I believe, is the assigned reason; but the philosophy of that support which of necessity *distorts,* is not of easy comprehension. It is remarkable with what pertinacity art desires to reverse nature. If the configuration of the chest be regarded, it will be seen that the lowermost portion of it is far and away the

largest in diameter:—on the other hand, if you will notice the first young lady of fashion you may meet in Regent street, you shall find that ART—perverse, envious, invidious, revolutionizing art—has turned Nature altogether topsy-turvy, the configuration being totally reversed, as is illustrated by the annexed diagrams.

It is clear as daylight that something must give way under the new *rêgime:* either the lungs, which occupy so great an extent of the chest, must waste away to impart a *waist* as waists go in these days, or the heart must shrink in size, or the upper ribs must be pressed outward, or some means or other must be afforded to compensate for tight-lacing.



Delicate as the structure of the lungs is, and thin as the walls of each air-cell may be, we find that nature is so tenacious of any interference with this nice and wonderfully-contrived organ, that the bony framework of the body shall itself give way and be displaced, to accommodate the action of the lungs—the vertebral column itself shall be disjointed rather than the lungs shall not have ample scope for action; and there is not a *tight-lacer*, however fair her form may appear to the casual beholder who is not "out," and whose figure is not to an extent deformed.

Nature, generally speaking, is exceedingly kind and good-tempered. She will do all she can for her refractory children, but if they abuse her too long or too much, she will inevitably take a fit of the sullens. A draught of cold damp air is all that is sufficient, as an exciting cause, to prostrate her powers. The lungs, the cramped, fettered, and jammed lungs, that have had no fair play for many a season, become affected, and, need it be doubted, that disease will be a hundred-fold more intense in those who have suffered from mechanical impairments than in others who have ever before enjoyed a free and uncontrolled exercise?

The apparent invidiousness of these observations, as applied to the gentle sex, is removed by the unmanly practice which just now prevails among the beaux of the day, young and otherwise, in the use of *belts*—the masculine for *stays*.

A late eminent writer on consumptions used to be enthusiastic in his advice upon clothing, particularly with regard to flannel; and certainly his advice was as sound as it was enthusiastic. Flannel, like wool, is a *non-conductor*, and is consequently of the highest benefit, in preventing the loss or waste of animal heat: it not only possesses this advantage, but it is most convenient from its *lightness*. The body of sensitive persons should be almost *incased* in this fabric in the colder seasons of the year. Some individuals, however, have so great an irritability of skin they can not tolerate it; but its usefulness would be found nothing impaired by *lining it* with any fabric of sufficient texture; by this means the minute fibres of the flannel are preserved from titillating the skin.* The use of flannel is especially recommended to persons engaged in laborious or other employments by which perspirations are apt to be induced, as it effectually prevents those chills which are experienced upon the subsidence of such perspirations, and averts the colds which are thereby occasioned.

* A thin vestment of chamois-leather will be found a good substitute for flannel.

As all sudden transitions from one extreme of temperature to another are baneful, the greatest attention ought to be paid to a corresponding alteration in dress, so as to accommodate ourselves to the change. It is a fine thing for the rash and the bold to boast that they can leave a well-heated apartment for a cold and damp atmosphere without the protection of an additional garment; they think it may be done with impunity, but they will find themselves one day deceived; as every cause must be attended by an effect, they will have the sorry satisfaction of ascribing with tolerable shrewdness some attack of present illness to a past act of indiscretion such as this, and then the true value of the boast will be duly appreciated.

Great care should be taken in regulating the temperature of apartments, especially in wet and damp seasons. There are many individuals who are so precise in their regularity and habits that fires are to be lighted only on a certain day; no matter what the season may be, howsoever cold or howsoever wet, the first of October or the first of November *is their day*, and till that day arrives they are imperative, though themselves and all the household may have been shivering for a month before. This is a species of wisdom which, as I can not comprehend, it would be presumptuous in me to question; they may be right, but I think it monstrously wrong.

It is a dangerous luxury to recommend, but allusion can not be too strongly made to the ill effects of leaving a comfortable warm drawing-room and retiring to a cold, miserable, damp sleeping-room; I know that fires are a sad soiler of the snowy whiteness of bed-furniture, and many worthy matrons are sorely annoyed thereby, not to mention the discomfort and vexation of spirit so caused to those respectable gentlewomen called housemaids, who love leisure more than labor. But, to persons any way predisposed to consumption or over-susceptible to cold-catching, I would strongly recommend a little persuasive eloquence in endeavoring to appease the scruples of the one, and a bold defiance of the sulky mutterings of the other; by all means let a fire be lighted in the sleeping-room an hour or two before retiring to it: happy are they who can procure a similar comfort in the morning.

Damp sheets and damp linen are the very lairs in which the grim destroyer hideth his most deadly weapons.

It must not be presumed that I am recommending such a degree of caution as to dress and household regulations as should unfit us for those encounters of atmospheric vicissitude to which we are all more or less exposed; that we should fly every gentle fall of rain or nvoid every breeze that blows; that thermometers should hang in every room, and every door and window be made air-tight. All I urge is that we should place ourselves in the best possible conditions to resist the extremes of atmospheric change, which, unresisted, might act injuriously to health, or predispose the body to structural disturbance. To the healthy I would say, Shun every relaxing indulgence in these matters, and sufficiently invigorate the frame to repel injurious impressions from without, but be not rash or indiscreet; to the invalid, Take every precaution which your debilitated constitution requires to avert the further aggravation of that debility.

Change of Air.—The effects of change of air, in either inducing or curing disturbances in the animal economy, are too well known to require any very detailed statement. The beneficial influence of a mild warm atmosphere on such extensive surfaces as the skin and the respiratory organs, in increasing the circulation of the blood, and consequently relieving internal plethora, in diminishing the irritation which may be present in the air-passages and lungs, and the effect on the nervous system, occasioned by change of scene and of employment, the removal from the usual cares which attend business, and the exhilaration of hope, must needs be great; while on the

other hand the change to a raw, humid, and impure, or uncongenial air, can not fail to be conversely injurious.

As a remedial agent, change of air is frequently found to be of more value than medicines, of itself apparently effecting that cure which the administration of the latter, however judiciously intended, was incapable of producing. But a great deal depends upon the locality of the situation to be advised. The favorable influence of "native air" is very frequently witnessed upon patients, although it may not be remarkable for salubrity or purity. It is not the mere change of air that will be beneficial; it must be where the atmosphere is mild or sharp, or dry or bracing, as may most comport with the patient's peculiarity of constitution, or the stage of the disease under which he suffers, or the progress of convalescence.

In health, the injurious effects of impure atmosphere are more easily resisted, and are less conspicuous, but in illness they are more immediately perceptible. While under even ordinary circumstances the beneficial influence of change of air is remarkable, that influence is rapidly and vividly perceived during indisposition, and it is sometimes, therefore, empirically recommended under conditions which scarcely justify the advice. Everything depends upon the state of the patient and the quality of the atmosphere into which he is about to be removed.

In cases where the invalid has resided in a close confined neighborhood, in a situation where the atmosphere is liable to be impregnated with impurities, where deleterious exhalations are frequent, in marshy localities, or in the immediate vicinity of stagnant waters, for instance, there can be little doubt that almost any change must be beneficial; but where nothing of this sort is prevalent, and where it is sought to remove him from a spot not particularly remarkable for insalubrity of air, to a situation calculated by its dry, or warm, or invigorating, or keen atmosphere (as may be variously indicated) to promote a cure, care must be taken to select such a situation, the atmospheric peculiarities of which, shall be most consonant to the disease and the constitution of the patient. An indiscriminate change may not only be attended with no benefit, but with positive injury; the languid or the irritable are incapable of supporting a sharp keen air, though to those whose constitutions are of an opposite character it would be found advantageous. Instances are numerous where London invalids have been incautiously referred to Brighton, or probably from its comparative contiguity have themselves selected it, as a situation likely to be of service in restoring health. The transition, however, from the close and loaded atmosphere of a crowded city, to a locality so remarkable for the comparative sharpness of the marine air has proved insupportable after a residence of a few days. When the air-passages are in an irritable condition, and the lining mucous membrane is in a state of great sensibility, a keen and dry atmosphere is calculated to aggravate the symptoms, and should by all means be avoided; if that excessive irritability do not exist, on the contrary, such a change might be freely recommended as a probable means of assisting the curative process.

It is a vulgar error, induced possibly by the known beneficial influence of change of air generally, to suppose that sea-air is in all cases preferable to inland atmosphere. Many persons, even in robust health, are unable to support a residence on the coast; while others, on the contrary, notwithstanding the unfavorableness of season or situation, derive manifest advantage from it; great attention ought, therefore, to be paid in selecting such a situation; and if the symptoms be at all aggravated thereby, the patient ought not to remain, but to repair to a milder region inland.

The seasons ought to go far in determining the selection to be made; the

south and southwest parts of the English coast have been very justly recommended as a sojourn for invalids during the autumn and winter quarters. During the spring an inland residence should be sought in localities conspicuous for being sheltered, and possessing a mild and dry atmosphere. In the summer season high and mountainous districts will be found greatly advantageous.

When illness is of long duration the benefit of a change of air is not likely to be permanent, if the patient confine himself to but one change; his constitution will become speedily identified, so to speak, with a new atmosphere, and the benefit be so far curtailed. A continuous succession of changes in such cases will be found of essential service in effecting convalescence. I once knew a young lady, whose health before marriage was very delicate, and who found, after exhausting the advice of the most skilful practitioners, that nothing but this succession of change was effectual; and her practice was, having fortunately relations both in London and in Plymouth, to make alternate visits of four or five weeks' duration to these places; by this means she was enabled to secure an uninterrupted continuance of good health, which a continued abiding in either would have disturbed.

Disease oftentimes presents itself of so fixed a character that the peculiarities of foreign climates have been found alone efficient in displacing it; and happy are those patients who possess the means of availing themselves of their beneficial effects. It would occupy too great a space to dilate upon the variety and characteristics of every foreign climate, which have become severally famous for their curative influences; to those who contemplate such a change of residence there are open plenty of channels of information upon the situation most adapted to their complaints. When circumstances will not permit a sojourn in a foreign land, and the invalid is compelled to seek such advantages as the climate of this country, in its various modifications, will afford, there are many situations which may be instanced as being valuable for their peculiarities.

Brighton will be found, from its dry and bracing atmosphere, a situation of peculiar advantage, especially during the autumnal months, to patients laboring under a relaxed state of the system. In winter, Hastings may be safely recommended for the mildness of its atmosphere and sheltered situation. Devonshire has been long celebrated for the mildness of its climate, and as being especially adapted for the resort of consumptive persons. Dawlish, Sidmouth, and Ilfracombe, have been for many years the occasional winter residence of invalids, who have derived the greatest advantage from the salubrity and mildness of the atmosphere in such places. Clifton, near Bristol, is noted also for its dry and exciting air, and its fitness as a residence for those of a relaxed and debilitated system; it has been found, however, not well adapted to persons of a consumptive habit.

There are many places within the range of half a dozen miles from London which will be found of great service to invalids whose occupations will not allow of a permanent absence, and which, from their well-known situation, need hardly be mentioned as to their peculiarities; and adverting to what has just before been advanced, where they are unable to absent themselves wholly from the city, it is most probable that a succession of change produced by occasional visits will be of greater service than an entire residence at the spot "out of town" which may be selected. The Saturday trips and Monday returns of worthy citizens to and from Gravesend are of a greater value than is dreamed of in their philosophy, and right well ought they to rejoice in the facilities which are afforded them for availing themselves of the healthy recreation; by inhalation and by motive force *steam* may yet take its station in our pharmacopœia.

Upon patients who are submitting themselves to change of air, I can not too strongly enjoin the necessity of a rigid adherence to proper diet, and such a degree of exercise as the nature of their complaint will allow. Where so much must necessarily depend upon the means by which the wastes and damage of the body are to be *repaired*, the diet, without which all the air in the world would not support life, must require the nicest regulation and the most circumspect attention. Exercise, without fatigue, must be daily taken, and in the open air as much as possible, unless the state of the weather interdict; by such a regard to exercise, in either walking, riding, or driving, as shall promote the circulation, invigorate the frame, and exhilarate the mind, the most salutary effects will result. The walks or rides should be so varied that the greatest amount of pleasing impressions may be made, care being taken to select such localities as may be defended against sharp winds or currents of cold air, and to adopt such precautions as shall protect them against sudden changes in the weather. A strict obedience must above all things be paid to the prescribed regimen; invalids, and especially convalescents, are too often prone, in the ease and indolence of living incident to an absence from business or domestic engagements, to be betrayed into forgetfulness; they will do well to remember that until health is established the air they breathe is medicine, which must not be neutralized.

Breathing Damp Air.—It is the fate of minute attentions to be disregarded or despised. The providence of persons in matured life is frequently met with much practical contempt by the young and inexperienced. The wise precaution of placing a handkerchief before the mouth and nostrils in damp and foggy weather, is often ridiculed for its assumed uselessness; and yet there is more philosophy in this little act than is supposed. I once heard a very knowing person "reason" with another, who was in the habit of being thus careful, upon the utter absurdity of supposing that any evil could be prevented by it. "If," said he, "you must expose yourself to this damp air, you must even condescend to breathe this damp air; and though, by interposing its passage to the lungs by a handkerchief, it struggles down to them with more difficulty, you do not stop it out; and if colds or consumptions are 'riding on the wings of the wind,' depend upon it they will not be kept at bay by the muffling of a handkerchief." Now this was cunning logic, but it was a little defective.

The object of placing a handkerchief in the position alluded to (though perhaps not precisely understood by great numbers, who do so from personal knowledge of its advantage) is to intercept the particles of moisture with which the atmosphere may happen to be impregnated in the passage of the air to the lungs; the closely-packed fibres of the handkerchief arrest them at the very threshold, and they are deposited upon its surface instead of being inhaled with the "thin and subtle air," which passes without difficulty to its destination. Thus, if the atmosphere be deleterious by reason of being saturated with moisture, and that it is so is undeniable, a great good is effected by a very simple act; and experiment will soon convince the skeptic that such is the fact. If he will merely interpose a dry handkerchief before the mouth and nostrils in damp weather, and respire through it, the rapidity with which it becomes surcharged with moisture (compared with the time it occupies to impart as great an amount in *dry* weather) will establish the fact beyond all doubt. The youthful and the rash may sneer at all this "muffling up,"* but to those who can not afford to risk a diminution of their health by a too reckless confidence, it may be a satisfaction to

* The modern "Respirator" is taken from this idea.

know that a sound reason can oe assigned for their faith: such a practice ought to be universal.

Cold, damp air is full of mischief, the parent often of tremendous evil; this is a fact asserted and acknowledged by all whom experience has made wise.

Exercise.—A very great amount of nervous energy is distributed to the organs of voluntary motion, and in every part of the body we find that nature adapts her powers in proportion to the degree of exercise which their organs perform; thus, among persons employed in long-continued walking, the muscular energies of the legs become by practice singularly developed, compared with those of the arms and body; the professed pugilist by practice greatly increases the vigor and bulk of those of the arms, back, and chest, while the lower extremities possess very insignificant strength; the skin of the laborer, exposed to every alternation of weather, becomes thickened to almost the consistence of horn, while that of the gentle drawing-room lounger dwindles into a delicacy and tenderness of texture equally, though contrarily, remarkable; so also with the glandular system: those glands which are excited into most frequent action increase in strength and structure, while those, on the other hand, that are rarely employed, fade gradually away into the mere vestige of what else they would have been.

It is quite clear, therefore, that if the organs of voluntary motion are not brought into that necessary degree of active exercise which, by the nervous power distributed to them, they were evidently designed to perform, the general health of the body must eventually become affected to an injurious extent, the great law of organic structures apparently being, that whatever destroys the harmonious action which should necessarily subsist between all and every function, whether by the exhaustion of excessive use or the decay incident to non-employment, inevitably leads to evil.

Man was never designed for a state of inactivity; the tranquil sensations produced by moderated exercise, the comfortable repose to which it conduces, the cheerfulness of mind, the regularity of action, in all the vital functions, and the successful resistance to many exciting causes of disease, are results that manifest how strongly the constitutional powers are fortified by well-tempered activity; while indolence of habit, on the contrary, invariably tends to organic disturbances, such as congestions of the liver and abdominal organs, corpulency, apoplexy, derangements characterized by diminished tone of the nervous and vascular systems, and a general susceptibility to morbid impressions.

Where our occupations in life necessarily interdict bodily exercise at the periods of being engaged upon them, we should be careful to employ such counteracting influences as occasion may admit; thus, if clerks and others, who are often injured by continued stooping in a sitting posture, were to vary their position by standing at a raised desk; if the *littérateur* were to accustom himself to walk up and down his study while arranging his thoughts, much benefit would be derived from the temporary suspension of the accustomed posture. There are dozens of ways by which, without occasioning loss of time, the chest might be so expanded as to afford free action to the lungs, and it is surprising that they are not more commonly resorted to; but they perhaps may be ascribed to the all-engrossing nature of the occupation. When the opportunity occurs, persons, compelled to sedentary employments should take as much exercise as possible, before and after the labors of the day; and no exercise will be found more beneficial than fast walking in the open air. The actions of walking, running, and leaping, not only tend to regulate the general circulation and the local expenditure of nervous energy, but also to increase the strength and conduce to a more en-

ergetic action of the lungs. The respiration becomes accelerated by muscular action; we inhale more vehemently; the blood receives a greater degree of arterialization, as instanced by the mantling color in the cheeks; and the lungs are excited to a vigor of action which, if not maintained to exhaustion, is attended by general benefit. The necessity for this occasional exertion of the lungs is instanced in early life by the proneness of infants to paroxysms of crying, induced not only by any apparent pain, but rather as an energetic effort to expand and invigorate the pulmonary organ: it is by this *first act* of our existence that the collapsed lung is excited to the full and perfected performance of its function, and it has been more than hinted that the excessive partiality to "talk," ascribed by ungallant libellers to the gentler sex, is nothing more than a law of nature, by which their lungs are brought into full operation from vocal excitation, when muscular activity is precluded by the sedentary duties of social life, or by their greater delicacy of organization.

Literary and scientific men suffer much, not only from over-exertion of the mental powers, but from the strained unnatural position of the trunk, as well as the want of general muscular activity; clerks and various artisans, particularly tailors, shoemakers, watchmakers, weavers, &c., suffer also from the same cause. The bent sitting posture, when long or habitually continued, by reason of the pressure made upon the abdominal organs, and especially the stomach, is productive of a variety of evils, such as dyspepsia, diarrhœa, headache, giddiness, and fistulæ; and, when the pressure is increased by leaning the sternum upon the edge of the table, or the desk, nervous palpitations, diseases of the heart, pulmonary consumptions, cerebral and nervous affections, too frequently ensue.* Sedentary employments of all kinds are powerfully injurious to health from their debilitating effects upon the muscular and nervous energies.

Morning exercise in the open air, at the expense of one hour stolen from the allotted period of sleep, will impart to persons thus engaged in sedentary occupations a sustaining influence throughout the labors of the day, which they will find most salutary and refreshing: the same remark is equally applicable to young persons, particularly to females whose employments require little muscular exertion. Many parents, though with the kindliest intention, yet most injudiciously enforce upon them too rigorous an exclusion from outdoor exercise, and the results are seen in the petty ailments to which they are so generally liable.

Sedentary habits frequently beget an ultimate indisposition to activity, which it will be wise to conquer ere it becomes indomitable. Where the necessity or the inclination for such occupation no longer exists, indolence is the usual consequence, and, when once this disrelish to proper labor is induced, both mental and physical disturbance supervenes, ennui, apathy, low spirits, and a peevish impatience of temper; indigestion, nervous affections, sluggish action of the abdominal organs, melancholy, and hypochondria, and a train of similar evils. He who possesses the great privilege of independence will find in it a curse rather than a blessing, unless he addicts himself to some pursuit by which both physical and mental energies are brought into proper activity; all the affluence of the earth would never buy the health which exercise secures. If labor be not necessary for the provision of his daily bread, it is necessary for the provision of health and happiness; for the man

> "Who consecrates his hours
> By vigorous efforts and an honest aim,
> At once he draws the sting of life and death."

* The patent reading easel obviates all restraint, and can be attached to chairs, sofas, and other seats so as to accommodate itself to any position of the reader.

SLEEP.—Strict attention should be paid to regularity of habit in sleeping hours; among all our wilful indiscretions few are more certainly calculated to injure the constitution at some period of life or another than the violation of that law of nature which imposes the necessity of sleep in timely and stated seasons.

The organs of sense and of motion, wearied by daily exercise, of necessity require the refreshment of rest to fit them for renewed activity; but, if that repose be impeded, debility to the nervous and muscular energies can not fail to result. It is not only necessary that sleep should be allowed to endure for a certain number of hours, but that the period should occur at intervals uninterrupted by irregularities. The gayeties of social life too frequently interfere with the regularity of our sleeping hours, and the headaches, lassitude, and general *mal-aise* which are experienced upon rising from our pillows after the late-hour pleasures of the preceding night, are a familar example of injury inflicted, and of the insufficiency of the rest received, though the actual amount of sleep may have exceeded the time usually allowed. As the vital energies are thus impaired by over-fatigued employment, it is easy to infer that they become less and less able to resist the attacks of disease that accident may occasion, and fever, inflammation of the brain, and disordered manifestations of the mind, are accordingly consequent upon the want of this sweet restorer to tired nature. "Balmy sleep," therefore, should be ever carefully solicited in due seasons and in due proportions, as not only a source of refreshing present comfort, but as a means by which the invasion of disease may be powerfully resisted.

Too much sleep is as pernicious as too little; the horizontal posture continued for an inordinate duration of time materially affects the circulation, and the blood by gravitation becomes improperly determined. We see this exemplified in patients whose ailments compel them to continue long in the recumbent position; the parts of the body on which they lie become discolored, emaciated, and in some instances proceed even to ulceration. Hence also the predisposition to apoplexy, paralysis, softening of the brain, and other diseases induced by such a posture.

Sleeping apartments ought always to be capacious, dry, and well ventilated; the bed should not be too soft, and the bed-clothes must be as light as may be consistent with necessary warmth. The inordinate quantity of bed covering sometimes used, has a most relaxing tendency by promoting excessive perspiration, and by rendering the body over-susceptible to external injurious impressions. Many persons are prone to the pernicious habit of closing the bed-curtains wholly around them, and thus, "cabined, cribbed, confined," continue to breathe, during the greater portion of the night, the enclosed atmosphere vitiated by their own respiration; this is certainly a most unlovely and most unwholesome custom. If the head be well night-capped, no curtains are at all necessary.

The excellence of early-rising, and its inspiring influences on both body and mind, have been themes for the poet's song and the sage's sermon; the subject is somewhat hackneyed, but it must be mentioned. Early-rising promotes cheerfulness of temper, opens up new capacities of enjoyment and channels of delight to which the sluggard must be insensible:—

> "The balmy breath of morn, the bracing air,
> The twittering songster's carol in the sky,
> The blooming pleasures that await without,
> To bless the wildly devious morning's walk."

It increases tne sum of human existence by stealing from indolence, hours that would else be utterly wasted, and, better still, unquestionably conduces to longevity. All long-livers have been early-risers, and—to descend from

the poetry of the affair to mere matter of fact—it is remarked by the actuaries of Life Assurance Companies (an exceedingly shrewd people in all that concerns matters of mortality) that early-rising almost invariably leads to length of days. Now as the habit of retiring to bed at late hours will hardly admit of early-rising, *therefore* the necessity of refraining from the one in order to secure the advantages of the other.

Cleanliness.—*The Bath.*—To the skin is assigned one of the most important offices of the animal economy. From the intimate sympathy that subsists between the skin and the lungs (with which as well by a free intercourse of vessels it is connected) any deficiency or excess in the exhalation of either organ is reciprocally compensated by the other. When the skin is corrugated by cold, and its vessels are contracted, the action of the lungs is increased, and their vessels are not unfrequently congested. It is singular that though consumption abounds in nearly all the cold, and especially the variable climates, it is unknown in most of the warm and temperate, where the functions of the skin are brought into constant operation and the labor of the lungs is proportionably diminished; and it is on this account also that diseases of the surface in such temperatures are very prevalent, while those of the lungs are comparatively rare. As an evidence of the intimate relation between the two organs may be adduced, the fact that those who are most subject to cutaneous affections are the least obnoxious to pulmonary cousumption, and that, moreover, if a skin-disease be suddenly and incautiously suppressed, a severe and sometimes fatal pulmonary affection will be the consequence. Coughs of long-standing and of a phthisical tendency have often been known to disappear on the occurrence of a spontaneous eruption, or of one artificially produced by blisters and other irritating applications.

It is not only necessary, therefore, that proper attention should be paid to clothing and to vicissitudes of temperature, with a view to the protection of this important organ, but that its peculiar offices should be assisted and promoted by artificial as well as by natural agencies. Though the functions of the skin are, of course, alike in all, they vary very considerably in various individuals, from peculiarities of organization. Many persons possess what is called a dry skin, from which it is difficult to obtain the perspirable fluid; while in others the exudation is so constantly profuse that the slightest variation in atmospheric temperature or in attire is sufficient to induce catarrhal affections by its suppression. We often meet with instances of remarkable thickness in the substance of the skin, and on the contrary, of its extreme attenuity; these and other varieties all indicate the nature of the attention which should be paid to induce the healthy performance of those functions which are its particular attributes.

Vapor-bathing* possesses the two-fold virtue of exciting a healthy action in the skin—promoting the just circulation of the blood, detaching scurfy particles and thoroughly cleansing it throughout its whole extent—and of dispersing inflammatory conditions of the lungs, and the mucous membranes of the air-passages. I have before adverted to the vicarious office of the lungs in cases of cutaneous imperfection, and to the supplemental duty they have consequently to perform; it must be quite clear, therefore, that the restoration of the skin to the proper exercise of its functions must of necessity relieve the pulmonary structures from inordinate and enervating labor; so that the artificial agency of vapor-bathing may not only be recommended for empirical purposes but is actually indicated by nature herself.

* For a more amply-detailed description of the cutaneous functions, the injurious liabilities to which it is exposed, and the remedial properties of the bath, I must refer to my "Treatise on Bathing," before alluded to.

Cleanliness of person (which term involves the removal of extraneous substance from the skin), is surely never to be confined to the washing of face and hands only; when general bathing, either in vapor or in water, is not resorted to, the dirt that accumulates on the cutaneous surface must be, and really is, enormous. We have daily evidence of this accumulation by the state of the finger-nails; though engaged in no dirty or dusty employment, or even in none at all, we find that the scurf and perspiration (which are constantly being excreted from every part of the skin in combination) will produce in a short space of time a very offensive deposite between their detached terminations, and the tips of the fingers. Now, when we reflect upon the relative quantity of this deposite over the whole extent of surface that is daily and hourly being formed, it will be a very simple but a very sound inference that the skin occasionally requires a somewhat more effectual cleansing than the daily *dry-rubbing* operation performed by our linen. The argument is tolerably powerful, though the subject has in it too little of captivating grace to do more than suggest a hint for profitable reflection.

To all persons predisposed to affections of the chest, bathing in one or other of its several varieties will be found to act most importantly as a repellant. Where no facilities are to be found of availing of this salutary practice, sponging the body with water, and especially the chest, will be a serviceable substitute. In the first instances of the employment of this means, tepid water may be used, proceeding by degrees to a colder temperature, until it can be borne without distress at its natural state of coldness; the best period of the day for doing this is in the morning upon rising from bed, and for about five or ten minutes at a time. This sensation of the chill at first experienced will be speedily succeeded by reaction, and an animating and refreshing glow be imparted, most comfortable to the feelings and most healthy to the thoracic organs.

Bathing the feet in warm water also is not only an act of necessary cleanliness but is attended by very beneficial results, especially where any petty inflammatory disturbance of the respiratory apparatus may happen to appear; it gives a fillip to the general circulation of the blood, and tends to remove any little congestion that may be present in the region of the air-passages. Cleanliness is indeed a cardinal virtue; for it removes at once the moral degradation arising from the sense of the personal impurities, and materially contributes to support the system in a state of undisturbed health.

Temper.—*The Passions.*—The uncontrolled excesses of the temper, the indulgence of passionate emotions, not only tends to the abridgment of domestic happiness, but to the abridgment of life also. Such an assertion may startle those who are occasionally prone to mental ebullitions, but the fact is undeniable. It is in the nature of passion to produce organic changes; and every individual, so frail and infirm is man, unhappily must have experienced at some one or more periods of his existence its surprising effect on the body, as instanced by certain functional disturbances. We have only to refer, by way of illustration, to the instantaneous effects of sudden fright upon the stomach, allaying at a moment the keenest sense of hunger; to the nervous depression produced by the passions of grief, despair, unrequited love; to the nervous excitation originated by anger, and to various physical derangements consequent upon other emotions to which accidental circumstances in our storm-and-sunshine wanderings through life give rise. Multipled instances are recorded of the fatal effects of passionate exercises, where joy too lively, grief too deep, unbounded rage, fear, and other violent manifestations of the mind, have terminated in fever, apoplexy, madness, or sudden death: even laughter, when carried to excess, has been known to cause loss of life.

We see, again, how powerful is the influence of mind over health in the

relative circumstances of mankind. Where the business, cares, and anxieties of life, are considerable—where difficulties throng upon our worldly condition—where misfortune pursues us in our career—where disappointment thwarts all our exertions—where pecuniary losses, domestic bereavements, despondency, or despair, prostrate our faculties, the health is sure to fade, and disease, lingering or acute, to supervene. Under these heavy afflictions our philosophy is generally sorely at fault. The consciousness of virtuous intention, aim, and inducement, of moral rectitude, of propriety of purpose, are all insufficient to repel their desolating powers upon the frame. We may be—we must be to a degree—sustained by an approving conscience, be the visitation what it may; but its unfailing effect is evidenced by the functional and organic disturbances which result. When the mind's peace departs, the usual solaces of life are unappreciated; perturbed and restless are the hours of day, and the night brings small repose; for sleep,

> "Like the world, his ready visit pays
> Where fortune smiles: the wretched he forsakes;
> Swift on his downy pinion flies from wo,
> And lights on lids unsullied with a tear."

The mental powers thus depraved, perverted, and inordinately excited, the nervous agency is of necessity impaired and organic injury becomes to a corresponding extent established.

The truth of this position is negatively proved by the effects of mental serenity; those to whom the troubles of life are but little known, whose cheerfulness of disposition has been unmoved by the vexations and anxieties that torment and harass their less lucky neighbors, whose circumstances are easy, whose anticipations are unclouded, whose care-for-nothing indifference is so great, or their philosophy so deep that they can despise present or prospective evil—are least liable to physical derangements, and are almost invariably in the possession of good health.

Even in a selfish point of view, irascibility of temper ought at all times to be checked. The flushed forehead, the blanched lip, the swelling throat, the fierceness of eye, and the elevation of voice, displayed in an ordinary fit of anger, are pretty sufficient indications of the tumult within, and of the disordered action of more organs than one, consequent upon the paroxysm. There are few of us so irritable that we can not repress these ebullitions of temper, *if we like*, at least to a very considerable extent; and, as it is confessedly very difficult to stay the torrent when in full flow, it behooves us to determine, in those seasons when reason is sufficiently cool to counsel correctly, to place that salutary restraint upon our propensities to passion and acerbities of temper *which never do any good to others* and are sure to prove injurious to ourselves.

A calm, serene, and cheerful mind MAY BE SECURED BY CULTIVATION; even persons of a naturally fretful, peevish, irascible temperament, will be astonished to find how comparatively easy it is to control and regulate their humors, if they will but resolutely determine to bring them under domination. It is the province of moral philosophy to enforce self-control under the aggravations of mental calamities, and to others I must leave its teaching; for me, it is only necessary to insist upon the maladies which are positively excited, or to which the body is predisposed, by excess of temper and the passions: the medicine lies in every bosom.

It is on account of the depression which of necessity succeeds any stimulation of the mental energies that the avoidance of all improper or excessive nervous excitation should be enforced. To persons of debilitated constitutions and excitable minds, even the gayeties and the amusements of life—theatres, balls, parties, music, exhibitions—where the relish for them exists, are very

frequently followed by most injurious reaction; and great discretion should be exercised in resorting to them, from the disturbance it produces of mental placidity and composure. Invalids would, for this reason, act wisely in checking the pettish disposition which illness often occasions; it aggravates present irritation, which ought to be soothed by serenity of temper. To them, whatever exhausts the mental energies—long-protracted attention, intense study, abstruse ruminations, certain feelings too long indulged of pride, envy, animosity, sullenness, are imminently and especially injurious, by conducing to those out-breaks of bad temper which it ought to be their duty to restrain.

Domestic Nursing.—Whenever the symptoms of disturbed health begin to manifest themselves, I strongly recommend that immediate attention be paid to those comforting resources which are more easily understood than defined by the term *domestic nursing*. Many persons, I am aware, evince a high-spirited contempt for such "caudling" and "weak-minded alarms; and there certainly is something in this noble daring that excites a feeling of self-respect "at home," and of admiration in others; but soberly considered I take it to be of very questionable efficacy in averting an attack of illness. Health is like the weather, we do not know how soon it may change; the provident traveller will fly to his barometer, and prepare himself according to its worst indications, though the threatened storm may not perchance be realized; *sensation* is the only barometer of a change of bodily health, and bold disregard to its premonitions may be found a poor repellant to the menaced danger.

Self-nursing, when carried to a puerile extent, is contemptible enough perhaps, and may moreover prove actually injurious by excess of indulgence; but, when sensation intelligibly bespeaks that some physical derangements are going forward, let the warning be gratefully received. Do not aggravate the on-coming evil by affecting a reckless doubt of its probability; but, while awaiting the issue, put yourself in the best possible condition of defence in case danger shall in reality approach. The consciousness of not having incurred the taunt of the banterer by this homely precaution will be a poor recompense for a bed of sickness, and no one knows that such may *not* be the result of a despised forewarning. Moral bravery is a fine quality, no doubt, but discretion is a better, and nothing can be more justly discreet than an immediate preparation for an anticipated malady.

There is much philosophy in the gruel and foot-bath and going-to-bed caudlings which domestic forethought so pertinaciously urges; these same caudlings are oftentimes terrible filchers to the doctor's fees and obscurers of his skill; were their virtues in more general requisition, and not so much confined to the almost exclusive knowledge of those whose advice we are often too conceited to receive, they would be more universally and more justly esteemed than they are.

Whenever, therefore, sensation conveys to the mind a message of approaching harm, the discreetest preparation will be found in domestic nursing: the cloud *may* pass away—it may burst! where then would be the wisdom of neglect?

Conclusion.—A little reflection upon the observations made under the preceding heads will, I flatter myself, lead to the inferences I have deemed it unnecessary to detail. Having stated in general terms what course ought to be avoided, and what adopted, it is left to the reader to fill up the simple outlines I have drawn, by shaping his habits according to the principles of action by which he ought to be guided for the conservation of his health. An amplified enumeration of all the particulars involved in these principles, with respect to the several important matters to which I desired to call his attention, would have swelled these pages to thrice their present extent, with-

out bearing upon individual peculiarities, so much depends upon age, temperament, habits, occupation, and locality; and, varying as these do, any specific instructions could not have been indiscriminately available, or, if acted upon, attended by invariable success. My object has accordingly been more to induce reflection upon certain subjects which most importantly control the condition of health and the duration of life than to dilate upon the nature of those minute particulars which they comprehend, and which, from the ever-various modes of life among society, and from the impossibility of general application, must have proved of little advantage to the general reader.

To persons actually laboring under, or who may be predisposed to, affections of the chest, the formulæ contained in the following Appendix will be found to contain a valuable body of information for domestic reference; to the prescriptions generally are appended notes descriptive of the intention they are severally designed to fulfil, and, as they have been selected from those the beneficial effects of which I have myself personally witnessed—several of them the production of the most eminent modern authorities—I can recommend them in the fullest confidence that salutary relief will result from their judicious administration.

APPENDIX.

To remove any ambiguity or misinterpretation which might be occasioned by the technical terms commonly employed to designate the nature and influences of medicine, the following explanation may be useful:—

Aperients, Laxatives, Purgatives, Cathartics, are names severally applied to those remedies which are administered for the purpose of promoting the excretions from the bowels, and used relatively to each other (as to comparative action from the mildest to the strongest) in the order of precedence.

Alteratives are those medicinal agents which are supposed to possess the property of changing disordered actions, chiefly of a chronic character, by inducing a secretion in diseased structures opposed to that which has been perniciously set up.

Anodynes, Palliatives, Sedatives, Narcotics, have the effect of allaying pain, of inducing sleep, and of diminishing the animal energies; they rank in power according to the order of enumeration, from the gently-assuasive operation of the anodyne to the stupifying influences of the narcotic.

Antacids—substances which neutralize acidity in the stomach.

Antiphlogistic—opposed to inflammation.

Diaphoretics stimulate the functions of perspiration.

Diuretics promote the action of the kidneys.

Refrigerants allay the heat of the body or of the blood.

Tonics are medicines which increase the tone of the muscular fibres of the stomach, such as vegetable bitters, astringent, stimulating substances, &c.

The other terms employed are sufficiently expressive of the various agencies alluded to without requiring further definition.

The "dose," or quantity of the medicine administered, importantly depends upon age, sex, temperament, and constitutional habits, and must be regulated accordingly. The prescriptions which follow, except in those cases concerning which special directions are given, have been drafted upon the assumed standard of a male patient of mid-age and ordinary general constitution; the relative doses will then range in degree of quantity and strength according to the subjointed table, and corresponding deductions should be consequently made.

From 10 to 15 years of age, one half the quantity; from 15 to 20, two thirds; from 20 to 50, common dose. Above 50 the gradation inversely as above.

For female patients a deduction of one fifth in diminution of quantity may usually be allowed, unless peculiarity of habit contra-indicate such an extent.

Particular attention should be paid to the *times* of taking medicine, and to rules of action subsequently. The best periods are at night on retiring to bed, and in the morning about an hour or so before breakfast. Where the dose requires to be repeated three or more times in the day, such equal intervals must be selected as shall least interfere with the meals taken: to swallow a draught or a pill immediately upon, or shortly after a meal, were to neutralize to a considerable extent the influence of the medicine itself, as well as materially to prevent the perfect digestion of the food upon which the stomach has to operate. It is for this reason that excess of solid food is always and very wisely interdicted after medicine-taking; the best drug or happiest combination of drugs within the knowledge of man, so taken, would be comparatively inert, and of less avail, perhaps, than the least influential if administered under conditions of the digestive passages most favorable for its operation.

The effects of physic generally are gratefully accelerated by subsequently taking warm drinks, gruels, and similar fluid preparations; carefully avoiding such, however, as are likely by their nature to counteract its office: thus no one ought, of course, upon taking alkaline mixtures—such as soda, magnesia, preparations of chalk, &c.,—to swallow acid drinks, or eat acid fruits, or other acid substances; for by the combination of the two—namely, the acid and the alkali—one would inevitably neutralize the other.

The diet should in all cases be adapted to the occasion: many persons after having taken medicine most improperly adhere to their general mode of living, never thinking or caring to make the slightest abridgment to it in either quantity or quality; a moment's reflection, surely, were sufficient to show the palpable absurdity of such a course. If medicine be resorted to at all the wisest plan will be to give it at least the fair chance of unthwarted action; a person sufficiently unwell to require physic is most assuredly unfit to persist in his ordinary habits of full-diet living. Empirics often hold out as an inducement to patients who are indisposed to self-denial that *their* medicines may be taken with equal effect at any time, and require neither abstinence nor alternation in the mode of living. The only cause of surprise is that any person of common sense should be cajoled by such an argument.

Medicinal preparations, internally taken, have a marked influence upon the nervous system, and render the body peculiarly susceptible to injurious impressions from without; great caution should therefore be used to avoid cold, wet, late hours, overfatigue, and those circumstances generally which are likely to enervate the powers of the constitution.

Cold, or common Catarrh.—The formulæ comprised in this division being applicable to several disorders considered in this appendix, besides simple catarrh, they are, to prevent the necessity of transposition, arranged in numerical order, and afterward referred to accordingly.

No. 1.—*Draught to be taken on retiring to bed for an anticipated Cold.*—Spirits of sweet nitre, 1 drachm; paregoric, 2 drachms; sal volatile, 20 drops; mucilage, 2 drachms; camphor julep, 1 ounce; syrup tolu, 2 drachms.—Mix.

No. 2.—Or, Camphor julep, 1½ ounce; nitrate of potass, 10 grains; Hoffman's anodyne liquor, ½ drachm; syrup of poppies, 1 drachm; or, solution of acetate of morphine, 15 drops.—Mix.

No. 3.—*Night Draught for Catarrh.*—Emulsion of almonds, (sweet), 1½ ounces; spirits of sweet nitre, 1 drachm; paregoric, 2 drachms; ipecacuanha wine, ½ drachm; antimonial wine, 30 drops.—Mix.

No. 4.—*Diaphoretic Pill to procure Perspiration and Sleep.*—Tartarized antimony, ¼ grain; calomel, 2 grains; acetate of morphine, ½ grain.—Mix: to be taken at bedtime.

Either of these draughts or the pill will procure perspiration and sleep, and should be followed in the morning by aperient medicine. See Form, No. 55.

Emetics have been, and still are, much employed in the early stages of catarrhal or bronchial affections, as having a tendency to produce moisture on the skin, and facilitate the expectoration, for which purposes ipecacuanha and emetic tartar are among the best combinations.

No. 5.—Take of ipecacuanha powder, 20 grains, emetic tartar, 1 grain.—Mix: to be taken in a glassful of warm water.

I have known numerous cases of catarrh, both recent and of long standing, speedily relieved by the administration of an active emetic or two, given every, or every other day, which, independently of relieving the stomach,* determines the blood to the skin, and restores the equilibrium of the circulation.

Saline Fever Mixtures.—These mixtures may induce slight nausea, but they seldom fail in exciting perspiration, and are very useful in recent colds. A fourth part only, taken at bedtime, will often procure a comfortable night's rest and effect a cure.

* Colds are more frequently attendant upon free than spare living.

No. 6.—Carbonate of potass or soda, 1 drachm; citric or tartaric acid, 1 drachm; distilled or boiled water, 5½ ounces; antimonial wine, 2 drachms; tincture of henbane, 2 drachms; tincture of digitalis, ½ drachm; syrup of orange peel, ½ ounce.—Mix. Dose, three tablespoonfuls every six hours.

No. 7.—Or, Acetated liquor of ammonia, 2 ounces; camphor julep, 3 ounces; ipecacuanha or antimonial wine, 2 drachms; tincture of henbrane, 2 drachms; syrup of suffron, ½ ounce.—Mix. Dose, three tablespoonfuls every four or six hours.

The names of medicines have of late years, like our public thoroughfares, been subjected to many alterations, but the old titles are better recognised, especially in country places, than the new, and are therefore preserved—this reference may guide those of the "new school."

If fever and lassitude supervene, confinement at home should be enforced, and the following saline medicines taken according to prevailing symptoms.

No. 8.—*For general Fever, Restlessness, and Irritability, with teasing Cough.*—Subcarbonate of ammonia, 15 grains; fresh lemon juice, ½ ounce; distilled water, 1 ounce; spirits of nutmeg, 1 drachm; syrup of orange peel, 1 drachm; extract of conium, 4 grains.—Mix to form a draught, to be taken three times a day.

No. 9.—*Refrigerant Mixture.*—To lessen the temperature of the body, during an attack of catarrh attended with fever.—Camphor, to be rubbed down, 10 grains; with mucilage, 3 drachms; muriate of ammonia, 1 drachm; orange flower water, or distilled water, 7 ounces; syrup of orange peel, ½ ounce.—Mix. Dose, two tablespoonfuls every four or six hours.

No. 10.—*Mixture for catarrhal Fever attended with Cough.*—Take of nitrate of potash, 1 drachm; compound powder of tragacanth, 2 drachms; cinnamon or caraway water, 5½ ounces; antimonial wine, 2 drachms; tincture of henbrane, 2 drachms.—Mix. Take two tablespoonfuls every four or six hours.

This mixture promotes the secretions, excites perspiration, and allays an irritable cough. The bowels should be kept open by saline aperients; the black draught, for instance, see No. 55, or even common salts.

No. 11.—*Saline Aperient Fever Mixture.*—(The name sufficiently expresses the property of this medicine.)—Acetated solution of ammonia, 2 ounces; camphor julep, 3½ ounces; sulphate of magnesia, 1 ounce; antimonial solution, 2 drachms; syrup of poppies, ½ ounce.—Mix. Dose, three tablespoonfuls every six hours.

No. 12.—*Antiphlogistic Mixture.*—In fever accompanied by thirst and heat of skin.—Nitrate of potass 2 scruples; acetated liquor of ammonia, 2 ounces; antimonial solution, 3 drachms; almond emulsion, 5½ ounces.—Mix. Two tablespoonfuls to be taken every four hours.

No. 13.—*Saline Effervescing Mixture.*—To remove sickness and allay fever.—Carbonate of potass, 1 drachm; antimonial solution, 1 drachm; spirits of sweet nitre, 1 drachm; emulsion of almonds, 5½ ounces; syrup of orange peel, ½ ounce.—Mix. Three tablespoonfuls to be taken (mixed with one tablespoonful of lemon juice, and to be drunk while effervescing) every four hours.

The advantages of nocturnal rest to an invalid whose day may have been spent in coughing, and whose frame is exhausted by fever, are incalculable; it often enables nature to rally and resist the further aggression of disease.

No. 14.—*Night Draught.*—For catarrh, accompanied by irritability and fever.—Subcarbonate of potass, 1 scruple; fresh lemon juice, ½ ounce; emetic tartar, 1-6 grain; distilled water, 1 ounce; syrup of morphine, 2 drachms.—Mix.

No. 15.—*Refrigerant Draught.*—To allay thirst, heat of skin, and dryness of the throat.—Nitrate of potass, 10 grains; almond mixture, 1½ ounce; syrup of tolu, 1 drachm.—Mix to form a draught: to be taken every four hours.

Where sore throat is present in catarrh, either of the following gargles will be found to possess a salutary influence:—

No. 16.—*Gargles for Catarrhal Sore Throat.*—Infusion of roses, 5½ ounces; syrup of orange peel ½ ounce.—Mix, to be used frequently.

No. 17.—Or, Take of infusion of bark, 5½ ounces; honey, ½ ounce; muriatic acid, 20 to 30 drops.—Mix.

THE CATARRH OF INFANCY.—When a child suddenly and unaccountably, as is often the case, takes cold, becomes hoarse* and begins to cough, and is feverish and restless, every kind of stimulating food should be withheld—he should be confined to an apartment of agreeable temperature, have a mild dose of aperient medicine administered, consisting of two or three grains of calomel, which from its being tasteless may easily be given, mixed with any of the child's food, and from its speedy and safe action is perhaps preferable to any other—the feet should be immersed in warm water just previous to going to bed, and a teaspoonful of the following mixture given every four hours to produce moisture on the skin and expectoration, whereby fever will be allayed, and all danger properly averted.

No. 18.—Take of ipecacuanha wine, 2 drachms; antimonial wine, 1 drachm; syrup of tolu, 3 drachms; spirits of sweet nitre, 1 drachm; mucilage of acacia, 1 ounce.—Mix.

No. 19.—Or, Take of oil of sweet almonds, ½ ounce; mucilage of acacia, 1 ounce; antimonial wine, 2 drachms; syrup of tolu, 2 drachms; sal volatile, 10 drops.—Mix.

If the symptoms do not yield to the preceding measures, further advice should be instantly sought.

* Hoarseness does not always attend the catarrh of children. When it does, it indicates inflammation of the windpipe, which might, if neglected, extend to the lungs, constituting croup, bronchitis, or pneumonia.

BRONCHITIS.—There are few affections of the chest of more common occurrence than this, except it be catarrh, which often precedes and as often accompanies it, but it does not necessarily follow that bronchitis, pneumonia, and pleurisy, should always consecutively ensue, although they may, as they frequently do, attend upon each other. The presence of a cough indicates irritation or inflammation of some portion of the bronchial membrane which in its slighter form is scarcely deemed an interruption to health, but, when severe, becomes a dangerous, sometimes a fatal disease. The term catarrh, in an abstract sense, implies only secretions attendant upon inflammation of the air-passages that give rise to the constitutional disturbance which ensues, no matter where the inflammation may be located. Many of the prescriptions inserted in the preceding section may be usefully employed under similar conditions in this and other disturbances: when for instance the attack is mild—No. 1, 2, 3, 4, will be found equally applicable in this complaint as in catarrh. In cases where bleeding has been employed, the following may be resorted to in the routine of treatment:—

No. 20.—Take of calomel, 5 grains; emetic tartar, ½ grain; extract of henbrane, 5 grains.—Mix: to form two pills, to be taken directly. After which,

No. 21.—Take of senna mixture 2 ounces (see form, No. 55), an hour after the pills, and repeat the same quantity in three or four hours if needful.

The object of these formulæ is to lessen the general congestion by increasing the various secretions, after which any of the following mixtures may be taken, with a view of keeping up the counter-irritation:—

No. 22.—Take of acetated solution of ammonia, 1½ ounces; camphor julep, 4 ounces; nitrate of potass, 1 scruple; antimonial wine, 2 drachms; tincture of henbane, 1 drachm; ipecacuanha wine, 1 drachm; syrup of tolu, ½ ounce.—Mix. Dose, three tablespoonfuls every six hours.

No. 23.—Or, Take of camphor julep, almond emulsion, of each 2½ ounces; acetate liquor of ammonia, 1½ ounces; spirit of sweet nitre, 2 drachms; antimonial solution, 3 drachms; syrup of suffron, 3 drachms.—Mix. Dose, three tablespoonfuls every four or five hours.

These mixtures produce free perspirations, and seldom fail to remove all febrile symptoms. Or formulæ 6, 7, 8, 9, 10, 11, 12, 13, 14, 15.

The febrile and inflammatory excitement being allayed, the next object is to palliate the symptoms, particularly the cough, which does not always spontaneously subside, although the cause of its original production may be removed.

No. 24.—Take of best honey, oil of sweet almonds, mucilage of acacia, each ½ ounce. To be well mixed together, then add the juice of a lemon and incorporate the whole; a teaspoonful given frequently, say nine or ten times a day, will "cut the phlegm," and allay the cough.

No. 25.—Or, Take of tamarind pulp, syrup of marshmallows, each 1½ ounces; cream of tartar, ½ ounce; nitre, 1 drachm.—Mix. A teaspoonful to be taken every two hours.

Where objection is made to either of the preceding, some useful formulæ for COUGH DROPS are here added.

No. 26.—Take of syrup of squills, syrup of tolu, of each 1 ounce; solution of the acetate of morphine, 1 drachm.—Mix. A teaspoonful taken occasionally promotes expectoration and allays cough. This formula has stood the test of many hundred trials, and, by modifying the quantity of the morphine according to the symptoms, has proved of eminent service.

No. 27.—Or, Take of solution of the acetate of morphine, 1 fluid-drachm; paregoric, 2 fluid-drachms; mucilage of gum arabic, 1 ounce; syrup of orange-peel, ½ ounce.—Mix. Take one or two teaspoonfuls occasionally, more especially at night, when rest is required.

No symptoms so varies in degree as cough, which is present in almost every inflammatory disorder of the chest: and, as the palates and constitutions of individuals may differ as much in matters of physic as in diet, numerous prescriptions, suitable to every temperament, taste, and condition, are therefore subjoined: the selection to be made may be gathered from the remarks appended to each formula.

No. 28.—*Demulcent Mixture.*—Take of compound powder of tragacanth, 2 drachms; emulsion of almonds, 7 ounces; syrup of marshmallows, ½ ounce.—Mix. A wineglassful to be taken occasionally.

No. 29.—*Expectorant and Demulcent Mixture.*—Take of almond emulsion, 7 ounces; ipecacuanha wine, 1 drachm; vinegar of squills, 2 drachms; syrup of tolu, 5 drachms.—Mix. Two tablespoonfuls a dose.

No. 30.—*Demulcent Sedative Mixture.*—Take of mucilage, 1 ounce; oil of sweet almonds, ½ ounce; syrup of poppies, ½ ounce; tincture of henbrane, 2 drachms; ipecacuanha wine, 2 drachms; cinnamon or distilled water, 5½ ounces; lemon-juice sufficient to impart a grateful acidity.—Mix. One or two tablespoonfuls to be taken occasionally.

No. 31.—*Cough Emulsion.*—Take of finely-powdered spermaceti, 2 drachms; the yolk of an egg; a lump of sugar. Rub the whole well-together; then gradually add thereto six ounces of cinnamon water—strain the mixture, and, lastly, add sixty drops of the solution of acetate of morphine. A tablespoonful to be taken occasionally.

This emulsion will be found very pleasant to the most fastidious palate, and to agree with the most delicate stomach.

No. 32.—*Spermaceti Emulsion.*—For catarrh attended with cough.—Take of spermaceti, 1 drachm; gum acacia in powder, 2 drachms; oil of sweet almonds, 1 ounce; syrup of tolu, ½ ounce; cinnamon water, 6 ounces.—Mix. Take two tablepoonfuls frequently in the day.

No. 33.—*Pectoral Emulsion.*—For catarrh attended with a cough.—Take of oil of sweet almonds, 1 ounce; the yolk of 1 egg; mucilage, 1 ounce; cinnamon water, 5 ounces; ipecacuanha wine, 2 drachms; syrup tolu, ½ ounce.—Mix. Take two tablespoonfuls when the cough is troublesome.

Where the expectoration is viscid and excreted with difficulty, the various preparations of squill, gum ammoniac, and myrrh, may be advantageously given; but they are stimulant expectorants, and inadmissible in all cases where fever and inflammation are present. Combined with refrigerants and sedatives, these objections are much lessened.

No. 34.—*Cough Mixtures.*—Take of nitrate of potash, 1 drachm; Dover's powder, 1 drachm; mucilage of acacia, ½ ounce; tincture of squills, 2 drachms; emulsion of almonds, 7½ ounces.—Mix. Dose, two tablespoonfuls every eight hours.

No. 35.—Or, compound powder of tragacanth, 2 drachms; nitrate of potass, 1 drachm; cinnamon water, 6 ounces; syrup of poppies, 1 ounce; oxymel squills, ½ ounce.—Mix One or two tablespoonfuls to be taken when the cough is troublesome.

These mixtures have a tendency to allay cough, to induce perspiration, and procure sleep.

No. 36.—*Sedative Cough Emulsion.*—In chronic asthmatic coughs.—Take of balsam of tolu, 1½ drachms; mucilage of acacia, 1 ounce; rub them well together, adding gradually tincture of benzoin, paregoric, of each, 3 drachms; oil of aniseseed, 20 drops; cinnamon or peppermint water, 6 ounces.

To form a mixture, two tablespoonfuls of which may be taken three or four times a day.

No. 37.—*Expectorant Cough Mixture.*—Take of ammoniacal emulsion, 6½ ounces; antimonial wine, ½ ounce; paregoric, ½ ounce; syrup of tolu, ½ ounce.—Mix. Take one tablespoonful when the cough is troublesome.

No. 38.—*Cough Mixture.*—Take of emulsion of bitter or sweet almonds, 7½ ounces; prussic acid, 4 drops; syrup of tolu, squills, or poppies, ½ ounce.—Mix. One or two tablespoonfuls to be taken three or four times a day.

This mixture contains that powerfnl medicine prussic acid, which, properly and cautiously administered, constitutes one of the most valuable additions to our materia medica. The quantity contained in each dose as above prescribed is at its minimum to be useful; but it is easier to increase the dose (which in some instances may be carried to five or six drops) until the desired effect be obtained, than incur the risk and consequences of an over-dose in the commencement of its use.

No. 39.—*Mixture for Chronic Cough.*—Take of almond emulsion, 7 ounces; oxymel of squills, ½ ounce; paregoric, ½ ounce.—Mix. Dose, two tablespoonfuls three times a day.

Useful to elderly persons who expectorate with difficulty.

No. 40.—*Chronic Cough with some degree of Fever.*—Take of wine of Colchicum, 2 drachms; tincture of foxglove (if the pulse is quick), ½ drachm; subcarbonate of potass, 1 drachm; citric acid, 1 drachm; distilled water, 7½ ounces; syrup of orange peel, ½ ounce.—Mix. Dose, three tablespoonfuls twice or three times a day.

The design of this mixture is to keep the bowels open and the skin moist.

No. 41.—*Where the Expectoration is difficult, the Cough distressing, and Fever absent.*—Take of carbonate of soda, 1 drachm; emulsion of almonds, 5½ ounces; tincture of henbane, 1 drachm; tincture of cinnamon, 2 drachms.—Mix. Dose, three tablespoonfuls three times a day.

No. 42.—*In old Coughs, unattended with Fever, yet deficiency of Expectoration.*—Take of oxymel of squills, syrup of poppies, syrup of tolu, each ½ ounce.—Mix them. Take a teaspoonful frequently.

No. 43.—*Irritable Coughs of Children.*—Take of syrup of violets, syrup of white poppies, oil of sweet almonds, each ½ ounce; ipecacuanha wine, 1 drachm.—Mix them. Give a teaspoonful frequently.

No. 44.—*Cough Mixtures.*—Take of marshmallow root, 1½ ounces; bruised aniseseed, 3 drachms; boiling water, 1 pint; boil down to ¾, strain, then add, sal ammoniac, 2 drachms; Spanish liquorice, ½ ounce.—Mix. Two or three tablespoonfuls to be taken occasionally.

No. 45.—Take of the Iceland (Lichen), or the Ireland moss (Carrigeen) decoction, 12 ounces; ipecacuanha wine, 2 drachms; oil of aniseseed, 10 drops; solution of morphine, 1 drachm; syrup of marshmallow, 1 ounce.—Mix. One or two tablespoonfuls to be taken as required.

These formulæ are very useful in long-existing coughs, particularly of aged persons.

No. 46.—*Expectorant Pills.*—(In chronic cough and asthma.)—Take of powdered squills, ½ drachm; gum ammoniac, 1½ drachms; extract of conium, ½ drachm.—Mix. Divide into 30 pills: take two every six hours.

No. 47.—*Pills for chronic or recent Coughs, attended with Pain, difficulty of Breathing, and deficient Expectoration.*—Take of compound squill pill, 1 drachm; emetic tartar, 1 grain; muriate of morphia, 2 grains.—Mix: to form 18 pills, one of which may be taken two or three times a day.

I ordinarily prescribe these pills (under occasional modification) for the winter coughs of elderly persons, and seldom find them ineffectual in immediately arresting the attack, when taken sufficiently early; and, where it has already occurred, if persevered in, in speedily subduing it.

No. 48.—*Cough Pills.*—Take of dried subcarbonate of soda, 1 drachm; ipecacuanha powder, 6 grains, blue pill, 6 grains; oil of aniseseed, 10 drops. To form 18 pills; one or two twice or three times a day.

These pills will be found serviceable in all catarrhal affections accompanied with irritability of the digestive organs.

Or the following mixture may be substituted:—

No. 49.—Take of camphor julep, 7 ounces; subcarbonate of soda, 1 drachm; carbonate of ammonia, 1 scruple; tincture of calumba, ½ ounce; paregoric, ½ ounce. Mix. Dose, two tablespoonfuls three or four times a day.

No. 50.—*Cough Pills.*—Take of dried squill powder, 12 grains; powdered myrrh, 2 scruples; extract of henbane, ½ drachm. Oil of aniseseed as much as is sufficient to form a mass, which should be divided into 18 pills, two of which may be taken every four or six hours.

No. 51.—Or, Take of squill powder, 9 grains; ipecacuanha powder, 9 grains; camphor, ½ drachm; tartar emetic, 2 grains; extract of henbane, 2 scruples.—Mix. To form 24 pills, two to be taken every four or six hours.

No. 52.—*Cough Pills.*—Take of Compound squill pill, 1½ drachms; extract of conium, 1 scruple. To be well mixed together, and divided into 24 pills, one or two of which may be taken at bedtime, and repeated at intervals of six or eight hours, provided the cough is not relieved.

These pills will be found useful in constitutional coughs, with difficulty of breathing.

No. 53.—*Compound Zinc Pills.*—Take of sulphate of zinc, 10 grains; ipecacuanha powder, 5 grains; powdered myrrh, ½ drachm; extract of lettuce, 1 drachm; syrup sufficient to form 30 pills. Take one three times a day.

In chronic or consumptive coughs.

No. 54.—*Stramonium Pills.*—Take of extract of stramonium, 1 drachm; castile soap, 2 drachms; powdered acacia, ½ drachm; liquorice powder, ½ drachm.—Mix with syrup to form 50 pills. One to be taken three times a day.

Aperients, Purgatives, and Tonics.—The following formulæ come within the class of aperients, purgatives, and tonics, and, as there can exist no chest or any other affection without the digestive apparatus being more or less disturbed, they will be found very useful addenda; their selection will materially depend upon the known effects of the various ingredients upon individual constitutions.

No. 55.—*The Black Draught.*—Take of senna leaves, 1½ ounces; epsom salts, ½ pound; bruised coriander and caraway seeds, each 2 drachms; bruised ginger, 2 drachms. Boiling water, one pint—let the whole stand in a warm oven, or on the hob of a fireplace for an hour or two; strain; then add, tincture of senna, 3 ounces; sal volatile, 2 drachms.—Mix. Dose. from two or four tablespoonfuls.

This mixture, like the next, will keep good any length of time, and it constitutes one of the best family medicines that can be resorted to, and is applicable whenever the bowels require aperient medicine.

No. 56.—*Aperient and Tonic.*—Take of senna leaves, 1½ ounces; epsom salts, 8 ounces; bruised coriander and caraway seeds, each 1 drachm; bruised ginger, 2 drachms; gentian root, 2 drachms; orange peel, 2 drachms; lemon peel, 2 drachms; boiling water, 1 pint. Let the whole stand in a warm oven, or on the hob of a fireplace, for an hour or two; strain, and then add tincture of senna and compound tincture of cardamoms, each 3 ounces; sal volatile, 2 drachms.

This mixture, which will keep unimpaired any length of time in well-stopped bottles, is gratefully purgative and tonic; from two to four tablespoonfuls constituting a dose. It may be given in all cases where aperients are required, without the depressing consequences so often attendant on laxatives medicines.

No. 57.—*Aperient Pills.*—Take of blue pill, pills of aloes and myrrh, and gamboge pill, each 1 scruple; oil of cloves, 10 drops. Mix to form 12 pills; two or three to be taken occasionally.

These pills are rather active purgatives, and adapted for the bilious temperament.

No. 58.—*Aperient Pills.*—Take of powdered rhubarb, powdered aloes, and castile soap, each 1 scruple; syrup sufficient to form 18 pills. Two to be taken twice a day.

In chronic constipation accompanied by dyspepsia.

No. 59.—*Anodyne Aperient.*—Take of ipecacuanha powder, 10 grains; compound extract of colocynth, 1 drachm; extract of henbane, ½ drachm; blue pill, ½ drachm; castile soap, 1 scruple; oil of cloves, 6 drops.—Mix to form 36 pills; one, two, or three pills, to be taken for a dose.

Useful for irritable stomachs and bowels.

No. 60.—*Antibilious Aperient Pills; their names implying their use.*—Take of alkaline extract of jalap, 1 drachm; calomel, 12 grains; oil of cloves, 2 drops.—Mix to form 12 pills, of which two or three may be taken as a dose occasionally.

Or, of a milder description:—

Take of alkaline extract of jalap, 2 scruples; alkaline extract of rhubarb, 1 scruple; powder of ginger, ½ scruple.—Mix to form 12 pills; two to be taken as required.

No. 61.—*Aromatic Aperient Pills.*—Take of socotorine aloes, 1 drachm; Peruvian balsam, 10 grains.—Mix to form 15 pills; one, two, or three, to be taken every other night, as required.

Strong Aperient Pills.—Take of croton oil, 4 drops; castile soap, ½ drachm; oil of cloves, 5 drops.—Mix to form 12 pills; one or two for a dose, as required.

No. 62.—*Stomach Pills.*—Take of powdered rhubarb, powdered ginger, extract of camomile, each 1 scruple; oil of aniseseed sufficient to form 18 pills. Two to be taken twice a day or three one hour before dinner daily.

No. 63.—*Tonic and Aperient Pills and Drops.*—Take of alkaline extract of gentian, powder of rhubarb, castile soap, each ½ drachm.—Mix and divide into 24 pills; two to be taken at eleven and four o'clock daily.

No. 64.—Take of liquor of potass, 2 drachms; compound tincture of gentian, 1½ ounces; tincture of capsicums, 1 drachm.—Mixed together, and a teaspoonful given every morning at eleven after the pills, in water or any other liquid.

These pills and drops administered conjointly for a fortnight or so will prove of great service to persons of dyspeptic habits whose appetite and digestion may be at fault, and whose general health may be considered "out of sorts." The diet should be according to the middle table.

No. 65.—*Tonic and Purgative Pills.*—Take of ammoniated iron, 1 drachm; extract of aloes, extract of gentian, each ½ drachm.—Mix to form 30 pills; two to be taken three times a day.

No. 66.—*Stomachic Mixture.*—Take of subcarbonate of soda, 1 drachm; sulphate of soda, ½ ounce; infusion of rhubarb, 2 ounces; infusion of gentian, 5 ounces; tincture of orange peel, ½ ounce.—Mix. Take three tablespoonfuls twice a day.

Useful in correcting acidity, imparting tone to the stomach, and stimulating the appetite.

No. 67.—*Stomachic Mixture.*—(For irritable weak stomachs.)—Take of infusion of calumba, 7½ ounces; solution of potass, 1 drachm; extract of conium, 1 scruple; tincture of orange peel, ½ ounce.—Mix. Dose, three tablespoonfuls twice a day.

Or, Take of infusion of cascarilla, 7 ounces; subcarbonate of soda, 2 drachms; tincture of calumba, ½ ounce; sulphuric æther, 2 drachms.—Mix. Take two tablespoonfuls twice a day.

No. 68.—*Antacid—in Heartburn—Acidity of the Stomach.*—Take of magnesia, 1 drachm; peppermint water, 1½ ounces; tincture of orange peel, 1 drachm.—Mix to form a draught to be taken as required.

No. 69.—*In Spasm of the Stomach arising from Flatulence.*—Take of magnesia, 1 scruple; tincture of senna, 3 drachms; peppermint water, 1 ounce; oil of aniseseed, 10 drops.—Mix to form a draught.

No. 70.—*Infusion of Coracoa.*—Take of curacoa rind, 2 drachms; boilding water, 1 pint. Infuse for one hour; cool, strain, and take a wineglassful every morning between breakfast and dinner—an excellent bitter.

No. 71.—*Tonic and Aperient.*—Take of decoction of bark, 7½ ounces; sulphate of soda, ½ ounce; diluted sulphuric acid, 40 drops; syrup of orange peel, ½ ounce.—Mix. Take three tablespoonfuls three times a day.

This mixture may be taken on the subsidence of any inflammatory affection that has left the patient feverish; or in ordinary fever cases, where there is an apparent local congestion.

No. 72.—*Laxative Mixture during the convalescence, under Catarrhal, Bronchial, or Pulmonic Affections.*—Take of infusion of roses, 7 ounces; sulphate of magnesia, 1 ounce; compound tincture of cardamoms, 2 drachms; syrup of orange peel, 3 drachms.—Mix. Three or four tablespoonfuls every morning, or two tablespoonfuls twice a day.

No. 73.—*For Sluggish Condition of the Intestines—Habitual Constipation.*—Take of the alkaline extract of rhubarb, 1 drachm; extract of ginger, 1 scruple.—Mix to form 18 pills; one or two to be taken every night.

No. 74.—*Compound Colocynth Pills.*—Take of powder of colocynth, of socotrine aloes and scammony, each ½ drachm; jalap, 15 grains; oil of cloves, 10 drops. Form into a mass with buckthorn syrup, and divide into 24 pills; take two or three occasionally.

No. 75.—*Digestive Lozenges.*—Take of bi-carbonate of soda, finely powdered, and white sugar, of each an equal quantity, to be well mixed and made into lozenges with mucilage, and flavored with any essential oil. Lozenges generally weigh about ten grains. The addition of powdered ginger in a similar proportion, is for some stomachs a great improvement.

No. 76.—*Alterative Pills.*—Take of Plummer's pills, 1 drachm; castile soap, 1 drachm; extract sarsaparilla, 2 drachms.—Mix to form 48 pills; one to be taken twice a day.

These pills are extremely serviceable in all scrofulous affections; but they should be continued for one or two months, provided the mouth be not affected by the Plummer's pill, which, containing a small quantity of calomel, might possibly occasion salivation, one or two grains of any mercurial preparation being known to produce in some persons that effect: it is, however, very rare.

Asthma.—In the treatment of asthma, it is necessary in every instance to study with care all the elements of the disease, as by this method only can we arrive at the most rational indications of cure. Medicines are of very variable influence in different individuals; for which reason it is necessary to try successively several and often very different means. It is not a little singular that persons subject to asthma, when free from the attack, enjoy the best health; and yet, from some inexplicable cause, in the midst of it find themselves suddenly gasping for breath, as though in a state of suffocation: hence, and, as before stated, it being a disease so clearly under the control of nervous influence, the remedies selected should be those which control the irritability of that system, care being at the same time taken to remove the exciting cause, be it imprudent diet, exposure to cold air, or the presence of any other disorder. Narcotics are by many recommended to be perseveringly continued until the exciting cause of the fit shall have been removed. Independently of lessening the necessity of breathing, they certainly overcome the spasm of the lungs, and on that account may be useful. Among the medicines of this class are opium, stramo-

nium, henbane, tobacco, and Prussic acid. The best general rule for their administration is to begin with a small dose, and to increase the quantity gradually until the desired relief is obtained. Annexed are a few of the best formulæ of narcotics alone and in combination:—

No. 77.—Take of extract of stramonium, 2 grains; extract of poppies, 1 scruple.—Mix. Divide into eight pills; take one every ten minutes till relief is obtained.

No. 78.—Or, Take of tincture of opium, 60 drops; peppermint water, 6 ounces.—Mix. Dose, three tablespoonfuls.

No. 79.—Or, Take of extract of lactucarium, ½ grain, made into a pill with aromatic confection or conserve of roses, and given every half-hour until relief is obtained.

No. 80.—Or, take of extract of lettuce, 2 grains, given in like manner to the lactucarium.

Among other means that have been employed, the following also have been found of great efficacy:—

Camphor Emulsion.—Camphor, 1 scruple; sweet almonds, 2 drachms; lump-sugar, 2 drachms; distilled water, 6 ounces.—Mix according to art, and take three tablespoonfuls every four hours.

No. 81.—*Spasmodic Drops.*—Take of paregoric and tincture of henbane, each ½ ounce; sulphuric ether, 2 drachms; oil of peppermint, aniseseed, or cloves, 10 drops.—Mix. Dose, a teaspoonful in water every ten minutes until relieved.

This combination truly deserves the name of anti-spasmodic drops, and, when judiciously prescribed, rarely fails in affording speedy relief. Whether the dyspnœa, or difficulty of breathing, is consequent upon spasmodic asthma, or happens to be the result merely of an hysterical attack, arising from some general irritation, particularly in dyspeptic and nervous females, the efficacy of these drops is alike successful.

The following formula is also a very useful one:—

No. 82.—Take of sal volatile, spirits of red lavender, syrup of morphine, each ½ ounce.—Mix. Dose, a teaspoonful frequently repeated.

No. 83.—Take of syrup of tolu, oil of sweet almonds, each 1 ounce; oil of aniseseed, ½ drachm.—Mix. Take a teaspoonful occasionally.

This simple prescription has acquired great celebrity among those who have resorted to it, frequently affording instantaneous relief to asthmatic coughs.

In all nervous disorders symptomatic of affections of the chest, unaccompanied by any *discoverable* organic lesion, the several preparations of iron are certainly more deserving the character of specifics than any known medicine; and, where asthma can be ascertained to be induced by primary and momentary alteration of the *condition* or *tone* of the nervous structure, they may be relied on for their efficacy.

No. 84.—Take of subcarbonate of iron, 1 ounce; treacle, 4 ounces.—Mix. Take a tablespoonful three times a day.

No. 85.—Take of extract of stramonium, 5 grains; ioduret of iron, extract gentian, each 1 drachm.—Mix; form 24 pills. Take one three times a day.

See also formulæ among the new remedies, particularly Lupuline, Gentianine, and Veratrine.

When the asthmatic paroxysms assume a periodic character, the quinine frequently diminishes their severity, and sometimes stops them altogether.

No. 86.—Take of sulphate of quinine, 1 scruple; aromatic confection sufficient to form eight pills; one to be taken three times a day.

Magnetism and galvanism have also been highly extolled, as materially influencing the nervous system, and as being followed by an immediate alleviation of the paroxysm. Dr. Wilson Phillip recommends galvanism in those cases in which the function of secretion is at fault, and which is more immediately occasioned by a deficiency of nervous energy.

Dry cupping, mustard poultices, and all forms of counter-irritation, are useful.

The following combination of Prussic acid with the tincture of lobelia will be found eminently useful:—

No. 87.—Take of prussic acid, 10 drops; ethereal tincture of lobelia ½ ounce; peppermint waer or camphor julep, 7 ounces.—Mix. Dose, three tablespoonfuls three or four times a day.

Magendie prescribes the following:—

No. 88.—Infusion of ground ivy, 2 ounces; prussic acid, 10 drops; syrup of marshmallows, ½ ounce.—Mix. Dose, a dessertspoonful every nine hours.

No. 89.—*To allay a sudden Asthmatic Attack, wherein the Breathing is very difficult.*—Take of tincture of conium or henbane, 5 drops; tincture of stramonium or opium, 5 drops; peppermint water, 1 ounce.—Mix. To be taken directly, and to be repeated in ten minutes if not relieved.

No. 90.—Or, Take from 20 to 60 drops of the ethereal tincture of lobelia inflata in water, tea, coffee, or any vehicle, every fifteen minutes, until the difficulty of respiration subsides.

No. 91.—Or, Take of ethereal tincture of lobelia inflata, ½ ounce; camphor julep, peppermint, or cinnamon water, 5½ ounces.—Mix. Two tablespoonfuls for a dose.

No. 92.—*For, or in Anticipation of, a Paroxysm of Dyspnœa, or Difficulty of Breathing.*—Take of camphor, 3 grains; carbonate of ammonia, 3 grains; ipecacuanha powder, 1 grain; extract of henbane, 3 grains. To be formed into three pills with mucilage, to be taken when the paroxysm is present or anticipated, and repeated in two hours if needful.

No. 93.—Or, Take of camphor, 5 grains; sugar, 1 drachm; tincture of calumba, 2 drachms; oil of aniseseed, 2 drops; cinnamon water, 1 ounce; morphine solution, 15 to 20 drops.—Mix; to form a draught to be taken under similar circumstances to the pills.

No. 94.—*In Spasmodic Affections of the Respiratory Organs.*—Take of gum asafœtida, powder of valerian, each 1 drachm; extract of aconite, 6 grains; squill-powder, 8 grains; castor, ½ drachm; subcarbonate of ammonia, 8 grains.—Mix the mass in a sufficient quantity of the syrup of poppies, and divide it into 48 pills, from two to four to be taken as a dose.

No. 95.—Or, Take of camphor julep, 5 ounces; tincture of asafœtida, ½ ounce: aromatic spirit of ammonia, 1 drachm; tincture of valerian, 2 drachms; syrup of orange-peel or ginger, 2 drachms.—Mix. Two or three tablespoonfuls to be taken occasionally.

Where asafœtida does not produce nausea, it constitutes a highly useful antispasmodic.

No. 96.—*Asthma, attended with Inflammation of the Air-passages and Expectoration.*—Take of true James's powder, 5 grains; camphor, 2 grains; ipecacuanha powder, 1 grain; extract of henbane, 5 grains; syrup of poppies sufficient to form three pills; which may be taken in the preceding formula of pills.

No. 97.—Or, To the next formula add 5 grains of nitrate of potass.

The addition of the nitrate of potass increases the diaphoretic properties of the pills.

No. 98.—*In Asthma and Chronic Catarrh.*—Take of powder of squills, 1 scruple; gum ammoniac, 1½ drachms; extract of conium, 2 scruples. Bruise them together and divide the mass into thirty pills, of which two are to be taken every six hours.

No. 99.—Take of gum myrrh, 1½ drachms; gum benzoin, 2 scruples; balsam copaiba, 1 drachm; Spanish liquorice, 4 scruples.—Mix. Divide the mass into forty pills. The patient to take two twice or three times a day, at equal intervals.

No. 100.—Almond-soap made into a pill of the usual size, two or three of which may be taken with each meal daily, is often of service to the asthmatic, and is also useful in long-existing coughs.

Spitting of Blood.—This affection being often the precursory indication of consumption, some discrimination is necessary to ascertain whether it is dependent upon accidental circumstances or symptomatic of that frightful disease. In all cases, however, where the hemorrhage is considerable, besides resorting to venesection, rest, cooling purgatives, and the refrigerants before mentioned, astringents should be given to stop it as quickly as possible; and where mild ones fail, those of a more powerful nature must be employed.

No. 101.—Take of infusion of roses, 6 ounces; nitrate of potass, 1 drachm; syrup of morphine, 2 drachms. Or, Tincture of opium, 30 drops.—Mix. Three tablespoonfuls every four hours.

Common drink—tamarind and fever-drink recommended among the domestic recipes.

No. 102.—Or. Take of tincture of kino, 2 drachms; tincture of catechu, 2 drachms; solution of acetate of morphine, 1 drachm; cinnamon water, 5½ ounces.—Mix. Dose, two tablespoonfuls every four hours.

If these should fail to produce any salutary effect, sulphate of zinc or the acetate of lead may be given, alone or in combination.

No. 103.—Take of compound infusion of roses, 7½ ounces; alum, 2 scruples; sulphate of zinc, 2 grains; acetated solution of morphine, 40 drops.—Mix. Dose, three tablespoonfuls every three or four hours.

No. 104.—Or, Take of acetate of lead, 1 grain; acetate of morphine, ¼ grain. Made into a pill with confection of roses, and given every three or four hours.

No. 105.—Or, Take of acetate of lead, 12 grains; colchicum powder, 25 grains; powder of opium, 3 grains. Mix the mass in a sufficient quantity of the mucilage of acacia, and divide it equally into twelve pills; one to be taken every three hours.

Angina Pectoris.—Angina, a disorder fortunately of comparatively rare occurrence, is dependent upon the deranged mechanical action of the thoracic muscles, producing, as before stated, most distressing embarrassment in breathing. The attack is usually sudden, the patient being apparently in perfect health at the moment—a clear indication of perverted nervous power rather than of diseased structure, which many have supposed it to be. Laxative medicines (see form. Nos. 55, 56), local irritants, inhalation of chlorine, tar, ether, etc.; frictions of ointment of morphine (see form. 165, among the new remedies); anti-spasmodics (see form. from No. 77 to 83), may severally be resorted to.

The following are adapted to relieve flatulency while present:—

No. 106.—Take of peppermint water, ½ ounce; spirit of cinnamon, ½ ounce; sulphuric ether, 30 drops; compound spirit of lavender, 15 drops. Mix, to form a draught which may be given at intervals as required.

No. 107.—Or, Pimenta water, 1 ounce; compound tincture of cardamoms, 2 drachms; compound tincture of cinnamon, 2 drachms; aromatic spirit of ammonia, 20 drops.—Mix. To be taken as required.

Where the state of the vascular system and constitutional energies render it prudent to withhold depletion, friction with stimulating liniments over the thorax and epigastrium is attended with immense benefit.

No. 108.—Take of compound camphor liniment, strong ammoniacal liniment, each 1 ounce; tincture of capsicums, 3 drachms.—Mix. To be used twice or thrice a day.

EMPYEMA, EMPHYSEMA, AND PLEURISY.—For the treatment of these diseases, see the articles separately given in the descriptive portion of the work. Pleurisy being a highly inflammatory disorder, the symptoms and condition differing only in locality from pneumonia, requires equally energetic measures for its cure; while the two former exclusively belong to the province of the surgeon. For counter-irritants, which perhaps are more requisite in pleurisy than in any other chest affection, see the formulæ so entitled. For general febrile disturbance, reference must be made to the various prescriptions on catarrh and bronchitis.

PALPITATION OF THE HEART.—The treatment of this disease must be adapted according to the exciting cause. Where it arises from plethora or debility, the treatment has already been described; where symptomatic of any nervous disorder, antispasmodics, under the head of asthma, may be resorted to. (See form. Nos. 76, 77, 87. 91.)

No. 109.—*Palpitation of the Heart from Nervous Excitement.*—Take of sal volatile, sulphuric ether, spirits of red lavender, syrup of morphine, each 2 drachms.—Mix. Take a teaspoonful every ten minutes until relieved.

PNEUMONIA, OR INFLAMMATION OF THE LUNGS.—Should the reader refer to this Appendix for the treatment of pneumonia instead of the article in the body of the volume, he is recommended to peruse the latter, wherein he will perceive that it is a disease requiring the most vigorous and active measures for its subdual, and such as more immediately come within the province of the medical practitioner. Bleeding in all cases is indispensable, and to a very considerable amount; the most eminent medical men considering that the danger of copious venesection is less than the danger of the disease. Dr. Forbes took from one patient 84 ounces in one bleeding, and Dr. Comrie 250 ounces in three or four days. The inflammation being of the most active character, the most powerful remedies should be employed, such as calomel, antimony, and opium. Dr. Armstrong recommended that calomel should be given combined with opium and emetic tartar, to the extent of inducing incipient ptyalism, on the occurrence of which the severity of the disease usually subsides. The formulæ he gave (after bleeding and opening the bowels) was

No. 110.—Calomel, 10 grains; opium, 3 grains; emetic tartar, 2 grains. Made into six pills; one to be given every four hours, and to be continued until a coppery taste is perceived in the mouth; or, if the disease continues with its original severity, until salivation is established.

This he called his sheet-anchor.

I can not refrain from subjoining the treatment adopted by Laennec,* which, considering the authority, deserves the attention of every member of the profession. The quotation is given entire:—

No. 111.—"Immediately after bleeding, one grain of emetic tartar dissolved in two ounces and a half of cold weak infusion of orange-leaf, with half an ounce of syrup of the same, or marsh-mallows, given every two hours for six times successively; the patient is then left for seven or eight hours if the symptoms are not urgent, or if he experiences any inclination to sleep. If the disease has made progress—if the oppression be great, the head affected, or one or both lungs attacked—the medicine is continued uninterruptedly until amendment takes place. Many patients bear the medicine without being either vomited or purged. In others the action is the reverse; when once, however, 'tolerance,' as it is called, is established, which is usually at the end of twenty-four or forty-eight hours, a marked improvement is perceived in all the symptoms, and sometimes patients apparently doomed to certain death are out of all danger, after the lapse of a few hours only, by a resolution of the inflammation.

"In conclusion, I can affirm that I have no recollection of death from acute pneumonia in any case where this medicine had been taken long enough for its effects to be experienced."

The same authority also mentions a case of a man aged 45, whom he saw on the fourth day, in an almost hopeless condition: twenty grains of tartar emetic were prescribed to be given in the twenty-four hours, but by mistake forty were given; the following day the patient was out of danger, and convalescence proceeded without interruption. The above method of treatment is introduced, not only out of respect to the author, but with a view to corroborate its utility. In the practice of many of

* Ably translated by Dr. John Forbes, of Chichester. Renshaw and Rush, Strand.

the profession, of some of my immediate friends, and in two instances occurring in my own family (one in a child ten years of age), it has proved equally efficacious.

The following combination speedily averted an anticipated fatal termination in the last case alluded to:—

No. 112.—Emetic tartar, 3 grains; calomel, 3 grains; compound powder of tragacanth, 1 scruple.

These were mixed together and divided into eight powders, one of which was ordered to be taken every two hours. On the child taking the first, slight vomiting ensued; after the second, the bowels were relieved, and, on taking the fourth, the difficulty of breathing ceased, the pulse fell, the body broke out in profuse perspiration, the child slept soundly, and awoke the following morning entirely recovered. The white oxyde of antimony is a favorite remedy with the French physicians at the present moment. Dose—twenty grains.

Consumption.—It is well known that consumption may be attended with pleurisy, bronchitis, and pneumonia, or that the only symptoms present may be cough, purulent expectoration, and the consequent debility. Where the disease is complicated, the treatment must be directed to the most prominent symptom; where there is only cough and purulent expectoration, the object is to allay the one, check the other, promote the healing of the ulcer, and restore strength at the same time. The importance of diet, habits, and clothing, toward effecting that object, has already been dwelt upon. The former, be it remembered, should be highly nutritious, plenty of animal food, malt liquor, wine, if it can be borne; the habits—active, breathing fresh air, taking plenty of exercise, retiring to rest and rising early, and the clothing warm and comfortable.

The subjoined formulæ are in the order of their relative value only as regards the purposes for which they are recommended. Inhalation, possessing the triple advantage of allaying cough, relieving expectoration, and inducing healthier action of diseased surfaces, is selected to preface the remedies advised in this part of the Appendix; and, as chlorine and iodine are the principal substances employed in that process, a brief notice of them precedes.

Chlorine.—Chlorine is a simple substance, so named from its yellow color. It was formerly termed oxygenized marine acid, or oxymuriatic acid, from its being considered to be composed of muriatic acid and oxygen; but the researches of the French chemists and Sir H. Davy warrant its being classed among the simple bodies. It is obtained by the action of muriatic acid on the peroxyde of manganese. Effervescence, occasioned by the escape of chlorine, takes place instantly; but the escape of gas is much increased by the addition of heat. The chlorine may be administered medicinally, and in a high state of purity, by passing it through water, which frees it from any portion of muriatic acid gas which may be mixed with it in the preparation. Sea-air, which is frequently so advantageous to pulmonary invalids, most probably derives its beneficial qualities from combinations formed by the salt water with the atmosphere, somewhat analogous to chlorine; and persons residing in inland parts, far removed from sea-air, may, by walking into a room with its atmosphere impregnated with chlorine, or, if the weather be fine, inhaling it in their gardens or pleasure-grounds, gain in a high and certain degree all the advantages to be afforded by a removal, perhaps hazardous and expensive, to a remote watering-place.*

Chlorine, although discovered by Scheele in 1774, was not employed as a medical agent until introduced by Dr. Favart, of Marseilles, in 1804. It made but little progress until a report of Dr. Cottereau, of the faculty of medicine of Paris, again brought it before the profession. "Several trading chemists, in particular M. Gannal, had remarked that phthisical persons who engaged themselves to work in the manufactories of bleaching liquor, in which chlorine is largely extricated, were gradually but evidently improved in health. To confirm his observations, M. Gannal constructed an instrument for inhaling it, and actually administered it as a remedy in phthisis. The success of his experiment surprised him; but, not being a medical man, he mentioned his views of the subject to Dr. Cottereau, who pursued the same

* *En passant*, the same remarks may be applied to the mineral springs. Patients are frequently induced to undertake long journeys to the shrine of some fountain-nymph, when in the bosom of their own families the same benefits might be derived from an extemporaneous preparation of the prescribed mineral water, quite equal if not superior (by reason of its strength being able to be increased without loading the stomach with so much aqueous matter) to the natural springs themselves. A citizen of the metropolis may, generally speaking, take the waters of Cheltenham, Bath, Leamington, or Tunbridge, as well at his own house as at any of those places, since they can be synthetically formed at a minute's notice, by the aid of the chemist, or by any person acquainted with the chemical composition of the waters; both easily attainable.

plans as M. Gannal, and with a degree of success sufficient to merit the attention of the profession. The same influence of chlorine in pulmonary diseases has been observed by Mr. Lenant, of Glasgow, who states that all the men who engage themselves to work in his manufactory, if they have coughs, are rapidly relieved when gradually introduced into the chlorine house; and that persons laboring under phthisis and asthma have taken lodgings in the neighborhood of his works for the sake of the atmosphere of chlorine emanating from them. Since that period, the medical journals have occasionally contained reports of cases fully justifying the anticipations entertained. With regard to my own acquaintance with the efficacy of chlorine in pulmonary affections, I had been accustomed to administer it topically in a fumigatory or bath, in cutaneous diseases, since 1827, and with very great success; and, employing the same bath for sulphurous fumigations, my notice was first attracted by the varied condition of the health of one of my attendants, who, laboring under a chronic harassing cough, found it always ameliorated for several days after administering the chlorine bath; and but from encountering the fumes of the sulphur, when giving a sulphurous fumigating bath, the cough would entirely cease. By transferring the latter duty to another atteudant, the cough of the former was wholly cured. Bathers also, who took the chlorine bath for specific purposes, observed their general health improved, and their spirits elevated; and those laboring under sore throats, hoarseness, or cough, became entirely well from one or two applications. In all cases not acutely inflammatory, nor attended with much debility, which have since fallen under my observation, I have recommended, and still continue so to do, the chlorine either in the fumigatory or vapor bath, or in an inhaling apartment for the purpose, and the success can be fully attested by many who visit the establishment. Though contrary to my original intention, as intimated in a former part of this work. I here detail the process:—

For private employment, the best method of obtaining chlorine gas is to form a mixture in a saucer of one part of peroxyde of manganese and five of muriatic acid, say a quarter of an ounce of the former to ten drachms of the latter, and place the same over a spirit-lamp, or on a shovelfull of lighted coals, protected from occasioning accident, on the floor of the chamber to be impregnated, leaving the window open to prevent too great an accumulation of the chlorine: the gas will in a very short time be copiously evolved, and the apartment sufficiently charged for the patient to enter. A slight sense of constriction in the chest will at first be experienced, the cough also, perhaps, be increased, and occasionally a degree of giddiness felt; these feelings will, however, speedily subside, expectoration be almost instantaneously produced without an effort, and a comfortable sensation of tranquillity will pervade the whole frame. This will all be experienced in ten or fifteen minutes, longer than which the patient ought not to remain, nor so long if too powerful a sense of constriction be occasioned, or if violent coughing be produced; his own sensations, however, will be the surest guide. The inhalation should be repeated daily, or oftener, otherwise the effect of the first may not be maintained, unless recovery should ensue, as is often the case, from one application.

In chronic catarrh, hoarseness, bronchitis, asthma, and even in phthisis where tubercles do not extensively abound, nor ulceration extensively exist, and the system be not wholly broken up, chlorine will take precedence of all therapeutic resources. When required to be used in the open air, the following plan may be adopted to procure chlorine in larger quantities, the patient passing to and fro in the cnrrent of the fumes. Mix in a flat dish, or earthenware pan,

Eight parts of common salt; three parts of black oxyde of manganese; four parts of water; five parts of sulphuric acid.

The rationale is this: the sulphuric acid combines with the soda, disengages thereby muriatic acid, which being free acts on the peroxyde of manganese. The residue is sulphate of manganese, and sulphate of soda, the protoxyde uniting with the sulphuric instead of the muriatic acid, as in the former case.

Chlorine may be disengaged from any of its combinations on the principle of chemical affinity, as, for instance, by adding sulphuric acid to the chloride of lime, sulphate of lime is formed and the chlorine extricated; or from the saturated aqueous solution by heat, by the simple admixture of hot water (to about half an ounce of the former add a pint of the latter) which gradually drives off the chlorine; in which latter case, the basin and flannel covering, as elsewhere recommended, may be employed for its inhalation.

In conclusion, respecting chlorine, I may observe, that in a register of pulmonary cases, by no means inconsiderable, kept for the last few years, wherein the inhalation of chlorine was used alone or in conjunction with other means under my own immediate surveillance, not an untoward result occurred in any one instance; and I entertain the fullest conviction that inhalation will be found the most powerful antagonist consumption has ever yet had to contend with.

Iodine.—The discovery and account of this medicine are detailed under the head of "New Remedies." The mode of administering it depends upon the practitioner. Iodine might, like chlorine, be inhaled in the form of gas, but only in a heated apartment, as the fumes crystallize almost as soon as disengaged, except at a certain temperature. The crystals are of a steel grayish color, and have a metallic appearance; they are soluble when combined with minerals or alkalies, in distilled water, or alone in alcohol (for directions, see "New Remedies"), either of which solutions may be employed similarly to the solution of chlorine in aqueous vapor. If Lugol's iodine mineral waters be used, half an ounce to a pint of boiling water will suffice for each inhalation; if the tincture according to Magendie's formulæ, the quantity should not exceed one drop at the commencement, and may be mixed with a similar proportion of tinctures of opium, lactucarium, conium, or stramonium, at the discretion of the medical adviser.

Sir Charles Scudamore has published an account of cases illustrative of the efficacy of the inhalation of iodine in pulmonary consumption, several of which appear to substantiate the title, but the worthy knight keeps his mode of administering the remedy a secret to all but those who consult him professionally. The instances wherein I have used iodine induce me to give the preference to chlorine.

Inhalation of Tar.—Place a vessel (earthenware or copper) containing tar over a spirit-lamp in the middle of the room, suffer it to boil slowly, and the chambers will soon be impregnated with the fumes arising from it, which may be inhaled for twenty or thirty minutes together. A small quantity of subcarbonate of potass may be added (one sixteenth part to one part of tar) to destroy the empyreumatic acetate acid.

The Vapor from Ether and Hemlock Leaves.—The vapor of sulphuric ether, in which the leaves of hemlock have been steeped, proves particularly serviceable in relieving cough, dyspnœa, and promoting expectoration, the quantity employed each time being from ten to thirty drops to a pint of boiling water.

Chlorine Gas, Nitrous Acid Gas, and Chlorate of Potassa.—A very clever, excellently written, and interesting work, entitled a Treatise on Pulmonary Consumption, its Prevention and Remedy, by John Murray,* has recently made its appearance, the purport of which seems to be a popular consideration of the cause and prevention of consumption somewhat after the manner of this little volume, though more elaborate, and the recommendation of the breathing of chlorine and nitrous acid gases, and the internal exhibition of chlorate of potassa, is the remedy. Mr. Murray, who, by-the-by, professes not to belong to the medical craft, displays throughout his work so much philosophical reasoning and professional knowledge, independently of the philanthropic motive which urged him to its publication, that it were a pity the profession should lose the enlistment of such a man.

My object, in this appendix, being to present the reader with an account of some of the leading plans of treatment adopted at the present day, I should be guilty of great injustice to Mr. Murray were I to omit taking notice of his, and lest it should suffer by my version, I transcribe his own words:—

Speaking of chlorine gas, he says: "We have observed the most extraordinary effects follow its cautious administration in catarrhal and pulmonic inflammation, and, in one case, a gentleman who had suffered many years under asthma was completely and permanently cured by having been in the immediate vicinity of a quantity of this gas, which escaped on overturning undesignedly a cylinder containing it, left standing over the shelf of the pneumatic cistern.

"In the administration of both chlorine and nitrous acid gas, considerable caution will be required. All metallic furniture must be discarded; even gilded surfaces will be acted on by chlorine, and colored hangings, &c., may be bleached, particularly if damp; a moist atmosphere will thus especially promote this action. The room, therefore, whither the patient retires had better be entirely emptied of its furniture, and devoted to this exclusive purpose.

"If a portion of peroxyde (or black oxyde) of manganese be put into a small basin or teacup and muriatic acid (or spirit of salt) poured over it, and the ingredients

* Renshaw and Rush, 1834.

mixed together be suffered to float in a vessel of tepid water, chlorine gas will be disengaged and impregnate the atmosphere—the proportionals of the peroxyde and muriatic acid must be according to the size of the apartment and the strength of the patient to bear it: thus it may be from a quarter to an ounce of the former, and two or more fluid ounces of the latter. The patient may enter this atmosphere several times a day, and each time remain a short period, so long as not to be painful or oppressive, and the quantity of impregnation must be insufficient to excite cough or irritate the lungs: two or three minutes at a time, and repeated five or six times a day, will be found quite sufficient. The physical strength and progress of the disease (in fact, circumstances and feelings) must determine these points.

"We have been accustomed to administer nitrous acid gas in pulmonary consumption in the following simple manner: A small quantity, to the amount of one or two ounces, of red fuming nitrous acid is poured into a wide tumbler glass, while the patient sits in the current of the vapor, in the act of escape and diffusion into the atmosphere, at about eighteen inches more or less apart from the glass, according to circumstances; the vapor will soon be felt, and at no distant interval an evident amendment will attest its efficacy and proclaim its value. The patient may remain two or three minutes at a time, and repeat the experiment four or five times a day, as may be convenient or agreeable. At the close, a piece of glass or slate may be put over the tumbler and preserve the acid for further use, since the same supply may be used several times." Many well-attested cases are given in corroboration of the efficacy of these gases in thoracic disorders, and the author hopes that time and experience will still further prove their utility; the only reward he solicits is being acknowledged as the promulgator of the fact. I am far from wishing to withhold the meed of praise from those to whom it is due, or to dispute the priority with any one of introducing particular remedies into notice, but I have already stated the date of my first acquaintance with chlorine gas, together with the source from which it sprang; hence Mr. Murray will see that the virtues of chlorine gas have been detected by others than himself, I for one never having seen or heard of his book until engaged in a revision of my own pages. With regard to the nitrous acid gas, I have already availed myself of his recommendation, nor as yet have I been disappointed in a single instance; the cases wherein I have used it however are few, but I intend losing no opportunity of testing its efficacy. I conclude my extracts with Mr. Murray's remarks on the *Chlorate of Potassa*.

"Perhaps one of the greatest desiderata in therapeutics is a medical agent which, while it subdues the inflammatory tone of the pulse, by lowering the rapidity of the circulation, will not, at the same time, reduce the strength of the patient. Such a one will be found in the chlorate or oxymuriate of potassa. The idea of its employment internally was suggested by Chaussier's work, entitled 'Contre Poisons,' published in Paris in 1818, wherein it was particularly recommended in cases of contusion by violent blows and falls, and in croup. This led to its employment by the author in inflammatory affections, and particularly those incidental to the chest. In chronic catarrh of many years' standing, it has effected a complete and permanent cure. Though personally susceptible, we scarcely know, in propria personæ, what a permanent cough is, since we find it soon dismissed by judicious doses of chlorate of potassa. We are not particularly attentive to quantity, but generally commence with six or eight grains, and have given it to one of our children, a few months old, in doses of two or three grains, with the most salutary effects.

"At our suggestion it has been made up into lozenges, and thus become a convenient mode of exhibition in catarrhal complaints. The agency of chlorate of potassa on the system is very mild and gentle; it speedily reduces febrile excitement, and, in a case which was supposed to be *ulcerated trachea*, two doses of eight grains each reduced the pulse from 120 to 97; while the system, so far from being lowered, is contrariwise strengthened, which we have in person repeatedly experienced."

A medical friend of the author's thus writes: "We have been cured of a severe catarrh within these last few days, by an eight-grain dose of the chlorate of potassa, taken in a basin of gruel at bedtime, and feel very grateful to Mr. Murray, for the knowledge of so agreeable and active a remedy."

Sufficient has already been adduced to render it deserving the notice of the profession. In conformity with the plan hitherto pursued, I now proceed to consider the treatment adopted by professional men who confide in other remedies than inhalation.

Foxglove.—Drs. Beddoes, Drake, Mossman, and others, speak in the most enthusiastic terms of the efficacy of foxglove; indeed, in the primary stages, they consider

it a specific. It certainly is a remedy of great power in lessening inflammatory action, but requires caution in the exhibition; for, when taken in excess, vertigo, nausea, sickness, prostration of the vital powers, and even death, have ensued.

Annexed are several formulæ:—

No. 113.—Take of *fresh* foxglove leaves, 2 ounces; pure water, 1 pint; boil down to one half, strain, and add compound tincture of cinnamon, ½ ounce.—Mix. Dose, one-half to one ounce every six hours.

No. 114.—Or, Take of *dry* foxglove leaves, 1 drachm; boiling water, ½ pint. Infuse for forty minutes, strain, and give from one-half an ounce to one ounce every six hours, watching the effect that the pulse be not too much reduced, not below 70.

Or, let the patient take from ten to fifteen drops of the following tincture three times a day, increasing two drops every second day until the habit feels its influence, when the dose must be suspended, diminished, or modified, according to circumstances.

No. 115.—Take of *dry* leaves of foxglove, 1 ounce; or, of the *fresh* leaves, 4 ounces; proof spirit, ½ pint. Macerate for a week in a warm place; then strain. This tincture may be taken in cinnamon water, or any of the saline mixtures.

Dr. Giovanni De Vitis, of Capua, narrates several cases of phthisis, which he asserts were successfully treated by him as follows:—

No. 116.—Take of tartar emetic, 3 grains; infusion of flowers of the elder, 5 ounces; simple syrup, 1 ounce.—Mix. Take a tablespoonful twice a day. Diet, rice boiled down to the consistence of bouilli and suitably sweetened; in diarrhœa, chocolate and biscuits.

The object of the medicine is to produce nausea and diaphoresis. When diarrhœa supervenes suspend the medicine, and give

No. 117.—Powder of foxglove, powder of ipecacuanha, 10 grains each. Make into ten pills; one to be taken every hour.

Emetics.—When attended with copious expectoration and violent coughing, emetics given every third or fourth day, with tonics in the interval (see formulæ Nos. 84, 85), have been found eminently serviceable, inasmuch as there are several cases recorded wherein they have affected an apparent cure, by at once unloading the lungs and air-passages from purulent accumulation, and inducing perhaps an altered and healthy secretion. See annexed formulæ:—

No. 118.—Take of sulphate of copper, 5 to 10 grains, ipecacuanha powder, 10 to 20 grains.—Mix. To be given in anything warm.

The quantity of the sulphate of copper and ipecacuanha will require to be increased each time of giving them, or the dose repeated in ten minutes if it should not produce vomiting, as they lose their effect on the stomach.

No. 119.—*Hemlock and Henbane.*—Take of extract of hemlock, extract of henbane, each 2 scruples; mucilage, 2 drachms; acetated solution of ammonia, 1 ounce; ipecacuanha wine, 1 drachm; camphor julep, 4 ounces; syrup of tolu, 2 drachms.—Mix. Dose, two tablespoonfuls three times a day.

This formula is the substance of the one prescribed by Dr. Paris, the principal ingredients being preparations of hemlock and henbane. The symptoms for which he recommends the mixture to be given are cough, purulent expectoration, hectic fever, and perspirations, indicative of established consumption. He advises that the medicine should be pereserved in until some degree of giddiness, nausea, or relaxation of the bowels, be produced, when amendment of the symptoms will often take place, and in some instances ultimate recovery.

Uva Ursi, or Bear Berry.—Dr. Bourne, of Oxford, published some cases of consumption, wherein he tried the powder of the uva ursi, in doses of from 8 to 15 grains, three times a day. He found it of singular efficacy in abating the hectic fever and in lowering the pulse.

Balsam Copaiva.—Dr. Armstrong, from the efficacy of balsam copaiva in inflammation of the mucous membrane of particular structures of the body, conceived that it might be as successful in every mucous membrane where inflammation should happen to exist; and therefore held it deserving a trial in pulmonic affections, since if it were even useless it could not possibly do any harm.

Sulphureous Waters.—The same author regarded in high estimation mineral waters impregnated with sulphuretted hydrogen, and mentions two remarkable examples in which purulent expectoration was present, and both of which *appeared* to be cured by the Dimsdale waters. The Harrowgate waters are noted for curing scrofula, wherever be its seat; and, as phthisis is considered really as scrofula of the lungs, there is no reason why they should not prove serviceable in that affection, as well as in others of a similar character, though of a different locality.

Alkalies.—One drachm to half an ounce of carbonate of potass, being mixed with the common drink and taken several times daily, has been by some practitioners

recommended as assisting in the cicatrization of internal ulcers; of course it should be given after a copious expectoration. Or the following alkalies may be tried:—

No. 120.—Carbonate of soda, carbonate of potass, carbonate of ammonia, of each equal parts mixed together. From ten to thirty grains may be taken several times in the day, in the usual drink.

Almond-soap taken in the form of a pill, with the patient's meals, in doses amounting from half to one drachm daily, has procured very great and permanent relief to individuals who had been long laboring under dry, husky, consumptive, asthmatical coughs. When the cough has been attended with pain, the soap, combined with gum ammoniac in similar proportions, and given in similar quantities, has been found efficacious.

The salt-water bath 98°, the artificial alkaline, soda, and sulphur baths, are powerful adjuvants in combating the debility of phthisis. These means should be zealously persevered in for a considerable time.*

Preparations of Iron.—Those usually employed are the sulphate, carbonate, ioduret, and muriated tincture: they are given alone or in combination; the sulphate enters into the composition of an established medicine called Griffith's mixture, the mistura ferri of the pharmacopœia, of which a wineglassful may be taken two or three times a day. For the carbonate and ioduret, see formulæ Nos. 84 and 85.

No. 121.—Take of muriated tincture of iron, 1 ounce. Twenty drops to be taken in water three times a day, increasing the dose one drop each time until the quantity of each dose amounts to one drachm.

This perhaps is one of the lightest preparations of iron which can be selected; it seldom disagrees with the stomach, and the dose may be increased from one drop to even two or three drachms. I have known patients take it with great benefit, for months together.†

Where the liquid preparations of iron do not sit easy on the stomach, or where they are objected to on account of their nauseous taste, the following pills may be substituted:—

No. 122.—Take of myrrh powdered, 1 drachm; sulphate of iron, 10 grains; subcarbonate of potass, ½ drachm; alkaline extract of gentian, 1 drachm. Mix and divide the mass into thirty-six pills; three or four to be taken three times a day.

No. 123.—*Tonic and Antacid.*—(Useful in tubercular phthisis.)—Take of liquor of potass, 2 drachms; tincture of gentianine, 1 ounce.—Mix. A teaspoonful to be taken twice a day.

No. 124.—*Linctus.*—(For cough in consumption.)—Take of comfection of hips, confection of red roses, each 1 ounce; oil of sweet almonds, 6 drachms; syrup of white poppies, ½ ounce; spirits of sweet nitre, 2 drachms; diluted sulphuric acid, 1½ drachms; powdered ipecacuanha, 2 grains.—Mix, to form a linctus, of which a teaspoonful may be frequently taken.

No. 125.—*Cough Mixture.*—Take of gum myrrh, 2 drachms; liquorice root, 3 ounces; boiling water, 1½ pints. Boil down to one pint, cool, strain, and take one or two tablespoonfuls with from ten to twenty drops of the following mixture, three or four times a day.

No. 126.—Take of subcarbonate of soda, 2 drachms; aromatic diluted sulphuric acid, 2 drachms; paregoric, 6 drachms.—Mix. From ten to twenty drops to be added to each dose of the above mixture.

In the debility or languor attendant upon consumption or chronic coughs, this mixture will be found very efficacious.

No. 127.—*Effervescing Emulsion.*—(For cough.)—Almond emulsion, 6 ounces; ipecacuanha wine, ½ drachm; carbonate of potass, 2 scruples.—Mix. Give three tablespoonfuls with a dessertspoonful of lemon-juice, and drink it during effervescence.

This mixture is refrigerant and expectorant.

No. 128.—*Sedative and Tonic Pills.*—(For cough.)—Take of extract of stramonium or extract of lactucarium, 4 grains; ioduret of iron, ½ drachm; alkaline extract of gentian, 1½ drachms.—Mix, to form thirty pills; two to be taken twice a day.

In consumptive cases, accompanied by profuse sweats, old Malaga wine tends materially to check them. One or two glasses may be taken daily. The same with a few sage-leaves infused in it has been recommended.

No. 129.—*To check Perspiration.*—Take of infusion of roses, 7½ ounces; syrup of quinine, ½ ounce.—Mix. Take three tablespoonfuls every six hours.

* Laennec.

† A man applied to me but some short time since, apparently in the last stage of pulmonary consumption. He complained of incessant cough, with little expectoration, but most profuse perspirations, commencing every morning about five o'clock, which within the last week had so reduced him that he was obliged to suspend his usual employment. I recommended the muriated tincture, thirty drops three times a day, the shower-bath every morning, commencing with the tepid and gradually diminishing the temperature until he could bear it cold, and the nitro-muriatic acid bath to the feet every night, applied in like manner, and the formula No. 26 for the cough; when within thirty days he was restored to perfect health: the amendment commenced the second day, and he persevered with the means during the summer. The reader may be assured that this is not a solitary case; and the practitioner, on adopting under apt circumstances similar treatment, will not be disappointed.

For the like purpose the nitrate of silver has been administered. The following is a good formula:—

No. 130.—Take of nitrate of silver, 2 grains; alkaline extract of gentian, 2 drachms.—Mix. Form twenty-four pills. Take two three times a day.

The acetate of lead, joined with morphine, restrains in a very powerful manner the morning perspirations, which waste and harass the patient. It also allays the cough, and lessens tne expectoration.

No. 131.—Take of acetate of lead, 6 grains; acetate of morphine, 3 grains; extract of poppies, 2 drachms.—Mix, and form twenty-four pills; take one twice a day, increasing the dose to two twice a day.

The prussic acid tends to diminish the hectic fever and perspirations.

No. 132.—Take of bitter almond emulsion, 7½ ounces; nitrate of potass. 1 drachm; syrup of morphine, ½ ounce; prussic or hydrocyanic acid, 8 drops.—Mix. Take a tablespoonful twice or thrice a day.

The importance of a night's rest in consumption must be obvious, considering how exhaustive is the constant cough and necessary wakefulness. See formulæ Nos. 1, 2, 3, 4.

In cases of great mental and physical depression:—

No. 133.—Take of subcarbonate of ammonia, 1 drachm; aromatic confection, 1 drachm; cinnamon or peppermint water, 7 ounces; spirits of cinnamon or peppermint, ½ ounce.—Mix. Give a wineglassful occasionally.

No. 134.—Or, Take of spirits of red lavender, aromatic spirit of ammonia, sulphuric ether, spirits of peppermint, each 2 drachms.—Mix; a teaspoonful given occasionally in a little water.

To arrest the diarrhœa often attendant upon long-standing consumption:—

No. 135.—Take of aromatic confection, 1 drachm; chalk mixture, 7 ounces; syrup of morphine, ½ ounce.—Mix. Dose, three tablespoonfuls three times a day.

No. 136.—Or, Take of compound powder of chalk, 1 scruple; compound powder of chalk with opium, 10 grains.—Mix. Form a powder, which may be taken twice or thrice a day, as occasion requires.

Where the diarrhœa arises from the presence of some irritative, or is occasioned by acidity in the stomach, the cause had better be removed, and the acidity neutralized by a gratefnl alkaline aperient.

No. 137.—Take of magnesia, 1 drachm; tincture of rhubarb, 2 drachms; peppermint water, 1 ounce. Mix. To be taken as required.

No. 138.—Or, Take of tincture of rhubarb, 1 ounce; prepared chalk, 1 scruple; oil of peppermint, 2 drops; syrup of morphine, 2 drachms.—Mix. To be taken at night, going to bed.

After which three tablespoonfuls of this or any of the preceding astringent mixtures may be taken every four or six hours, as occasion requires.

No. 139.—Take of mixture of chalk, 7 ounces; spirit of cinnamon, ½ ounce; sal volatile, 1 drachm; syrup of morphine, ½ ounce.—Mix.

No. 140.—Or, Take of confection of opium, 1 drachm; cinnamon water, 7 ounces; tincture of kino, ½ ounce; tincture of red lavender, 1 drachm; tincture of catechu, 3 drachms.—Mix. Dose, three tablespoonfuls occasionally.

The sulphate of zinc and copper have been administered with effect:—

No. 141.—Take of alum, 1 drachm; sulphate of zinc or copper, 3 grains; acetate of morphine, 2 grains; confection of roses, sufficient to form twelve pills. Take one twice or thrice a day.

Seidlitz and soda water may be drank occasionally.

Counter-Irritants.--Local Applications.—The most important under the head of local applications are those which produce external counter-irritation—a term employed to designate irritation artificially established with a view to counteract and thereby neutralize some natural irritation or inflammation existing in another and interior part of the body. The most simple forms are those of fomentation, poultice, evaporating fluids (as ether, camphorated spirits, &c.), and the essential oils, which are often severally successful in removing slight internal inflammations. An incipient sore throat or stiff neck is generally cured by one night's wear of a flannel-roller round the neck, steeped in ammonia or hartshorn and oil. Next to these in order are the various kinds of baths—the warm-water, vapor, sulphur, shampooing, and others—the efficacy of which is alluded to in several parts of this work.

Chronic inflammations require permanent rubefacient remedies. Thus a warm stimulating plaster as hereafter prescribed is of much utility in chronic coughs and chest affections, when applied in combination with friction, electric or galvanic shocks. The most active kinds of counter-irritants are sinapisms or mustard poultices, and their action is so speedy and energetic that they are the most eligible remedies when a sudden local irritant is required. They are usually composed of flour of mustard and bread crumbs in equal or various proportions, moistened and made

into a paste with hot water or hot vinegar. They should never be suffered to remain on longer than ten or fifteen minutes, or than when a sense of heat is produced of six or seven minutes' duration. From five to ten drops of croton oil dropped upon a lint or linen rag, slightly rubbed over the skin, very speedily produces an extensive crop of eruptions.

The next degree of counter-irritants are blisters, which detach the cuticle from the cutis, and occasion from the latter an effusion of serum, dependent of course upon the strength of the blister and the time it is suffered to remain on. A very simple, though somewhat painful, method of obtaining instantaneous vesication is smearing the parts with spirits of wine and setting light to it. An acetic solution or a tincture of cantharides may be used where it is desirable to modify the amount of irritation.

An important class of counter-irritants are those which affect the skin more deeply and produce a purulent discharge. The substance most eminently calculated for this purpose is tartar emetic, one part mixed with three of spermaceti ointment, a portion of which should be rubbed in over the situation to be excited night and morning until the eruption appears. The skin should be previously washed and fomented with warm water for ten minutes, which insures a more general erythema, and prevents the eruption being confined to a few large and unmanageable sores.

"An eruption excited and renewed on the chest in this manner seems, in cases of an inflammatory tendency, to act as a safety-valve to the system, letting off any incipient disposition to plethora."

In the London Medical and Surgical Journal, for September, 1833, a counter-irritant is recommended as an adjuvant to medical practice by Dr. Hancock, composed of vinegar and salt, or lime-juice and pepper, and which he advises should be rubbed all over the body in inflammatory disorders, particularly those of the lungs, and the more dangerous the disorder the greater is the chance of success. He relates many cases, among which is one where the symptoms were great pain in the chest, suffocative breathing, dry tongue, and others, all pointing to a speedy termination; and the pepper friction being promptly applied speedily restored the patient to convalescence. He says, "We ought not to fritter the time and life of a patient under the use of single remedies, as when a formidable enemy is within the walls we should not put forward a force in single file to repel his approach, and thus trifle till he gets possession of the castle." The formula he proposes is as follows:—

No. 142.—A handful of best pepper should be well powdered and mixed with an equal quantity of salt; then add a pint of lime juice or good vinegar. With this composition the body is to be rubbed entirely over, until it shall produce a sufficient demonstration of excitement and pain.

A disturbance so extensive as this application must necessarily produce requires the greatest discrimination on the part of the medical attendant with reference to the constitutional powers of the patient, and would be as unmanageable by a non-professional domestic nurse as the administration of a red-hot cinder bath.

Perpetual blisters, issues, setons, the actual cautery, boiling water, the application of steam, close the list of counter-irritants, but they are of too formidable a nature to be employed by otherwise than professional men.

No. 143.—*Plaster for the Chest in Chronic Bronchial Affections.*—Take of compound plaster of galbanum, 1 ounce; camphor, 1 drachm; subcarbonate of ammonia, powdered opium, each ½ drachm; cajeput oil, 40 drops.—Mix and spread it according to the usual manner.

No. 144.—Or, Take of compound pitch plaster, ammoniacal plaster, opium plaster, of each equal parts, spread on leather in the ordinary way.

No. 145.—*Pectoral Plaster for Chronic Chest Affections.*—Take of galbanum plaster, pitch plaster, each 1 ounce; camphor, ½ drachm.—Mix. To be spread on leather as usual.

No. 146.—*For wandering Pains about the Chest or any part of the Body.*—Take of compound camphor liniment, 1 ounce; laudanum, ½ ounce.—Mix. The surface of the chest to be well rubbed twice a day with this liniment.

No. 147.—Or, Take of camphor liniment, oil of turpentine, each 1 ounce.—Mix. To be used as the one preceding, twice a day.

No. 148.—*Tincture of Cantharides for Local Application to produce Vesication.*—Take of bruised cantharides, 10 drachms; bruised capsicums, 1 drachm; alcohol, 1 pint. Digest and strain.

No. 149.—*Formula for preparing the Nitro-Muriatic Acid Bath.*—Take of nitric acid, muriatic acid, each ½ pint; distilled water, 1 pint. Three ounces to be added to every gallon of warm or cold water. Immersing the feet in a bath prepared according to this direction is occasionally recommended in cases of debility.

No. 150.—*Embrocation for deep-seated and anomalous Pains.*—Take of sulphuric ether, spirits of camphor, each 1 ounce; muriate of morphine, 2 grains.—Mix. To be applied to the parts affected twice a day or oftener if necessary.

NEW MEDICINES.

Among the medicines prescribed in this appendix are many not included in the standard directory of the druggist—the London pharmacopœia; for the guidance, therefore, of those who may not be acquainted with the formulæ, I have described the mode of preparing them, in order that no difficulty may occur to persons desirous to obtain them. The introduction of a subject so apparently irrelevant to a publication principally, indeed wholly, designed for domestic application, is justified by the important influences these newly-discovered agents have been found to exert in the removal of disease, and the advantage that may possibly be derived by patients from being made able to impart information, where information does not previously exist, as to the manner in which these remedies may be correctly prepared. Without this means, the knowledge of the finest remedy in the world were useless; and there are many situations, especially in the circle of country practice, where it may be found of important utility. The desire to obtain any such medicines need not, consequently, be frustrated by the chymist alleging ignorance about the mode of preparation, when the requisite information can be communicated by a transcript from these pages, or the loan of the work itself.

Cyanuret of Potassium.—This preparation is obtained by exposing the ferruginous prussiate of potass to heat, whereby the cyanuret of iron is completely decomposed, leaving the potassium unaltered, save being soiled by the iron and charcoal of the cyanuret of iron. The mass is washed in water which takes up in solution the cyanuret of potassium, while the iron and charcoal subside. The solution is suffered to evaporate and crystallize, and may be kept for an indefinite length of time in well-stopped bottles. Its properties are like those of prussic acid, and for their less volatility perhaps more to be depended upon.

The cyanuret of potassium of Mr. Laminn, of Finsbury square, which by mere solution with tartaric acid constitutes prussic acid, may be relied upon for its purity, and answers the objections raised against the volatilization of prussic acid from being kept, by the above extemporaneous method of preparing it.

The following are formulæ which enter into the prescriptions contained in this appendix:—

No. 151.—*Solution of the Cyanuret of Potassium.*—Take of cyanuret of potassium, 1 ounce by weight; distilled water, 8 ounces by weight.—Mix.

This solution, possessing similar properties to the prussic acid, may be administered in like doses, or mixed with those preparations in which the acid is given.

No. 152.—Or, Take of the solution of the cyanuret of potassium, ½ drachm; distilled water, 8 ounces; purified sugar, 1 ounce.—Mix.

A tablespoonful may be taken night and morning, increasing the dose gradually to three or four times that quantity.

No. 153.—*Syrup of Cyanuret of Potassium.*—Take of the solution of cyanuret of potossium, 1 drachm; simple syrup, 1 pint.—Mix. This syrup may be added to ordinary pectoral mixtures, or one or two teaspoonfuls given twice or three times a day.

No. 154.—*Ointment of Cyanuret of Potassium.*—Take of cyanuret of potassium, 3 grains; spermaceti ointment, 1 ounce.—Mix.

This ointment is very useful in allaying muscular rheumatism, often attendant on chest affections.

Prussic or Hydrocyanic Acid.—The name of this acid, and its awfully powerful effect on the system when taken in poisonous doses, is already familiar to the public as well as to the profession. It was discovered by the celebrated chemist Scheele, nearly fifty years ago, but attracted the notice of medical men only within the last fifteen years, when Magendie, in a memoir presented to the academy of Sciences, reported its wonderful effects in pulmonary complaints. From that time it has been employed by all the physicians in Europe, and with uniform success; it is now considered one of the most valuable therapeutic agents we possess. Its properties are principally sedative, and the most beneficial results have been experienced from its employment in chest affections, particularly in consumption, in removing the hectic fever, allaying the perspirations and subduing cough. In nervous diseases and derangements of the stomach, more especially gastritis, or inflammation of the stomach, attended with excruciating pain at the pit of the chest, accompanied by vomiting, its effects are all-subduing. The dose of the acid is from one to three or four drops, but

had better at all times be taken only when prescribed by a medical man, or as prepared in the formulæ given in this appendix.

Iodine.—This powerful medicine has been employed with wonderful success in many of those distressing cases which had been previously considered as beyond the control of medicine, particularly the varieties of scrofula, and, as consumption is held to be a scrofulous condition of the lungs, its administration in one or other of its forms is strongly recommended in that disease. It is obtained from a great variety of sea-plants. Its salts are numerous, those of soda and potass being however chiefly used. It is apt, in patients whose stomachs are irritable and in a weak state, or if given in excess, to excite nausea and disturb the nervous system; hence it had better be taken only under the superintendence of a professional man. Many valuable remedies fall into disrepute in consequence of being administered when the stomach or bowels, the nervous or the sanguiferous systems, are unfit for their reception. Magendie's formulæ for the preparations which are now most usually prescribed, and which should be kept ready, are subjoined.

No. 155.—*Tincture of Iodine.*—Dissolve 60 grains of iodine in 2½ ounces of alcohol. Dose from ten to thirty drops twice a day in any vehicle.

No. 156.—*Liquor of Iodine.*—Take of hydriodate of potass, 36 grains; iodine, 10 grains; distilled water, 10 drachms.—Mix. Dose, same as the tincture.

No. 157.—*Solution of Iodine.*—Take of hydriodate of potass, 24 grains; distilled water, 1 ounce.—Mix. Dose from ten drops twice or thrice a day.

No. 158.—*Ioduretted Sulphuric Ether.*—Take of sulphuric ether, ½ ounce; pure iodine, 6 grains.—Dissolve. Twenty drops a dose.

No. 159.—*Liniment of Iodine.*—Take of soap liniment, 1 ounce; tincture of iodine, 2 drachms.—Mix. To be rubbed over the part affected twice a day.

No. 160.—*Ointment of Iodine.*—Take of hydriodate of potass, ½ to 1 drachm; simple ointment, 1 ounce.—Mix. A portion to be rubbed over the part affected twice a day.

The following mixture has been prescribed by M. de Fermon, in the case of a young phthisical female, with good effect, and I myself have witnessed palliation of consumptive symptoms in several instances by a similar combination.*

No. 161.—Take of lettuce water, 4 ounces; solution of hydriodate of potass, 15 drops; medicinal prussic acid,† 10 to 12 drops; syrup of marshmallows,† 1 ounce.—Mix. Dose, a dessertspoonful every two or three hours.

Dr. Lugol, physician to the Hôpital St. Louis of Paris, has published a work on the efficacy of iodine in scrofulous diseases. The preparations which he recommends, differing somewhat from the preceding, are subjoined.

He has three solutions of different degrees of strength:—

No. 1 contains ¾ of a grain of iodine, 1½ grains of hydriodate of potass, and 8 ounces of distilled water.

No. 2 contains 1 grain of iodine, 2 grains of hydriodate of potass, in 8 ounces of distilled water.

No. 3 contains 1¼ grains of iodine, 2½ grains of hydriodate of potass, in 8 ounces of distilled water.

Dr. Lugol begins with giving one half of a grain of iodine in the twenty-four hours, and therefore lets the patient have ⅔ of No. 1, in two or three divided doses.

In a few days the quantity is gradually increased to one grain a day, and this dose is generally continued till the end of the treatment. In some instances Dr. Lugol has given one grain and a half in twenty-four hours, but this is the greatest quantity ever prescribed by him. He considers the concentrated solution a less exact mode of employment than these weaker solutions, which he calls "iodine mineral waters." The external, local or general, use of iodine, Dr. Lugol considers equally serviceable, as he insists that they have an internal influence on the system, in consequence of absorption. His formula for iodine baths is to dissolve two or three drachms, with rather a larger proportion of hydriodate of potass, in two or three ounces of distilled water, which are to be put in the bath. Its effect on the skin is very active, it sometimes reddens it.

Dr. Scudamore has published several cases illustrative of the efficacy of iodine administered by inhalation in pulmonary consumption. The mode Sir Charles prescribed is to mix a weak solution of iodine with the addition of some saturated tincture of conium with water (quantities not given) "of 120 degrees of heat, to be inhaled for fifteen or twenty minutes, three times a day."

* In some obstinate and long-standing cutaneous affections (particularly in one case of lepra of nearly twenty years' duration), the preparations of iodine have been found to possess wonderful efficacy.

† Or the prussic acid and syrup of marshmallows may be replaced by an ounce of the syrup of cyanuret of potassium.

Morphine.—Morphine, the narcotic principle of opium, has been found to be of its kind one of the most useful of all the recently-discovered medicines. It inherits all the good properties of opium without its inconveniences.

The preparations of morphine most usually employed consist of the *acetate*, *sulphate*, *muriate*, and *citrate*. They may be incorporated in pills, mixtures, or electuaries, and given in doses from one quarter of a grain to two or three grains within appropriate intervals, or for the purposes of ready administration may be kept pre pared according to the following formulæ:—

No. 162.—*Syrup of the Acetate or Sulphate of Morphine.*—Take of acetate or sulphate, 4 grains simple syrup, 1 pint.—Mix. Dose, two drachms to one ounce.

No. 163.—*Solution of Morphine.*—Take of acetate or sulphate, 16 grains; distilled water, 1 ounce; acetic acid, 3 or 4 drops; alcohol, 1 drachm.—Mix. Dose, six to twenty drops.

No. 164.—*Solution of the Citrate of Morphine.*—Take of pure morphine, 16 grains; crystals of citric acid, 8 grains; distilled water, 1 ounce; tincture of cochineal, as much as is sufficient.—Dissolve. Dose, six to twenty drops.

No. 165.—*Ointment of Morphine.*—Take of acetate or sulphate, 2 grains; simple ointment, 1 ounce. —Mix. A small portion rubbed over any part affected with rheumatic, or neuralgic pain, almost invariably gives relief.

Emetine.—The nauseating principle of ipecacuanha—pure emetine is white and pulverulent, and may be medicinally employed in any of the following formulæ:—

No. 166.—*Emetine Lozenges.*—Take of pure emetine, 8 grains; white sugar, 4 ounces. Made into lozenges of nine grains each, one of which, in order to act as an expectorant, or as a substitute for the ipecacuanha lozenge, may be taken every one or two hours; but if taken oftener will excite nausea.

No. 167.—*Emetic Mixture.*—Take of infusion of orange peel, 3 ounces; pure emetine dissolved in a sufficient quantity of acetic acid, 1 grain; syrup of marshmallows, 1 ounce.—Mix. A tablespoonful to be given every ten minutes till vomiting is produced; or, if intended to act as an expectorant, one drachm to be taken in a dose of any pectoral mixture.

No. 168.—*Syrup of Emetine.*—Take of pure emetine, 4 grains; simple syrup, 1 pound.—Mix. To be employed as the emetic mixture, or ipecacuanha wine in cough medicines.

Lactucarium—Is the white viscid juice of the garden lettuce, obtained at the time the plant is in flower, by incision, and without heat. It is bitter, concretes, and turns brown rapidly; it should be preserved in well-stopped bottles, as it readily imbibes moisture from the atmosphere. The extract of lettuce obtained in the ordinary method possesses similar properties to the lactucarium, but requires to be given in larger doses. They both act as sedatives, without inducing the ill effect consequent upon taking opium, and are highly useful in allaying phthisical coughs, procuring sleep, &c. The dose is from one grain administered several times in the twenty-four hours. The following is the formula for the lettuce lozenge.

No. 169.—Take of Lactucarium, 1 drachm; emetine, 8 grains; gum arabic powder, 1 ounce; white sugar, 3 ounces. Made into lozenges in the ordinary manner of ten grains each, one or two of which may be taken occasionally; very useful in chronic coughs.

Veratrine—Is obtained from the seeds of the Indian caustic barley, and the bulb of the colchicum autumnal. Its properties resemble those of the meadow saffron, and will consequently be found useful in all those cases wherein the latter is prescribed, particularly when taken internally in cases of gout, rheumatism, and dropsies; it is locally applied in tumors, swellings, chronic inflammations, &c.

The forms are pills, tincture, solution, and ointment.

No. 170.—*Pills of Veratrine.*—Veratrine, ½ grain. Made into a pill with gum arabic or liquorice powder, with syrup. One pill to act as an aperient may be given once or twice only in the day.

No. 171.—*Tincture of Veratrine.*—Veratrine, 4 grains; alcohol, 1 ounce.—Mix. Dose, ten to twenty-five drops administered internally in rheumatism, gout, dropsies, &c.

No. 172.—*Solution of Veratrine.*—Sulphate of Veratrine, 1 grain; distilled water, 2 ounces.—Mix. Dose, a teaspoonful twice or thrice a day. Use same as the tincture.

No. 173.—*Ointment of Veratrine.*—Veratrine, 4 grains; lard, 1 ounce.—Mix. A portion the size of a nut rubbed in over the seat of the disease for 12 or 15 minutes each time, once or twice a day.

Gentianine—Is the alkali of the gentian root, powerfully bitter, and somewhat aromatic. It possesses, of course in a concentrated form, all the properties of the gentian, and may be administered in the form of a lozenge, the tincture, syrup, or any extemporaneous vehicle.

No. 174.—*To prepare the Gentianine Lozenge.*—Take of gentianine from ½ to 1 grain; extract of liquorice, 10 grains.—Mix. This lozenge may be taken daily before dinner, or oftener if desirable; it is an excellent tonic.

No. 175.—*Tincture of Gentianine.*—Take of alcohol, 1 ounce; gentianine, 5 grains.—Mix. Dose, a teaspoonful twice a day in water, or any other liquid.

No. 176.—*Syrup of Gentianine.*—Take of gentianine, 16 grains; simple syrup, 1 pint.—Mix.

This is one of the best bitters that can be employed medicinally.

Quinine—Is the alkaline principle of Peruvian bark, and owes its discovery to our

indefatigable neighbors, the French chemists. It is of a whitish color, insoluble in water, and intensely bitter, but soluble in alcohol and acids. There are several salts of quinine, but the sulphate is generally employed, from one to five grains constituting a dose. It may be administered in either pills or mixtures, as prescribed in the formulæ of this appendix. The syrup and wine are subjoined below.

No. 177.—*Syrup of Quinine.*—Take of sulphate of quinine, ½ drachm; simple syrup, 1 pint.—Mix Dose, half an ounce.

No. 178.—*Quinine Wine.*—Good Madeira wine, 1 pint; sulphate of quinine, 16 grains.—Mix. A wineglassful twice a day.

No. 179.—*Quinine in combination with Morphine.*—Take of sulphate of quinine, 2 to 5 grains; sulphate of morphine, ¼ to 1 grain.—Mix and form a pill, to be taken twice a day in irritable or hectic fever, and to allay or prevent the perspirations in phthisis.

No. 180.—*Lobelia Inflata—Indian Tobacco.*—Take of lobelia, 2 ounces; alcohol or sulphuric ether, 1 pint.—Mix. Digest for ten days and strain. Dose from 20 to 60 drops two or three times a day.

In asthma, hooping-cough, difficulty of breathing from spasm, &c., this medicine has been administered with unbounded success.

No. 181.—*Iodurets of Mercury.*—The combination of iodine with mercury.—162 parts of the protoioduret of mercury contain 62 of iodine, 100 of mercury, 162.—Dose, ¼ part of a grain.

No. 182.—562 parts of the deutoioduret of mercury contain 250 parts of mercury, 312 parts of iodine, 562.—Dose, ¼ part of a grain.

Lupuline.—This substance resides in the common hop. It is the mealy matter which adheres to the seeds and strobules, and presents itself in the form of small, shining, yellowish grains, possesses an aromatic odor, and is pulverulent.

The principal preparation is the tincture. Properties—tonic.

No. 183.—Take of powdered lupuline, 1 ounce; alcohol, 3 ounces.—Digest and strain. Dose, a teaspoonful twice a day.

Ioduret of Iron.—The combination of iodine with iron, brought into notice by Dr. A. T. Thompson, the author of the Pharmacopœia Londinensis, and one of the professors of the London University.

This medicine possesses similar properties to the other preparations of iron, with the advantages of its combination with iodine. Dose, two to five grains twice a day.*

On Diet.—At a period eminently practical, like the present, when the connection between cause and effect is so closely scrutinized as to make the discovery of the one follow the development of the other, I can not dismiss this subject without reiterating that to maintain or recover health a careful attention must be paid to *diet*, which is, after all, the alpha and omega of the materia medica; and I am bold to prognosticate that fashion and authority will be compelled to descend to the steps of plain common sense, and submit to a radical reform in this particular. I am enough of a visionary to anticipate, and of a philanthropist to desire, a period when life shall be at a higher premium than it is now; when every organ of the senses shall be perfected by a sane and graceful temperance, till respiration itself shall be a pleasure: yes, and more than a pleasure—even a thanksgiving, a devotion to the power that made us—when all those hinderances to domestic happiness and social good which exist under the guise of perverted temper, clouded intellect, imbecile stillness or mischievous activity, or even disease itself, which may be traced up to stomach obstructions or biliary derangements, shall be scouted into oblivion. In a word, when "*ill health*," to borrow the expressive language of one who, having gladdened, would also lengthen life, "*shall be disgraceful.*"

In my little treatise, entitled "What to Eat, Drink, and Avoid,"† will be found a series of diet-tables (want of space forbids their transcription here), for every degree of invalidism, together with a review of the relative digestibility of all kinds of food, for a fuller detail of which the announcement at the end of these pages must be referred to. To render the present volume domestically acceptable, the subjoined receipts are inserted.

Among them will be found several useful directions for preparing the lighter kinds of food and drink, and, although every practised nurse and housewife is probably in

* The utility and efficacy of the foregoing remedies, like all others, depend in the highest degree on the manner in which they are prepared; for their medicinal powers may easily, from want of caution or judgment, become converted into the most deadly weapons of destruction. Not merely should the medical practitioner be thoroughly acquainted with their ramified uses and mode of operation, but the manufacturing chemist should also be experienced and competent for his no less responsible office.

† Published by J. S. Redfield, New York.

possession of the information here conveyed, it may not be held altogether unnecessary to a noviciate.

Common Substitutes for Solid Food.—*Arrowroot.*—Upon a tablespoonful of arrowroot pour sufficient cold water;* make it into a paste, and then add boiling milk until it becomes thick; sweeten it with pounded loaf-sugar, and season it with a little nutmeg or ground cinnamon.

Rice.—Wash and pick two or three ounces of the best rice, boil it in sweet milk till quite soft, sweeten and season it with cinnamon or nutmeg.

Gruel.—Dr. Kitchener, than whom no authority in such matters can be more unquestionable, directs that one tablespoonful of oatmeal should be well mixed in a pint-basin, with three tablespoonfuls of cold water; a pint of boiling water should then be carefully added, and boiled for five minutes, stirring it all the time to prevent the oatmeal from burning at the bottom of the stewpan, after which it should strained, to separate the undissolved parts of the meal from the gruel. If a more substantial repast be required, double the above quantity of oatmeal may be added. To increase the nutritive quality of this aliment, broth or milk may be substituted for water.

Gruel should never be kept longer than forty-eight hours, as it is apt to become acescent.

Isinglass.—Half an ounce of isinglass may be boiled in a pint of water or milk until it is dissolved, when it may be flavored with cinnamon, nutmeg or wine.

Jellies.—No. 184.—*Calves' Feet Jelly.*—Take two calves' feet well cleaned; take off the hoofs, and break the feet in several places; put them on with two pints of cold water, and boil them slowly until the bones loosen from the feet. Strain through a hair sieve, and flavor with wine or spice, as may be required.

No. 185.—*Biscuit Jelly.*—White biscuit, 4 ounces: water, 4 pints. Boil to one pint; add as much white sugar as it will dissolve, then of red wine 4 ounces, and a drop or two of oil of cinnamon.

This jelly will be found serviceable to patients in a low state, with weak stomachs and relaxed bowels.

No. 186.—*Jelly of Iceland Moss.*—Iceland moss, 4 ounces; water, 2 quarts. Boil to ½ pint; strain; add white sugar, 4 ounces.

This jelly is nutritious and strengthening in consumption and affections of the chest generally. Cariggeen moss may be used, it being very nutritious; poor families in Ireland frequently subsisting upon it entirely.

No. 187.—*Hartshorn Jelly.*—Hartshorn shavings, 1 ounce; water, 4 pints. Boil to two pints, and strain; warm again, with orange-juice, 1 ounce; white sugar, 6 ounces; sherry, 5 ounces.

No. 188.—*British Arrowroot Jelly.*—One dessertspoonful to two or three of cold water, in a large breakfast cup. Mix; then add slowly boiling water, stirring till the cup is nearly full; add a little wine, with nutmeg, cinnamon, and sugar. Milk may be used instead of water.

Tapioca Jelly.—Soak tapioca in water for a night; then boil it gently till quite clear, and add lemon-juice, lemon-peel, wine, sugar, and cinnamon, at pleasure.

Creme de Ris.—Rice, three spoonfuls; boil in water two pints to one; strain; add ten sweet almonds, five bitter almonds; rub them down with a lump or two of sugar, and form an emulsion with the liquid; add a little cinnamon or orange-flower water, and drink the mixture warm in the morning.

Drinks.—Toast and water may be made by impregnating water with the soluble parts of toasted bread, which is thus rendered slightly nutritive; a preferable mode is that of substituting biscuit toasted to a coffee-color for bread, as the former is free from yeast. Toast and water should be made fresh every day.

No. 189.—*Common Drink in Catarrhal Fevers.*—Cream of tartar, ½ to 1 ounce; white sugar, 4 ounces; orange-peel, 2 ounces; boiling water, 2 quarts. To stand till cool, when it may be strained, and is fit for common use.

No. 190.—*Barley Water.*—Pearl barley, 2 ounces; water, 4½ pints. Boil down to three pints, and strain.

No. 191.—Or, Pearl barley, 2 ounces; figs, 2 ounces; Spanish liquorice, ½ ounce; raisins stoned, 2 ounces; water, 4 pints. Boil for twenty minutes, and strain.

Sage, Balm, or Rosemary Tea.—This is made by infusing a handful of the leaves in boiling water for ten or fifteen minutes. The liquor should be decanted in the usual manner, and may be sweetened with sugar. Either of these herbs furnishes a salutary beverage.

* Rain-water, when collected in the open fields, is certainly the purest natural water, and should be preferred; but when collected in large towns it is impregnated by the smoky and contaminated atmosphere through which it falls, and, when directed from the tops of houses into the water-butt below, contains calcareous matter; in which case it should always be boiled and strained, or filtered, previous to using it, as should, in fact, river, spring, or well-water.

INFUSION OF LEMON-PEEL.—A drink extremely agreeable to the palate may be made by infusing lemon-peel in boiling water, and adding a small quantity of sugar.

CURRANT-JELLY DRINK.—A delicious beverage is also made by dissolving a small pot of currant-jelly in a quart of warm water, which may be drank warm or cold, as the palate may dictate.

No. 192.—*Demulcent Drink.*—(In colds, attended with sore throat.)—Gum arabic, 2 ounces; pearl barley, 2 ounces; water, 2 quarts. Boil down to three piuts; suffer it to cool and clear; strain; then add the juice of a lemon.

No. 193.—*Pectoral Drink.*—Take of common mallow, coltsfoot leaves, marshmallow-root, each 1 ounce; aniseseed, ½ ounce; boiling water, 2 or 3 quarts. Infuse for an hour or two; strain, and sweeten with sugar-candy, syrup, or white sugar.

No. 194.—*Linseed or Bran Tea.*—Linseed or bran, 4 ounces; gum arabic, 1 ounce; boiling water, 2 quarts. To be suffered to cool; then strain; sweeten with honey.

No. 195.—*Raisin Drink.*—Stone raisins, 4 ounoes; water, 2 quarts. Boil for twenty minutes, and strain.

No. 196.—*Tamarind Drink.*—Best tamarinds, 4 ounces; water, 2 quarts. Boil for twenty minutes, and strain.

No. 197.—*Barley-water Drink.*—To each quart add the juice of a lemon.

No, 198.—*Rice Drink.*—Rice, 2 ounces; water, 3 pints. Boil to a quart, and strain; a little lemon or orange-peel may be added.

No. 199.—*Common Drink in Cough.*—Red poppies, 1 ounce; figs, 2 ounces; coltsfoot, 2 ounces, water, 2 quarts. Boil for twenty minutes; sweeten with honey, and acidulate with lemon-juice, or elixir or vitroil.

No. 200.—*Honey Water.*—Take of honey, 2 ounces; the juice of half a lemon; water, 1 quart. A wineglassful occasionally

THE END

CONTENTS.

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BY R. J. CULVERWELL, M. D.,

AUTHOR OF "GUIDE TO HEALTH," "HOW TO BE HAPPY," ETC.

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BOSTON: REDDING & CO., No. 8 STATE STREET.

PHILADELPHIA: G. B. ZIEBER, AGENT, No. 3 LEDGER BUILDINGS, THIRD ST.

BALTIMORE: W. TAYLOR & CO.—NEW ORLEANS: J. C. MORGAN.

1849.

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BY JOHN H. GRISCOM, M. D.

"To any body blessed with eyes and reason it would seem the most natural thing in the world, that mankind should have discovered that pure air and plenty of it, was the element with which God had surrounded the earth, for the purpose of sustaining the breath of life in the beings he had placed upon its surface. But this first and rational thought gives place to amazement, if we carefully examine the dwellings of the human race, whether costly or simple, and observe how systematically all provision has been omitted for providing them with an adequate supply of the vital fluid. No man would deny, in the abstract, that after air has been once inhaled and ejected from the lungs, it is unsuitable for breathing again, until it has been mingled with the great ocean of atmosphere and received a fresh supply of the life-sustaining principle of which it has just been deprived. But it is easy to establish the fact, by mathematical demonstration, that the great majority of public apartments, the ordinary dwellings of families, and especially the sleeping-rooms of all classes, do not furnish one quarter the supply of fresh air requisite to the full and healthful play of the lungs, and the performance of their important functions upon the system. It is not difficult to understand that this air-famine must necessarily weaken and enfeeble the system, rendering it peculiarly susceptible to the absolutely poisonous vapor exhaled from the lungs, and the constant deperdition of the particles of human bodies. And when we reflect that this evil has been exerting its baneful influence for thousands of years—indeed ever since men began to build and live in houses—accumulating its direful effects, and perpetuating them from generation to generation—we shall be prepared to admit that to the breathing of noxious and impure air, mankind owes most of the epidemic and endemic scourges with which it is afflicted.

Recently our medical and sanitary writers have been drawing the attention of the world to this subject, and endeavoring to arouse it to the momentous importance of ventilation and pure air. But no prejudices are so strong as those which endanger the lives of their possessors. In fact, prejudice and ignorance seem to be the pet vices of humanity, and are the more fondly cherished, and the more obstinately clung to, in proportion to their power of doing mischief.

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The work is divided into three parts. The first treats of the nature of the air, its functions in the animal economy, and the structure of the human system intended for its reception. The second part enumerates with brevity but frightful distinctness the evils imposed upon the world by impure air and the lack of ventilation; and the third is devoted to a clear, scientific, and practical discussion of the best means of ventilating every species of building. The whole book is a complete manual of the subject of which it treats; and we venture to say, that the builder or contriver of a dwelling, school-house, church, theatre, ship, or steamboat, who neglects to inform himself of the momentous truths it asserts, commits virtually a crime against society and his fellow-creatures.

But not the least valuable portion of this work, is that which contains directions for applying a sufficient ventilation to houses and other buildings already erected. There is scarcely a dwelling or an apartment in this choking, suffocating city, which might not be supplied, at a most insignificant expense, with fresh air and means for carrying off the dead and poisonous exhalations from the lungs. In this view the work possesses an inestimable value to all classes; and we trust that the public will, for its own sake, read it as universally and as thoughtfully as it deserves."—*N. Y. Metropolis.*

"We should be glad to believe that this brief notice would induce our readers to buy this work, and read it thoroughly and attentively. Certainly this is a matter of great, of paramount importance. We pay doctors to dose and drug us; we awake from a feverish and disturbed sleep, with a sensation of mental and physical heaviness and depression which finds no relief until we go *into the pure air*, outside our ill-ventilated dwellings; and yet we learn not wisdom from this painful and wasteful experience. We see our little ones, pale, and weak, and dejected, inside of our *infernally* (there is no other word to express the truth) constructed dwellings, and we take them into the open air, and lo! the color comes back to their cheeks, and the smiles chase one another over their young faces—yet we seem not to heed the warning and instruction which nature, more kind and more potent than all the doctors and all their drugs, thus freely gives us. When shall we learn that God in giving us life, has also, and as beneficently, provided the means of fostering and nourishing life? When shall we learn to estimate at their proper value, pure water and pure air, which God provided for man before he made man, and a very long time before he permitted the existence of a doctor? We commend the Uses and Abuses of Air to our readers, assuring them that they will find it to contain directions for the ventilation of dwellings, which every one who values health and comfort should put in practice."—*N. N. Dispatch.*

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