An improved system of domestic medicine : founded upon correct physiological principles : comprising a complete treatise on anatomy and physiology, the practice of medicine, with a copious materia medica, and an extensive treatise on midwifery, embellished with over one hundred useful engravings, gotten up expressly for family use / by Horton Howard.

Contributors

Howard, Horton, 1770-1833.
Daniels, Worth B. 1899-1978
Daniels, Worth B. 1925-2009
National Library of Medicine (U.S.)

Publication/Creation

Cincinnati : H.M. Rulison, Queen City Publishing House ... ; Philadelphia : Duane Rulison, Quaker City Publishing House ..., 1856, ©1848-1852.

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AN

IMPROVED SYSTEM

OF

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BY HORTON HOWARD.

NEW REVISED EDITION. THREE VOLUMES IN ONE.

CINCINNATI:
H. M. RULISON, QUEEN CITY PUBLISHING HOUSE. 115 MAIN STREET.
PHILADELPHIA:
DUANE RULISON, QUAKER CITY PUBLISHING HOUSE, 32 S. THIRD STREET.
1856.

HMD
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1856

Entered according to Act of Congress, in the year 1848, by
HORTON HOWARD,
In the Clerk's Office of the District Court of Ohio.

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94-18365

PREFACE

TO THE FIRST EDITION.

In presenting to the public a new work, upon the very face of which is stamped the impress of novelty and innovation, I have assumed it as granted, that a concise history of the circumstances and motives which led to its publication, would not only be interesting but useful to the reader.

From exposure in early youth, my health became much impaired, and my constitution weakened by sickness; insomuch that from the age of thirteen to twenty-one, I was a constant prey to disease and all its concomitant ills—its pain and anxiety—its gloomy forebodings, and the repulsive prospect of a slow decay. During this period I not only applied for medical aid to the best physicians of my native state, (North Carolina,) but I devoted a portion of my time to the study of medicine, in the hope of finding something to mitigate my sufferings, and also, at the same time, of acquiring the knowledge of a useful and honorable avocation for life Stimulated by these earnest hopes and sentiments, I prosecuted my book studies, aided by the best physicians of my acquaintance, until I had acquired a competent knowledge of the practice of medicine. But alas! my fondest anticipations were but idle dreams; neither my books, nor my physicians, brought that relief—that grateful solace to my sick-worn frame, which I so ardently desired, and so anxiously sought from their aid!

By these means, however, I became acquainted with the members of the medical faculty, by which was laid the foundation of a most familiar intercourse with the profession, in almost all places where I have since resided. Moreover, I became acquainted with the appalling fact, that with all the knowledge which I, or the best medical practitioner possessed, and with the use of such remedies as were generally relied upon in the treatment of disease, it would be a matter of uncertainty whether I should cure or kill! With these sentiments indelibly impressed upon my mind, I abandoned the idea of following a practice which could only be pursued at the hazard of destroying life; and which could not, therefore, be termed, as Asclepiades styled the patient observation of Hippocrates, "a meditation on death;" but was absolutely an acceleration of its progress. My health

was finally restored by a peculiar kind of regimen which will be particularly described in my medical work.

From these considerations, and from these alone, I abandoned the idea of following the practice of medicine as a profession; although I have practised very considerably among my immediate neighbors, more especially in sickly seasons; but for which I have never charged, nor have I ever received, any compensation.

In the summer of 1825 the bilious fever prevailed epidemically, which swept off numbers of my acquaintances, amongst whom I lost a lovely daughter, whose death, I have no doubt, was accelerated by bleeding; which, at the instance of consulting physicians, I reluctantly consented should be done. Other branches of my family, as well as several of my neighbors, suffered by the same epidemic, all of whom recovered by the assistance of such medical aid as I was *then* capable of affording them; which indeed I had reason to believe was at least equal to any that could have been derived from other sources.

About the time of which I am now speaking, or soon after, I heard much talk of the botanic physicians, usually styled *steam*, or *patent doctors*; and as prejudice in the mind of the multitude often goes in advance of almost every great and good work, so it was in this instance; and myself with the rest, and particularly with the medical faculty, imbibed prejudices the most hostile, and feelings the most contemptuous, towards this infant germ of rational medicine. I still very sensibly recollect with what supercilious disdain I then looked down, as I thought, from my lofty eminence, upon the botanic practice and practitioners of medicine. For however I had, with many great physicians, felt and deplored the imperfections of the healing art, I could not for a moment suppose, that the improvement which it so imperiously demanded, would, or possibly could, originate at any other source than the fountain heads of medical science.

But I was not destined long to remain the slave of my prejudices, or the deluded victim of my own blindness and folly. A case occurred during the ensuing winter which overthrew the strong citadel of my prejudices, and opened to my astonished vision new and extraordinary views of the healing art, directly opposed to the opinions taught in the fashionable schools of medicine. A respectable neighbor of mine, was taken very ill with a pleurisy, attended by symptoms of obstinate bilious fever; and as I had successfully attended his family during the summer, he called upon me in his own case. I accordingly attended, resorting to the usual remedies administered in such cases; but finding it a complicated formidable case, and my business requiring my absence from home, I advised him to call in the best medical aid that could be obtained, which I thought his dangerous complaint imperiously required. On the morning of the day on which I contemplated leaving home, I called to see and take leave of him, and to my utter astonishment and indescribable horror, found a steam doctor preparing to take the sick man through a process of steaming, puking, &c. On seeing this, I turned upon my heel with the most disdainful and disgusting emotions, with the intention of immediately leaving the house, and the sick man to perish, as I supposed he probably would, in the hands

of this adventurous empiric of the botanical school. But by the earnest entreaties of my sick neighbor, and the solicitations of the ignorant steam doctor, as I then thought him to be, I reluctantly consented to stay and witness the operation and effects of the new mode of curing disease wholly with botanic medicine, aided in its effects by the use of vapor or steam.

I then carefully examined the symptoms of the sick man, found there was no abatement of their violence, and waited to see the result of the process to which he was, as I thought, presumptuously submitting. But after the operation was completed I again examined him, and felt myself astonished and confounded at the extraordinary effect which had been produced in so short a time. The fever was gone, the pain of his side was almost removed, the difficulty of breathing had ceased, the headache had departed, and his appetite for food returned. My prejudices, which alone had prevented me from giving this new system an impartial examination, were thus, in a moment, scattered to the four winds of heaven, whilst I was overwhelmed with reflections of my own want of liberality and consistency.

I had now been an eye-witness to such sudden and salutary effects of medicines as I had reason to believe were unknown to the faculty of Europe or America. Impressed with these views, I came to a serious pause. I knew full well the inefficiency of the common means resorted to in the treatment of disease; I had but a few months before, lost a beloved daughter, and had again and again seen patients languish for weeks and even months, under less formidable attacks of disease than that of my neighbor, of whom I am speaking, whilst he seemed in a fair way to get up in a few days; which he actually did. I felt that I owed a duty to myself and to my family; and that to my Maker I was accountable for the neglect of that duty. I paused—I reflected—I weighed the whole matter seriously. I had seen the effects of the new medicines in but one case; but that was one of virulent character, and it yielded to the means employed, as if they acted by a charm; I came to the conclusion that it was my duty as a man, and as a Christian, to forego all my prejudices, and avail myself of the knowledge of these botanic medicines for the benefit of my own family.

I accordingly applied to Dr. Hance, the practitioner who had attended my neighbor, and from him I received the knowledge of Dr. Thomson's System of Medicine. Sickness in my own family, as well as amongst my neighbors and friends in distant parts of the country, soon afforded opportunities which confirmed my highest opinions of the new practice; and I commenced, with zeal and energy, proclaiming my convictions to the world. I pursued this course because I believed that mankind would be benefited by the new system, and that it was my duty to encourage its promulgation.

During this time, however, Dr. Thomson had become dissatisfied with his agent, and came into this country [Ohio] in order to make some permanent arrangement for the extension of his system. My zeal and assiduity in recommending his practice, had been wafted by the breath of the people to the ears of Thomson, and he conceived the idea of committing to my care the general agency of his business. After repeated solicitations

from him, and the most earnest persuasions of the friends of the system, I consented, with extreme reluctance, to become his agent.

I almost immediately took measures for prosecuting the business to an extent commensurate with its usefulness; and pursued it with a vigor and energy only equalled by the desire which I felt to make it useful to the world. But whilst I was thus zealously pushing the business intrusted to my care, the jealousy of Dr. THOMSON was aroused, and I was dismissed from the agency, at the end of about three and a half years from the time of accepting the appointment. I had, however, from the first, seen and deplored the imperfections of Dr. THOMSON's book, and the circumscribed limits of his materia medica; and under the influence of these impressions, I employed Dr. HANCE to revise the practical part of Dr. THOMSON's works, previous to their being re-printed. But with further reflection upon the turbulence of his disposition, and his self-conceit, I became satisfied that it would give him dissatisfaction, and therefore concluded not to publish the work thus revised: and subsequent declarations of THOMSON have fully confirmed the correctness of my conclusion.

I was not satisfied, however, that the knowledge of botanic medicine should remain in so imperfect a state. Societies for its improvement were instituted; and I endeavored to excite an emulation in the minds of its practitioners; and took much pains to collect a knowledge of every improvement, and every additional article of value, which experience should develope; all of which, I confidently anticipated, would enable me, at some future time, to present to the world a better system of medicine than had hitherto been offered to its acceptance and approbation.

And it is under these circumstances, and with these views, that I now present to the public, in the following work, the result of my collections and labors. It is not pretended nor supposed that the work has arisen to the acme of perfection; but it is confidently believed that it will be found superior to any other which has preceded it; and as such I commit it to that test which will decide its merits, and give its decision at the bar of public opinion.

I also deem it an act of justice to the public and to myself, as well as to Dr. WILLIAM HANCE, to state, that he has assisted me in the collection of materials, and in their selection and arrangement for this work. His zeal in the improvement of medical botany; his deep research and laborious investigation; his new, peculiar, and as I conceive, correct views of the principles of medical science, the very foundation upon which the healing art is based, have been of great service, nay, of indispensable utility to me in the preparation of the following pages. My time and attention for some years past have been necessarily too much engrossed in diffusing the knowledge of the botanic system, to permit of my devoting so much of them as seemed necessary, to the research, investigation, and consideration of a subject so interesting to the family of man. And it is no more than a just tribute to the merits of Dr. HANCE to say, that the continuance of his labors may be still more beneficial to the world. And I should feel myself guilty of injustice to his character and to that confidence which the public has justly placed in his talents, did I omit acknowledging, in this manner

that he is more justly entitled to the authorship of this work than myself. True I have been at all the trouble and expense of collecting the materials, and preparing the work for publication; in other words, of bringing it into existence; and from time to time, have verbally or in writing, communicated my views of the various subjects on which it treats, (which have generally been in accordance with his own;) and I wish it to be distinctly understood, that it is upon these considerations alone, that I claim the authorship as my own.

It may also be proper to state, that in accordance with my expectations in recommending the institution of botanic societies, much useful information has been elicited; and many of my agents, knowing that a work of this nature was in a train of preparation, have kindly furnished me with many valuable medical recipes, and extraordinary cases of cure. These, with the names of those persons, so far as their consent has been obtained, will be given in their proper places.

The knowledge of many valuable Indian remedies, have been procured for this work, at considerable expense to the author.

HORTON HOWARD.

COLUMBUS, OHIO, 3*d Month* 15*th*, 1832.

PREFACE TO THE THIRD EDITION.

IN offering to the public a third edition of this work, I embrace the opportunity, in the name and on behalf of its present proprietors, the heirs of the late Dr. HOWARD, of tendering to those who have heretofore so liberally patronized it, my best respects. The extensive sales, and high approbation so often expressed of the value of the work, having induced the proprietors to stereotype it, their partiality has induced them to confide its revision and correction once more to my hands. In the fulfilment of this duty, I have used as much diligence and discretion as a multiplicity of other vocations connected with the Botanic cause would permit; and I cannot but flatter myself that the work will now be found still more acceptable to the public. The revisions and corrections, it is true, are not as numerous as they were in the second edition; but they are, on the whole, perhaps little less important. Much pains have been taken to correct all the botanical and other technical terms, the former, many of which were erroneous, being made, in general, to correspond with the sixth edition of *Eaton's Manual of Botany*, now the most extensively used of any similar work. I also take much pleasure in acknowledging the advantages derived from a "*Synopsis of the Flora of the Western States;* by JOHN L. RIDDELL;" (formerly of the Worthington, now of the Medical Department of the Cincinnati College;) a work of much utility to every person engaged in the acquisition of botanical knowledge in the West.

I take this opportunity also of saying a few words in relation to the severity of language sometimes used towards physicians and their poisonous medicines. It has been well said by some writer, that extensive changes or violent innovations in long established usages, seldom, if ever, take place without a corresponding necessity therefor. There must be palpable and flagrant abuses before individuals acquire sufficient firmness and hardihood to expose a popular error. This I conceive to be the case with Medicine. Its errors and abuses are both obvious and flagrant, and it requires strong language to arouse popular feeling or arrest professional attention upon a subject which both the community and the profession have, until recently, considered too sacred to be meddled with by vulgar hands. This is the only apology I have to offer in relation to the subject under consideration · and I trust it will be sufficiently satisfactory to every reader. I have deemed an explanation the more necessary, as the work is now falling extensively into the hands of medical men; and those who have perused the "Preface to the First Edition," will have perceived upon whom the responsibility now rests.

In conclusion, I feel constrained to say a few words in relation to the eminent individual whose name stands upon the title page as author of this work, and whose qualifications enabled him to be abundantly more useful than any other man hitherto laboring in the same good cause. Called by the dire Cholera from the sphere of his usefulness here, when he felt the iron hand of death pressing upon him, his devotion to the botanic cause deserted him not, but it still played around the lamp of life in its last expiring moments. The same holy principle which inspired him in health to stem the current of popular opinion in promoting medical reform and the welfare of his fellow men, now dictated an injunction upon his heirs to persevere in the great work which he had begun; and in any disposition they might think proper to make of the copyright to his book, to consult, as first in importance, the good of mankind. He also called his neighbors to witness, that his faith in the botanic practice (having submitted to no other) remained undiminished—that all that human effort could do to relieve him had been done, but disease proved too potent for the remedy. Thus closed the useful life of this excellent, highly gifted, and, I may say, extraordinary man.

W. HANCE

CINCINNATI, OHIO, 12*th Month* 6*th*, 1835.

NOTE.—In the present or fourth edition of this work, there have been some alterations made, which may, perhaps, be properly noticed here. The Appendix, consisting of a summary of reported cases of cures, performed by the new treatment, and which was considered important at the first introduction of the work, is now deemed superfluous, and is, accordingly expunged. Some of the old Botanical illustrations, which were extremely inaccurate, and badly executed, are replaced by new ones, with a respectable addition in numbers. The cuts have also been distributed, so as to accompany the respective descriptions. It had been designed by the present proprietor, to submit various sections of the work to farther revisions, before the appearance of the present edition; but for want of time, since the stereotypes have fallen into his hands, this has been delayed for another edition, which will soon appear.

PREFACE TO THE SEVENTH EDITION.

[In the present edition, there have been thorough revisions of the work, and in various parts much improvement has been made.

The department of Anatomy and Physiology, Vol. I, has been almost entirely re-written, and numerous fine engravings have been added to illustrate the subjects. This department of the work is much more extensive in this than in former editions. Its doctrines of Physiology have been somewhat modified according to the latest discoveries in this important science.

In the department of *Materia Medica*, there have been many new engravings added, and old ones of bad execution replaced by such as are finer and truer to nature.

The department of Practice has been so near perfection, that little improvement has been admissible. Still, however, in various parts, it will be seen, that the frequent repetition of the "*Course of Medicine*," has been obviated by the institution of other means, of more convenient application, and which, in those cases, are equally efficient.

No expense has been spared to bring the work up to the latest improvements in all the departments on which it treats, and to render it in every way still more acceptable to its numerous patrons. For this purpose, the present Publisher has had the services of a very experienced practitioner, and popular teacher and Professor of Medicine.

What has been added in the present edition, is embraced within *brackets*, thus—[ ].

H. M. RULISON.

Cincinnati, *May* 10, 1856.]

INTRODUCTION.

As in the following work disease will be treated in a manner different from most other medical publications, at present extant; and as it embraces some new principles, and combination of principles, peculiar to itself, we deem it proper, as introductory to the more important parts, to advert to some of the objects at which we shall aim, and the views by which we shall be governed in its general composition and arrangement.

Our grand leading object will be, to simplify the theory and practice of medicine, so as to adapt both, as far as practicable, to the common capacity of families; thereby enabling them, in most cases, to become their own physicians. The civilized world, at least, has been too much and too long dependent upon the professors of medicine; and it is high time that the prejudices which have held mankind to this dependence, should be broken and annihilated. And there are no means by which this can be accomplished, but to reduce medical works to something more "plain, intelligible, and systematic; showing medicine, as it ought always to have been shown, divested of all mystery; needing for its successful application to practice, no extraordinary powers, no legerdemain; nothing but common sense, with common study and observation."* None but works bearing such a character, can become very popular or useful; and a work of this description we propose and stand pledged to give to the world.

A very important objection to most of the hitherto published works on medicine, is the too common use of what are styled *technical* terms, by which they are rendered unintelligible to families in general. The extensive employment of such terms in books intended for common use, is certainly improper; but as it is impossible to convey definite ideas upon every subject treated of in medicine, without resorting to the use of some technical terms, we shall occasionally employ them; always, however, endeavouring to introduce them, when practicable, in such a way that the reader will be assisted by the phraseology in gathering the meaning of the word. A glossary will also be annexed, to which the reader may refer when necessary.

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*Thomas Ewell.—Medical Campanion, page 20.

We shall be the more liberal, however, in the use of technical language, because we believe it ought to be more generally understood; and in assigning a reason for so doing, we need only advert to the fact just expressed,—the impossibility of conveying definite ideas on medical subjects, without it. The only reason why people in general are not sufficiently familiar with technical terms to comprehend all that is really necessary respecting medicine, is because this necessary part of *every* man's and woman's education, has been made through the medium, or under the cloak, of professional science, too abstruse and metaphysical for the great mass of mankind to comprehend. "Professional pride and native cupidity," says a late writer,* "contrary to the true spirit of justice and christianity, have, in all ages and countries, from sentiments of self-interest and want of liberality, delighted in concealing the divine art of healing diseases, under complicated names, and difficult or unmeaning technical phrases. Why make a mystery," continues he, "of things which relieve the distresses and sufferings of our fellow beings?" A great responsibility must certainly be resting upon those who have been thus instrumental in concealing, under a dead language, or by affected mystery, the knowledge of any thing so important to the world. A correct understanding of the best means of preventing sickness and restoring health, is only second in importance to a knowledge of the Christian religion. Every family has, or may have, a bible; and why not have a book, adapted to their capacity, on medicine?

Had physicians made it their business to enlighten the world upon this highly important subject, instead of "darkening counsel with words without knowledge," mankind unquestionably would not only have been familiar with all necessary technical terms, but they would also have been acquainted with, and known how to employ, the best means of removing their maladies. But is this the case?—No: There is scarce any thing of inferior importance in the common concerns of life, with which they are not better acquainted.

It is a principal object of the following work, to restore to the human family the lost knowledge of the means of removing their maladies; which information should be as universally disseminated as the knowledge of the bible or of religion; and we scarcely doubt that in time it will be so. The illiberal part of the medical faculty, who have profited by the ignorance of the people, will, no doubt, throw every obstacle within their power in the way of its consummation; but we think the day is now dawning, which was alluded to, as in prophetic vision, by the brief biographer of Dr. John Brown, "when instruction

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*Dr. Gunn, of Knoxville, Tennessee.

concerning the cause of health and disease, will be acknowledged to form a necessary part of all rational education." And we, at least, are satisfied that public opinion, to a great extent in the United States, if not in many parts of Europe, is in unison with this sentiment.

"It has hitherto been the case," as the same author justly observes, "that the faculty have contrived to retain a privilege which the priesthood have lost." Only a few years since, it was generally believed that all the concerns of religion legitimately appertained to the clergy; and the bible, which was regarded as the means of salvation, was printed in a dead language, and was considered as fitting only to be entrusted in the hands of the priests. They then exercised the same despotic sway over the minds of the people, in matters of religion, that the medical faculty now do in medicine. But the time has arrived when the people will have books on medicine which they can understand, and a mode of practice which they themselves can apply and comprehend. They will no longer be obliged to go to the doctor for every dose of medicine which the exigencies of sickness may require, any more than they are necessitated to go to the clergy for a knowledge of the scriptures or the means of salvation.

The bible, which, with all its benefits and blessings, is within the reach of every family, informs us that the "grace of God, which bringeth salvation, hath appeared to all men;" or, in other words, that the means of saving the immortal soul are bestowed upon or offered to all; and so there is no doubt that the means of saving the body from pain and sickness are, to a great extent, provided for us, without the necessity of applying to a physician. And a system of medicine, in accordance with these sentiments, is already before the world, for its adoption or rejection, which many have already embraced; rejoicing in the certain confirmation of being now released from the thraldom of medical bondage and scientific imposition, which, for ages, has been increasing, and seems, in this enlightened day, to have arrived to a degree of oppression, only equaled, inversely, by the superior scientific attainments of the profession.

We hope it will not be supposed that these grave assertions are lightly made; for we have ample testimony from members of the faculty themselves, of the gross deception which they are practicing on the credulity of the people. "If you wish to know," says Dr. Gunn, "how much artifice is in vogue in the science and practice of medicine, ask some physician of eminence to give you in plain common English, the meaning of those mysterious and high-sounding names you see plastered on bottles, glass jars, gallipots and drawers in a drug store, or doctor's shop." After explaining many of those hard and difficult

names, the same author observes: "These I think, are fair specimens of the useless technical terms and phrases with which the science of medicine has been encumbered by a policy hostile to the interests of every community; in which the reader will easily distinguish, if he will look one foot beyond his nose, not only that big words and high-sounding phrases are not superior wisdom, but that three-fourths of the whole science of medicine, as now practiced and imposed upon the common people, amounts to nothing but fudge and mummery. In fact, it has always seemed to me, whenever I have reflected seriously on this subject, that all these hard names of objects of common and daily contemplation, were originally made use of to *astonish the people;* and to aid what the world calls learned men, in *deception* and *fraud.*" If members of the faculty write thus of their own profession, can they attach much censure to us for repeating their assertions, and enforcing them upon the attention of the world?

In the following pages we propose taking a transient view of anatomy and physiology, sufficient, perhaps, to enable the reader to form a general idea of the most important organs of the human system, and of the functions which they perform. It is for the mass of mankind that we write; and there are few whose leisure or inclination will permit them to acquire any considerable minute knowledge of those subjects; and, therefore, we have deemed it not improper to present a mere outline of those curious sciences. Persons who wish to obtain more extensive information of this kind, may find numerous works, of perhaps equal merit, on both of these subjects, and each containing something peculiar to its author; to any of which he may refer at pleasure.

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VOLUME I.

ANATOMY AND PHYSIOLOGY.

CHAPTER I.

OF MAN AS A PHYSICAL BEING OR ANIMAL.

In physical organization, the human body differs but little from the other superior animals, excepting in form and the position of person. In all the leading organic characteristics, there is much similarity.

All animals depend ultimately upon the vegetable kingdom, or the process of vegetation, for the adaptation of the primary elements to the uses of the animal body.

Life, as evinced in the vegetable, is capable of modifying or directing the properties of elementary matter, so as to form new combinations, differing from all that occur in the inorganic world. These materials, or new and peculiar compounds, thus formed, are, *gum*, *lignin*, *gluten*, *resin*, *oil*, *starch*, *sugar*, *legumin*, etc. They are called *Proximate Principles.*

The animal can not form these; it can not subsist upon the primary elements. But when these are formed into *proximate principles*, as above, they will serve as aliment to the animal.

Yet while this is the case it appears that the proximate principles of the vegetable are almost identical with the corresponding substances that are found in the animal tissues. These are *albumen*, *fibrin*, *gelatin*, *casine*, etc. Yet it is conceded, that, although isomeric in elementary character, they are of a little higher grade of organization in the animal than in the vegetable.

SECTION 1.

OF THE ELEMENTARY PRINCIPLES THAT ENTER INTO THE HUMAN BODY.

Nineteen elements have been found in the human body, although they are not all supposed absolutely necessary to its

essential composition. Those found are, carbon, hydrogen, oxygen, nitrogen, phosphorus, sulphur, silicon, chlorine, iodine, bromine, fluorine, potassium, sodium, calcium, magnesium, iron, manganese, aluminum and copper.

Of these elements it has been supposed that only thirteen are really essential to the body. Copper, bromine, iodine, silicon, manganese and aluminum, are considered to occur in the body only incidentally.

SECTION 2.

OF PROXIMATE PRINCIPLES.

As intimated before, the primary elements combine under the influence of vegetable life, into what are called *proximate principles*, which are very analogous, whether found in the plant, or afterward in the animal. The most prominent of these principles are albumen, fibrin, gelatin, casine, protine, etc. Various acids found in the system, as the acetic, benzoic, lactic, formic, oxalic, choleric, hippuric, etc., have, also, their correspondent principles in the vegetable form.

SECTION 3.

OF TISSUES.

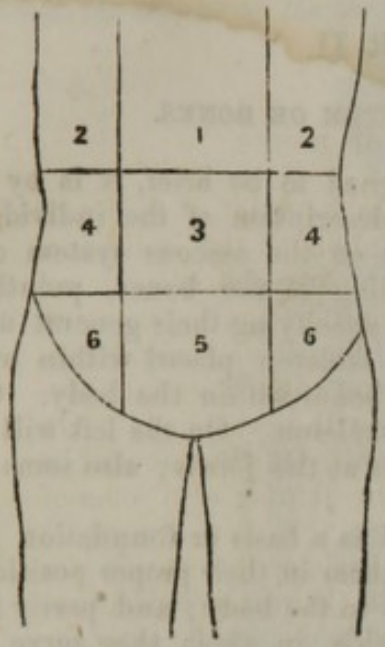
THE above named proximate principles, in turn, combine, variously, under the control of the vital laws of the animal, and form what are called *tissues*. These are the oseous, fibrous, nervous, vascular, cellular, etc.

SECTION 4.

OF ORGANS AND DIVISIONS OF THE BODY.

THE tissues of the body are united and formed into organs, as bones, muscles, glands, etc. Organs unite in forming apparatuses, as the digestive apparatus, generative apparatus, etc. The body is divided in its description, into the *head*, *trunk* and *upper* and *lower extremities*. The trunk is divided into the *chest* and the *abdomen*.

The abdomen is again divided into nine imaginary sections, by transverse and longitudinal lines, as illustrated in the annexed diagram.



1. Epigastric region.
2, 2. Right and left hypochondriac.
3. Umbilical region.
4, 4. Right and left lumbar.
5. Hypogastric region.
6, 6. Right and left iliac regions.

CHAPTER II.

OF THE OSSEOUS SYSTEM OR BONES.

In this treatise, which is designed to be brief, it is by no means possible to give a minute description of the individual structures, and our remarks here on the osseous system can extend but little beyond the naming of the bones, pointing them out upon the engraving, and specifying their general use.

In Fig. 1, we have the bony skeleton placed within outlines, to show the position of the bones within the body. On the right side, we have the naked skeleton. On the left will be seen the articulations of the bones at the joints; also some of the large vessels.

The bones are designed in part as a basis or foundation for the other structures, to support them in their proper position, thus to give form and symmetry to the body; and partly for the purpose of motion or locomotion, in which they serve as levers to the action of the muscles.

The round bones are generally tubular, and the hollow is filled with marrow or medulary substance, except at the ends, where, instead of the cyllindrical character and the central cavity, we find a favose or *net-work* structure. The flat bones, as those of the skull and scapulæ, consist of two tables or plates united by the net-work structure.

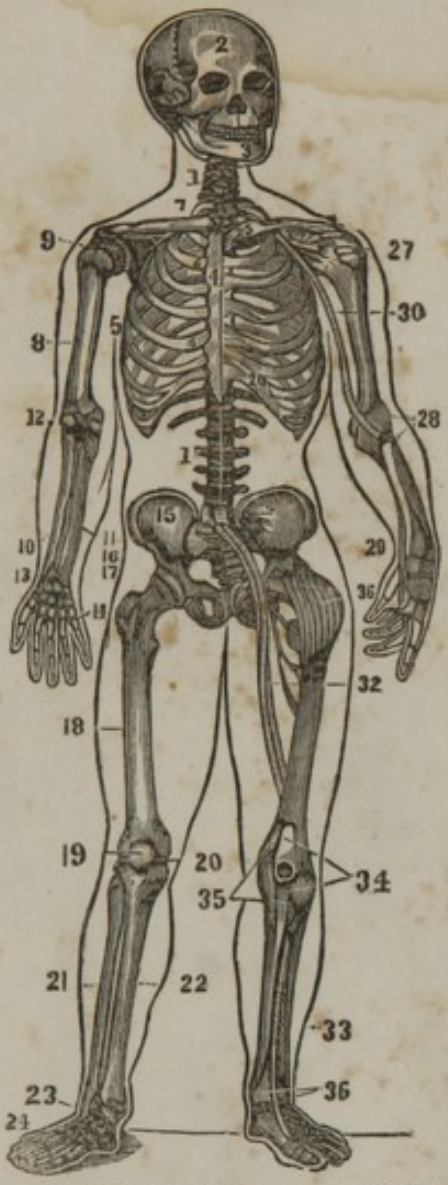
The bones, like all other parts, except the nails and hair, are supplied with blood-vessels and nerves, and are covered with a very firm membrane called *periosteum*. This latter membrane where it covers the bones of the skull, is called *pericranium*.

In their natural state, the bones contain but little sensibility, but when in a state of inflammation, they are extremely sensitive and painful.

The number of bones in the human body is two hundred and forty-eight; the head containing (including the teeth,) sixty-three: the trunk, fifty-three; the upper extremities or arms, sixty-eight (including the *sesamoid* bones when they exist); and the lower extremities, sixty-four (including also the *sesamoid* of the great toes, when they exist).

Fig. 1.

Front view of the skeleton with outlines to show the position of the bones in the body. In the left side, the articulations, and also the trunks of the large vessels, are shown.



1, 1. The spinal column. 2. The skull. 3. The lower jaw. 4. The sternum. 5. The ribs. 6, 6. The cartilages of the ribs. 7. The clavicle. 8. The humerus. 9. The shoulder-joint. 10. The radius. 11. The ulna. 12. The elbow-joint. 13. The wrist. 14. The hand. 15. The haunch-bone. 16. The sacrum. 17. The hip-joint. 18. The thigh-bone. 19. The patella. 20. The knee-joint. 21. The fibula. 22. The tibia. 23. The ankle-joint. 24. The foot. 25, 26. The ligaments of the clavicle, sternum and ribs. 27, 28, 29. The ligaments of the shoulder, elbow and wrist. 30. The large artery of the arm. 31. The ligaments of the hip-joint. 32. The large blood-vessels of the thigh. 33. The artery of the leg. 34, 35, 36. The ligaments of the patella, knee and ankle.

TABLE I.—*Front view of the Male Skeleton.*

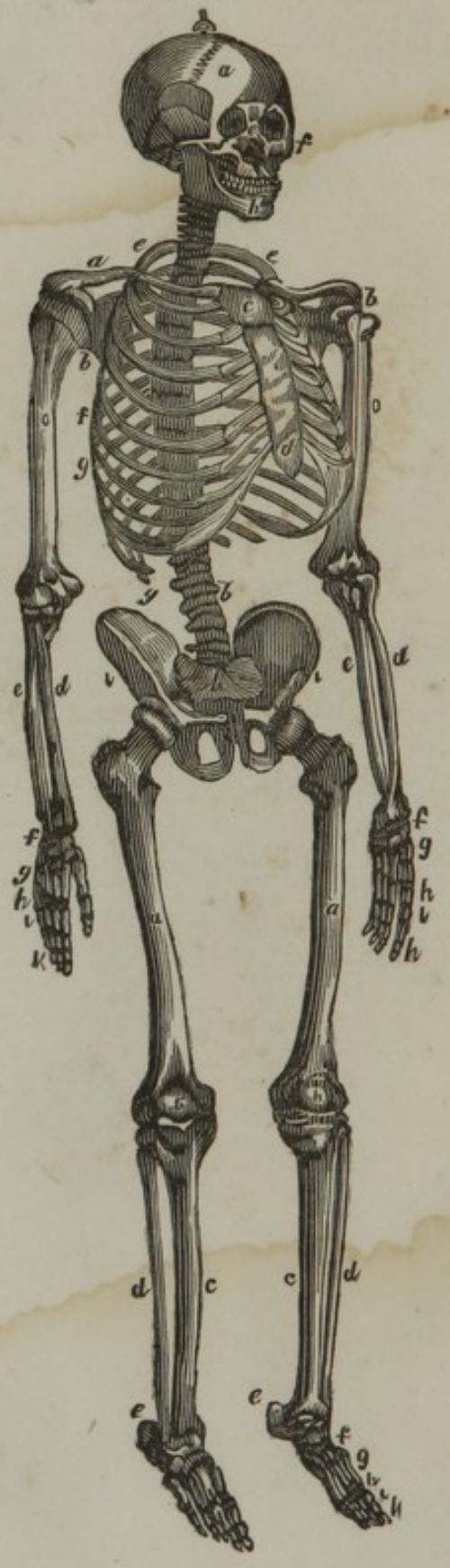


TABLE I.

Represents a front view of the Male Skeleton.

HEAD AND NECK.

a. The frontal bone. (*Os frontis.*)
b. The parietal bone.
c. The temporal bone.
d. A portion of the sphenoid bone.
e. The nasal bone.
f. The malar, or cheek bones.
g. The superior maxillary, or upper jaw bone.
h. The lower jaw. (*Inferior maxillary.*)
i. The bones of the neck. (*Cervical vertebra.*)

TRUNK.

a. The twelve bones of the back. (*Dosal vertebra.*)
b. The five bones of the loins. (*Lumbar vertebra.*)
c, d. The breast bone, composed of two pieces. (*Sternum.*)
e, f. The seven true ribs. (*Costa.*)
g, g. The five false ribs.
h. The rump bone, or sacrum.
i. The hip bones. (*Iliac.*)

UPPER EXTREMITY.

a. The collar bone. (*Clavicle.*)
b. The shoulder blade. (*Scapula.*)
c. The upper arm bone. (*Humerus.*)
d. The radius.
e. The ulna.
f. The carpus, or wrist.
g. The bones of the hand.
h. The first row of finger bones.
i. The second row of finger bones.
k. The third row of finger bones.
l. The bones of the thumb.

LOWER EXTREMITY.

a. The thigh bone. (*Femoris.*)
b. The knee pan. (*Patella.*)
c. The tibia, or large bone of the leg.
d. The fibula, or small bone of the leg.
e. The heel bone. (*Calcis.*)
f. The bones of the instep.
g. The bones of the foot.
h. The first row of toe bones.
i. The second row of toe bones.
k. The third row of toe bones.

TABLE II.

Represents a back view of the Male Skeleton.

THE HEAD.

a. The parietal bone.
b. The occipital bone.
c. The temporal bone.
d. The cheek bone. (*Malarum.*)
e. The lower jaw bone. *Inferior maxillary.*

NECK AND TRUNK.

a. The bones of the neck. (*Cervical vertebra.*)
b. The bones of the back. (*Dorsal vertebra.*)
c. The bones of the loins. (*Lumbar vertebra.*)
d. The hip bone. (*Iliac.*)
e. The sacrum.

UPPER EXTREMITY.

a. The collar bone. (*Clavicle.*)
b. The blade bone. (*Scapula.*)
c. The upper bone of the arm. (*Humerus.*)
d. The radius.
e. The ulna.
f. The bones of the wrist. (*Carpus.*)
g. The bones of the hand.
h. The first row of finger bones.
i. The second row of finger bones. } (*Phananges.*)
k. The third row of finger bones.
l. The bones of the thumb.

LOWER EXTREMITY.

a. The thigh bone. (*Femoris.*)
b. The large bone of the leg. (*Tibia.*)
c. The small bone of the leg. (*Fibula.*)
d. The heel bone. (*Calcis.*)
e. The bones of the instep. (*Tarsus.*)
f. The bones of the toes. (*Metatarsus.*)

TABLE II.—*Represents a back view of the Male Skeleton.*

CHAPTER III.

OF THE MUSCULAR SYSTEM.

THE *muscles* constitute the fleshy parts of the body and are the main instruments of motion. They are of fibrous structure and consist of a series of bundles of fibers invested in sheaths of cellular membrane. The *fasciculæ*, or bundles of fibers are very minute at first, but as they are arranged in compound bundles of successively larger size, we have ultimately only a single bundle in a muscle. The muscles are of very varied shape and size, but are mostly of spindle form, and are often terminated by tendons, where they are inserted into the bones.

When a muscle contracts, this occurs in its longitudinal direction, while its diameter thickens, and its body becomes firm or rigid.

The muscular fiber is endowed with a peculiar principle called *irritability*, and it is upon this that its power of contraction is dependent; or, in other words, the impressibility of the muscles by nervous agency is dependent upon the principle of *irritability*, which they possess.

In regard to articulations or the attachments of muscles, they are said to "rise" where they have their more fixed termination. By "insertion," is meant that termination or attachment which is more movable, that is, the end of the muscle which moves more the bone or portion to which it is attached. The middle or larger portion of the muscle, is called its "belly" or "swell."

The muscles are abundantly supplied with blood-vessels and nerves, and are much subject to inflammation.

The number of muscles in the human body is commonly estimated at four hundred and five, and are all in pairs excepting nine.

TABLE III.

Anterior view of the Muscles of the Body.

1. Occipito-fontalis—*use,* to raise the eyebrows. 2. Orbicularis palpebrarum—*use,* to close the eyelids. 3. Levator labii superioris—*use,* to elevate the upper lip. 4. Zygomaticus major. 5. Zygomaticus minor—*use,* these two muscles, to elevate the angles of the mouth. 6. Masseter—*use,* to bring the jaws together, or to chew. 7. Orbicularis oris—*use,* to close the lips. 8. Depressor labii inferioris—*use,* to draw down the lower lip. 9. Platysma myodes—*use,* to bend the neck forward. 10. Deltoid—*use,* to raise the arm. 11. Pectoralis major—*use,* to bring the shoulder forward. 12. Pectoralis minor—*use,* to draw down the head of the scapula and to assist in dilating the chest. 14. Biceps flexor cupeti—*use,* to bend the arm at the elbow. 15. Brachialis internis—*use,* to bend the fore-arm. 16. Supinator radii longus—*use,* to bend the wrist. 18. Flexor carpi radialis longior—*use,* to bend the hand inward. 19. Flexor communis digitorum—*use,* to bend the fingers. 20. Annular ligament—*use,* serves as a pulley to stay the tendons passing under it. 21. Palmar fascia—*use,* serves as a pulley under which the tendons of the hand work. 22. Obliquus externis abdominis—*use,* to move the body sideways. 26. Psoas magnus—*use,* to bend the thigh forward. 27. Abductor longus—*use,* to raise the thigh. 28. Sartorius—*use,* to draw the leg across the other. 29. Rectus femoris—*use,* to bring the leg forward in walking. 30. Vastus externis—*use,* to extend the leg. 31. Vastus internis—*use,* to extend the leg. 32. Tendon patella—*use,* serves for the insertion of muscles. 33. Gastrocnemis—*use,* to extend the foot. 34. Fibialis anticus—*use,* to bend the foot at the ankle. 36. Tendons of the extensor digitorum communis—*use,* to extend the toes.

TABLE III.—*Front view of the Muscles.*

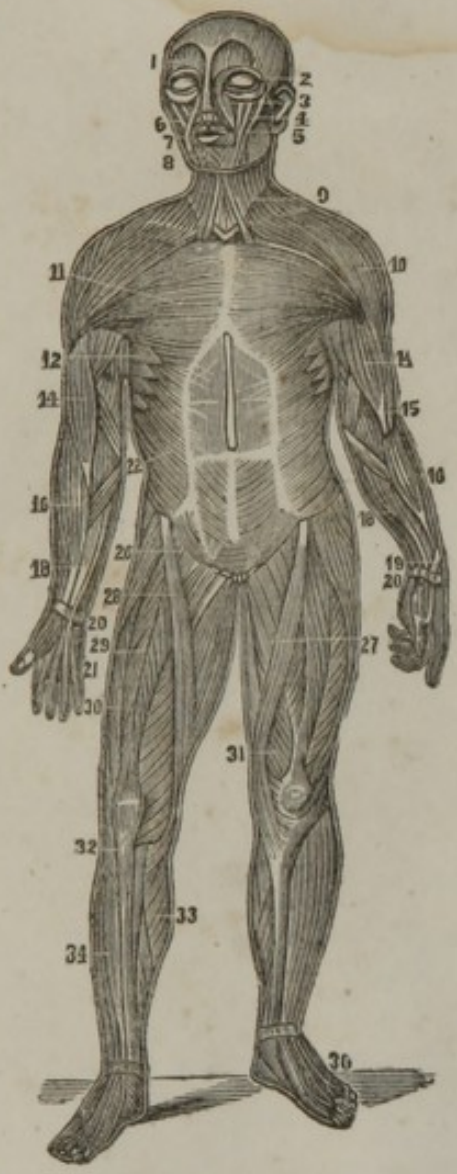


TABLE IV.—*Back view of the Muscles.*

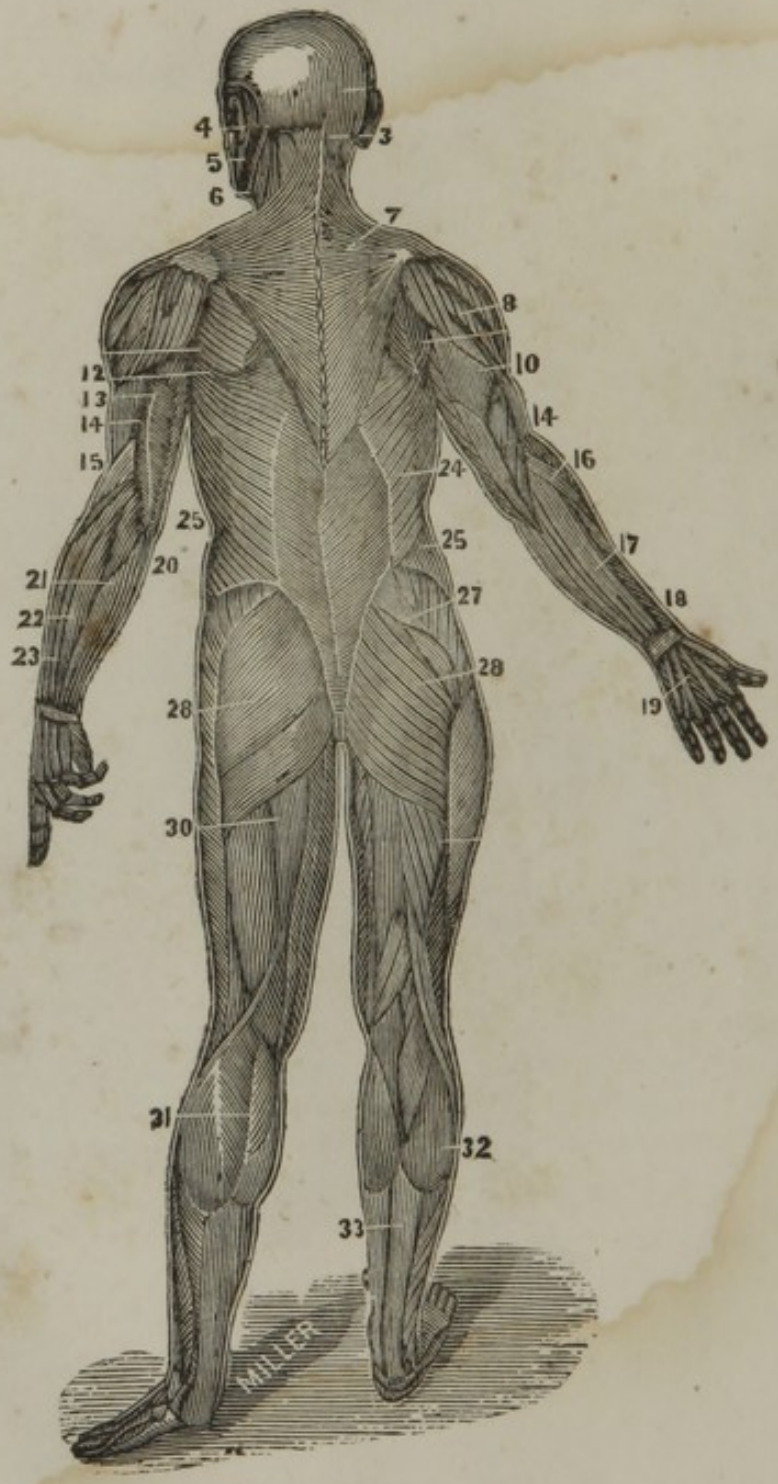


TABLE IV.

3. The complexus—*use*, this and 4, the splenius, elevate the chin. 5. Masseter—*use*, to bring the teeth together. 6. Sterno-clido mastoides—*use*, to bend the neck forward. 7. Trapezius—*use*, draws the shoulder back. 8. Deltoid—*use*, to elevate the arm. 10. Triceps extensor—*use*, to extend the arm at the elbow. 13, 14. Triceps of the left arm. 15. Supinator longus—*use*, to turn the fore-arm outward. 17. Extensor communis digitorum—*use*, extends the fingers. 18. Extensor ossis metacarpi policis. 19. The tendon of the extensor communis digitorum—*use*, these last two extend the wrist and fingers. 20. The olecranon process of the ulnus and insertion of the triceps. 21. Extensor carpi ulnaris—*use*, to extend the wrist. 22. Extensor communis digitorum—*use*, to extend the fingers. 24. Latissimus dorsi—*use*, draws the arm to the side and backward. 25. The tendinous origin of the latter muscle. 26. Obliquus externus—*use*, to turn the body. 27. Gluteus medius. 28. Gluteus magnus—*use*, these latter two muscles extend the thigh at the hip-joint. 29. Biceps flexor cruris. 30. Semitendinosus—*use*, the latter two bend the leg at the knee. 31, 32. The Gastrocnemius—*use*, to bend the foot at the ankle joint downward, and thus put the axis of the foot in a line with the leg, as in walking or leaping. 33. The tendo Achillis—*use*, to extend the foot.

CHAPTER IV.

OF THE BLOOD-VESSELS.

[THE BLOOD-VESSELS are distinguished by the appellation of veins and arteries, and also include the heart. The heart is situated nearer the left than the right side of the thorax, and is a strong muscular body, of that class denominated hollow muscles. This organ is generally regarded as the salient or starting point of the blood, whence it is propelled through the arteries, to every part of the body. The heart is divided into two cavities, called the right and left *ventricles*, connected with which, at the base or broad part, are two other hollow muscles, denominated *auricles*, or, in more familiar language, deaf-ears.]

SECTION 1.

OF THE HEART.

[THE heart is the grand focus in which the blood is constantly concentrated, and from which it is as constantly distributed to all parts of the system; passing twice through this organ in making one complete revolution in the body, in the following order, viz: The blood, as it returns from all parts of the system, is emptied by what are termed the ascending and descending *vena cava*, into the right auricle of the heart, and from thence passing into the right ventricle, the contraction of the heart propels it through the pulmonary artery into the lungs. From the lungs the blood, now essentially changed, again returns through the four pulmonary veins into the left auricle, and thence passing into the left ventricle, the contraction of the heart propels it through the aorta and its numerous branches to every part of the body.]

Fig. 2. Fig. 3.

Front and back view of the Heart.

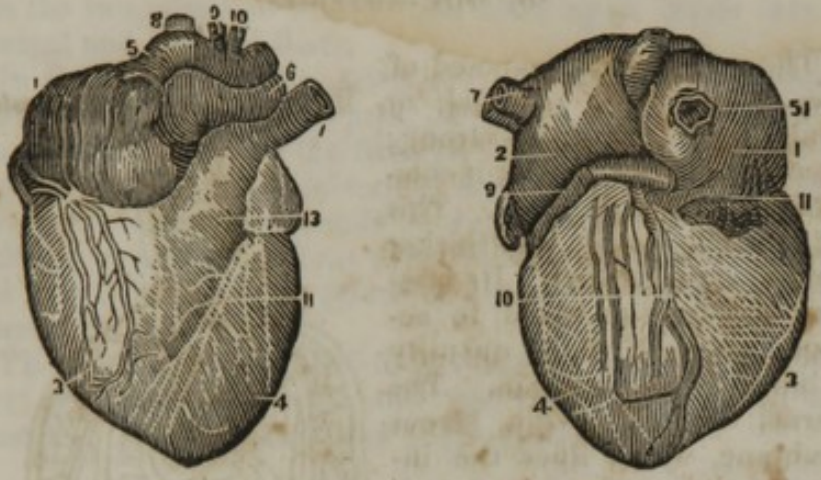


Fig. 2.—A front view of the heart. 1. The right auricle of the heart. 2. The left auricle. 3. The right ventricle. 4. The left ventricle. 5, 6, 7, 8, 9, 10. The vessels through which the blood passes to and from the heart.

Fig. 3.—A back view of the heart. 1. The right auricle. 2. The left auricle. 3. The right ventricle. 4. The left ventricle. 5, 6, 7. The vessels that carry the blood to and from the heart. 9, 10, 11. The nutrient vessels of the heart.

Fig. 4.

Section of the Heart, showing its cavities and valves.

Fig. 4.—A section of the heart, showing its cavities and valves. 3. The right auricle. 4. The opening between the right auricle and right ventricle. 5. The right ventricle. 6. The tricuspid valves. 7. The pulmonary artery. 9. The semilunar valves of the pulmonary artery. 10. The septum between the right and left ventricle. 12. The left auricle. 13. The opening between the left auricle and left ventricle. 14. The left ventricle. 15. The mitral valves. 16. The aorta. 17. The semilunar valves of the aorta.]

SECTION 2.

OF THE ARTERIES.

[The arteries are composed of three coats. The external, or cellular coat, is firm and strong; the middle, or fibrous coat is composed of yellowish fibers. This coat is elastic, fragile, and thicker than the external coat. Its elasticity enables the vessel to accommodate itself to the quantity of blood it may contain. The internal coat is a thin, serous membrane, which lines the interior of the artery, and gives it the smooth polish which that surface presents. It is continuous with the lining membrane of the heart.

Communications between arteries are free and numerous. They increase in frequency with diminution in the size of the branches, so that through the medium of the minute ramifications, the entire body may be considered as one circle of inosculation. The arteries, in their distribution through the body, are enclosed in a loose, cellular investment, called a sheath, which separates them from the surrounding tissues.

Fig. 5.
View of the arterial system.

1. Left ventricle.
2. Aorta, near its arch.
3. Abdominal aorta.
4. Right ventricle.
5, 5. Right and left iliacs.
6, 6. Right and left carotids.
7, 7. Right and left brachial arteries.

The aorta, on rising from the left ventricle of the heart, immediately gives off the two coronary arteries, and at its arch, it furnishes the left carotid and left subclavian, on one side, and on the other side only one, the innominata, which is larger than either of those on the left side. In the Thorax, the aorta gives off, 1. the bronchiatic; 2. œsophageal; 3. mediastinal; 4. the in-

tercostals. In inferior portions, *i. e.*, below the diaphragm, it gives off, 1. the diaphragmatic; 2. the cœliac; 3. the mesenteric; 4. the spermatic; 5. the emulgents. The aorta then divides into the two primitive iliacs. The iliacs again divide into the internal and external iliacs.

In the extremities the arteries are mostly named after the bones along which they pass; thus, the humoral, radial and ulnar, in the arm, and the femoral, tibial, etc., of the leg.

Arteries are all characterized by a vibrating action, called *pulsation*, which corresponds to the action of the heart. This action is in part dependent upon the action of this latter organ, and in part to a similar power of contraction possessed by the arteries themselves.

The motion of the blood in the arteries is always in a direction away from the heart, and this fluid is moved in these vessels by the pulsating force above spoken of.]

SECTION 3.

OF THE CAPILLARIES.

[THE arteries terminate in what are called the capillary vessels, which are a system of extremely numerous and minute or hair-like tubes, so small as to be below the natural vision.

The capillaries may be considered the intermediate vessels, between the arteries and veins. It is in these vessels that the most important functions or changes of the blood occur—the change from arterial to venous blood. Here the phenomena of oxydation and calorification take place, and it is from this system that all the endless variety of materials is supplied to the tissues of the body, and for the glandular secretions and venous absorption.]

SECTION 4.

OF THE VEINS.

[THE veins take their rise in absorbent radicals, from the capillaries, and in their course unite and reunite, thus forming larger and still larger trunks, until, finally, two large vessels, the ascending and the descending *vena cava*, are formed.

The office of the veins is to absorb and convey the blood back again to the heart. Thus the circulation in the veins is always in a direction toward the heart.

There is no pulsation in the veins as in the arteries. The circulation in them depends upon a different arrangement. They are supplied by numerous valves, which close in a direction so as to force the blood forward by every motion operating upon these vessels. Physiologists have not yet become satisfied with any theory projected to account for the grand principle of venous circulation, or the power sustaining it.

The valvular arrangement just spoken of, at once suggests that an alternate pressure and relaxation, is exercised upon them. Such action, we can readily perceive, is afforded to some extent by the action of the muscles. But this action is not sufficiently regular to account for the regularity of the venous circulation. Another action, however, which is more regular and universal, is, that of the pulsation of the arteries. The swell of the arteries in the diastolic motion, produces a great pressure in every part of the system. We have a very striking sense of this in the throbbing pain of the head, in some forms of fever, or in cases of inflammation, especially when the parts are much swollen. Thus the force of the heart and arteries not only carries the blood through the arteries, but tends, indirectly, also, to move it forward in the veins.

But there is still another physical principle which is cited as an agency in venous circulation, and that is capillary attraction.

Fig. 6.

The Venous System.

1. The right auricle.
2. Descending vena cava.
3. Ascending vena cava.
4, 4. The right and left iliac veins.
5, 5. The right and left subclavian veins.
6. The jugular vein of the right side.

The arrows show the direction of the flow of the blood.

The foregoing figure gives some idea of the venous system. It will be seen that the large vessels—and these are all that are given in the cut—are very nearly correspondent to those of the arterial system. It must be observed, however, that the small veins have no regularity in their course or position.

The blood in the veins is of a much darker color than that in the arteries. This change of the blood has taken place in its passage through the capillary system, and is dependent upon the phenomena of oxydation or combustion, and the general metamorphosis of the materials of the tissues—all of which are in contact with the capillary system. In fact, the capillaries are properly only the *interstices* of the structural parts, or the vessels, nerves, etc.]

CHAPTER V.

OF THE GLANDULAR SYSTEM.

[GLANDS are secretory bodies of very diverse character and location. Some of them, as the liver and kidneys, are large, and others, as some of the conglobate or lymphatic, are quite small.

When glands are defined simply as secreting bodies, the mucous membranes must be included in their list, as these membranes all perform this function. They secrete the mucus with which they abound, as is seen in the mouth, nostrils, and throughout the alimentary canal and the urinary organs.

But in this chapter it is intended only to speak of the soft bulbous or bodily organs which perform the function of secretion.]

SECTION 1.

OF THE LYMPHATIC GLANDS.

[THE lymphatic glands, or ganglions as they are often denominated, are found distributed all over the body, and consist of numerous small globular bodies, connected with the lymphatic vessels.

The lymphatic glands are now most commonly called conglobate glands. They have no excretory duct except the continuation of the lymphatic vessels. The largest of the conglobate glands are the mesenteric, ingual and axillary glands.]

Fig. 7.

A representation of the Lymphatic Vessels and Glands.

1, 2, 3, 4, 5, 6. Lymphatic vessels and glands of the lower limbs. 7. Lymphatic glands 8. Commencement of the thoracic duct. 9. Lymphatics of the kidney. 10. Of the stomach. 11. Of the liver. 12. 12. Of the lungs. 13, 14, 15. Lymphatics and glands of the arm. 16, 17, 18. Of the face and neck. 19, 20. Large veins. 21. Thoracic duct. 26. Lymphatics of the heart.

[These glands are not supposed to secrete material into the lymphatic system, but simply to change the character of the fluid passing through them. In this sense they are considered the out-guards of the body, defending it from improper materials that are carried in the lymphatics. When poison or any offensive material forced into the system, as in the extremities, these glands, situated between the point of insertion of the poison and the body, become swollen and inflamed, and it is found that they secrete the foreign substance into their cells and retain and neutralize it, or by their softening and suppuration, they break out, and thus by a discharge remove the offensive material.]

SECTION 2.

OF THE LIVER.

[By reference to Fig. 12, the position of this gland may be seen in the abdominal region. It is situated partly in the right hypochondriac and partly in the epigastric region, immediately below the diaphragm.

It is the largest, by far, of all the glandular bodies. Its office is principally to secrete the bile, which is a very necessary agent in the process of digestion.

The liver is lobular in its form, consisting mainly of two large and two smaller lobes, and the gall-bladder, and its duct. The gall-bladder is situated in the sinus of the liver, on its under surface.

The color of the liver differs from that of all the other glands. It is of a dark brown color and is sometimes stained yellow with bile.

The liver is largely supplied with blood, and it is supposed that the blood is modified very materially in its passage through this gland, that it is decarbonized and purified by the liver.]

SECTION 3.

OF THE SPLEEN.

[This is an oblong gland, situated in the back part of the left hypochondriac region, immediately below the diaphragm. It is of a spongy texture and of a reddish or violet appearance.

It is singular that so large an organ as the spleen, is so little understood as to its office or use. It is supposed, however, to effect a change in blood by its glandular action, as this fluid

passes through it. Certain it is, that this gland, under some forms of disease—those, for instance, which result from contagions, particularly from *marsh miasma*—it, like the conglobate glands, becomes inflamed and often indurated and swollen, thus showing its office in modifying the character of some of the materials of the blood. It has been said, however, that in some experiments on animals, the spleen has been cut out and removed without materially affecting the life of the animal. But if the office of the spleen is regarded to be that of neutralizing foreign and pernicious agents in the blood, it is not strange that its extraction from the body in a state of health, should affect the system but little for the time being.]

SECTION 4.

OF THE PANCREAS.

[THIS is an oblong, soft, glandular body, situated transversely across the posterior wall of the abdomen, in the left hypochondriac region, just behind the stomach. It is about six inches long, and weighs, perhaps, four ounces. Its office is to secrete the pancreatic juice, which performs a part in digestion.]

SECTION 5.

OF THE PAROTID OR SALIVARY GLANDS.

[THE salivary glands are situated in front of the lower portion of the ear, just above the angle of the jaw, one on each side. They are small, soft bodies, and their office is to secrete the saliva, which is necessary to afford moisture to the mouth, and to supply fluid in the process of mastication.

The saliva is important also to the function of digestion, and it is, therefore, a bad practice to take fluids, as teas, coffee, or even water, in large quantity, in connection with food. Drinking, at such times, prevents the flow of the saliva into the mouth, as it otherwise would.

The salivary duct opens into the mouth opposite the second molar tooth, in the upper jaw. It is this gland that is affected in the disease called mumps.]

SECTION 6.

OF THE SUB-MAXILLARY GLANDS.

[THESE are situated on the inside of the lower jaw, one on each side of the mouth, anterior to the angle of the jaw. Their

excretory ducts open into the mouth on each side of the *frænum linguæ*, or thread (bridle) of the tongue.

The fluid may sometimes be seen jetting forth when the mouth is open, especially when the mind reverts to the eating of fruits. This and the succeeding or sub-lingual glands, have much the same use as the parotids.]

SECTION 7.

OF THE SUB-LINGUAL GLANDS.

[THE sub-lingual glands are situated under the tongue, within the lower jaw, one on each side of the thread of the tongue. They are small, elongated bodies, and lie immediately under the mucous membrane of the floor of the mouth. They have a number of mouths or ducts that freely discharge the fluid secretion of the glands.]

SECTION 8.

OF THE THYROID GLAND.

[THIS is a small, flat, glandular body lying against the fore-part of the trachea, below the thyroid cartilage. It is susceptible of great enlargement, and often is found enlarged more or less, especially in women. The disease is called *goitre* or *bronchocele*, and sometimes "*big-neck*."

The thyroid gland, though supplied with four large arteries and veins, as also with four nerves, has no excretory duct that has as yet been discovered; nor has there ever been any satisfactory speculation as to the use of the gland itself.]

SECTION 9.

OF THE PROSTATE GLAND.

[THIS is a small gland, about the size of a chestnut, situated before the neck of the bladders behind the symphysis pubis, and surrounding the first portion of the urethra. Its excretory outlets, to the number of ten or more, open into the urethra, and afford a lubricating fluid to this passage.]

SECTION 10.

OF THE LACHRYMAL GLANDS.

[THESE are small glands, situated in depressions of the frontal bone, at the upper and outer angle of the orbit, one in each orbit. The size of the lachrymal glands is about that of the kernel of a peach-stone. They have many excretory ducts, which open into the eye under the upper lid. Their use is to furnish the moisture and tears of the eyes.]

SECTION 11.

OF THE MESENTERIC GLANDS.

[THESE glands, which are often called mesenteric ganglions, are small knot-like bodies occurring in the course of the chyliferous vessels, in the mesentery. They are very numerous, but have no regular excretory duct. The lacteals pass through them however. Yet it is not known certainly to what extent the chyle, conveyed through the glands by these vessels, is modified; and hence, as yet, their office is little understood.]

SECTION 12.

OF VARIOUS OTHER GLANDS.

[THERE are, besides those glands already mentioned, many others, of smaller character, that are described in larger works on Anatomy; but it is deemed unnecessary to treat of them separately in this work. The most important of these are Peyer's and Brunner's glands, which are numerous and very small glands situated, the first upon the small intestines, and the latter upon the stomach and duodenum; the synovial; the sebaceous; the sudoriferous, etc.]

CHAPTER VI.

OF THE NERVOUS SYSTEM.

[THE nervous system, which relates chiefly to the functions of sensation, motion and volition, comprises the cerebro-spinal center, and the numerous slender or thread-like prolongations that emanate from this center, called nerves, and which are distributed upon every tissue and part of the body, excepting the extremities of the nails and the hair.

The substance of the brain, spinal marrow and nerves, is very analogous. It is of a soft or pulpy consistence, and whitish or cineritious color.]

SECTION 1.

OF THE BRAIN.

[THE brain, in the human subject, is large, and with its membranes and vessels occupies all the cavity of the skull. It consists of two portions, the *cerebrum*, or anterior and larger portion, and the *cerebellum*, which is about one-seventh the size of the former, and is situated in the back and lower portion of the skull.

The brain is entirely surrounded by three membranes, the *dura mater*, *archnoid*, and the *pia mater*.

The *dura mater* is a very firm membrane, answering to the periosteum of other parts. It lines the entire cavity of the skull, and reflects into the sinus of the brain, forming the falx, an arched or sickle-like partition between the right and left hemispheres.

The *archnoid* is the serous membrane of the brain and spinal cord, and is like other serous membranes, a closed sack, containing its investment. It is reflected upon the inner surface of the dura mater, and thus gives this membrane its serous or moistening investment.

The *pia mater* is a very vascular membrane. It invests, neatly, the entire surface of the brain and dips into its convolutions. It is the nutrient membrane of the brain, and receives all the blood from the carotid and vertebral arteries, designed for the brain.]

Cerebrum.

[The cerebrum is divided into two hemispheres by a cleft or fissure. In this fissure we find a projection of the dura mater in a circular or arched form, called the *falx cerebri*, from its resemblance to a sickle. The object of this construction, is to render support to this large pulpy mass.

The upper surface of the cerebrum is marked by many undulations or convolutions, and the under surface admits of three divisions in each hemisphere, called the *anterior, middle,* and *posterior* divisions.

When the brain is cut through its upper part horizontally, and the part removed so as to expose its cut surface, it will be discovered that the substance of this organ is of two distinct colors. On its outer surface, the brain, for a small depth, is of an ashy gray or cineritious color, while the central portion is white. This darker colored portion, called its *cortical* or *cineritious* portion, in its outlines, follows the convolutions of the brain. The light colored portion is called its *medullary* portion. The two hemispheres of the cerebrum, are connected by a dense layer of transverse fibers, called *corpus cullosum.*

There are several cavities in the interior of the brain, two of which are of considerable size, and are called the *lateral ventricles.* They extend from the anterior to the posterior part of the cerebrum, and project into other directions also.]

Cerebellum.

[This portion of the brain, which is situated in the occipitus or back part of the skull, is also marked by the two divers colors of its substance, as mentioned of the brain. The white portion presents, when the cerebellum is cut vertically, a beautiful appearance or form, resembling the trunk and branches of a tree, which is hence called *arbor vitæ.* See fig. 8.]

Medulla Oblongata.

[On the under surface of the brain, we discover the commencement of the spinal column, here called *medulla oblongata.* See fig. 8. It is a roundish body, consisting of three divisions or pairs of bodies, called *corpus pyrimidale, corpus restiforme, corpus olivare,* united in a single bulb. The medulla oblongata, unlike the brain, is highly sensitive, and if even slightly punctured, convulsions ensue.]

Spinal Cord.

[The spinal cord or spinal marrow, as it is often called, continues from the brain or medulla oblongata, downward through

the tube of the spinal column, afforded by the corresponding openings of the vertebra. It continues throughout the entire length of the spine. It is groved on both its anterior and posterior surfaces, by a furrow, which divides it in its entire length into two great nervous cords, intimately united with each other.

These lateral cords are each divided by furrows into three distinct sets of fibers, or columns; namely the *anterior*, *lateral* and *posterior* columns. The anterior are the motor columns; the posterior are the columns of sensation; the lateral columns are divided in their function between motion and sensation. They contain the fasciculus described, by Sir Charles Bell, as the respiratory tract.

At its lower extremity, the spinal cord is terminated by an oval tubercle, whence arise a number of nerves that go to the lower parts of the body. From the appearance of these numerous nerves in their emanation from the spinal cord, they have been denominated *cauda equina*, from a supposed resemblance to a horse's tail. The spinal cord, as well as the medulla oblongata, is enveloped in its entire length by the continuation of the three membranes of the brain.]

The Nerves.

[The nerves are tubular cords, of the same substance of the brain and spinal cord. They take their rise from the medulla oblongata and the spinal cord, and extend to every part of the body by different sets. They often unite in their course, and form plexus. There are forty-two pairs of primary nerves arising from the nervous centers, which, according to their origin, are called *craneal* or *encephalic*, and *spinal nerves*. Twelve pairs originate within the skull, and thirty pairs pass from the spinal cord: eight *cervical*, twelve *dorsal*, five *lumbar*, and five *sacral*.

Each nerve is composed of several filaments or cords, placed alongside each other, and surrounded by the *neurilemma*.

The craneal nerves have mostly but a single root, but the spinal arise by two roots, one from an anterior fasciculus of filaments, and the other from a posterior, separated from each other by the *ligamentum denticulatum*. But the two roots make afterward but one nerve.]

Fig. 8.

Side view of the Brain, Medulla Oblongata, and Craneal Nerves.

Fig. 8. 1. Cerebrum. 2. Cerebellum. 3. Medulla oblongata. 4. Medulla spinalis or spinal cord. 5. Ventricle of the brain. 6. Olfactory nerve. 7. Optic nerve. 8. Eye. 9. Motores oculorum. 10. Pathetic nerve. 11. Trifacial or trigeminum nerve. 12. Abducentes nerve. 13. Potio Mollis nerve. 14. Facial nerve. 15. Glossopharyngeal nerve. 16. Pneumo-gastric nerve. 17. Spinal Accessory. 18. The first cervical nerve. 19. Cervical plexus. 20. Descending posterior cervical nerves.

The CRANIAL NERVES, that connect with the brain, are arranged in twelve pairs. They are called: 1. The *Olfactory.* 2. The *Optic.* 3. The *Motores Oculorum.* 4. The *Patheticus.* 5. The *Trifacial.* 6. The *Abducentes.* 7. The *Portio Dura.* 8. The *Portio Mollis.* 9. The *Glossopharyngeal.* 10. The *Pneumogastric.* 11. The *Spinal Accessory.* 12. The *Hypoglossal.*

The OLFACTORY NERVE (first pair) passes from the cavity of the skull through many small openings in a plate of the *ethmoid* bone. (This plate is called *cribriform*, from its resemblance to a sieve.) This nerve ramifies upon the membrane that lines the nasal passages. It is the softest nerve of the body. (Fig. 8, 6.)

The OPTIC NERVE (second pair) passes from the interior of the cranium, through an opening in the base of the skull, (*foramen opticum,*) to the cavity for the eye. It pierces the coats of the eye, and expands in the retina.

The MOTORES OCULORUM (third pair) pass from the brain, through an opening of the *sphenoid* bone, (*sphenoidal fissure*,) to the muscles of the eye.

The PATHETICUS (fourth pair) passes from the brain through the sphenoidal fissure, to the superior oblique muscle of the eye.

The TRIFACIAL NERVE (fifth pair) is analogous to the spinal nerves in its origin by two roots, from the anterior and posterior columns of the spinal cord. It has a ganglion, similar to the spinal nerves upon its posterior root. On this account it is sometimes called the *craneal spinal* nerve. It divides into three branches: the *opthalmic*, *superior maxillary* and the *inferior maxillary*.

Fig A.

View of the Trifacial Nerve.

1. Trifacial nerve.
2. The ophthalmic branch.
3. The superior maxillary branch.
4. The inferior maxillary branch.
5. Sublingual nerve.
6. The buccal nerve.
7. The inferior dental nerve.

The *ophthalmic nerve* passes through the sphenoidal fissure, and gives off three branches: 1. The *lachrymal*, to the eye. 2. The *frontal*, to the forehead and upper eyelid. 3. The *nasal*, to the eyelids, nasal fossa and nose.

Fig. B.

View of the Superior Maxillary Nerve.

1. Its orbitar branch.
2. The nasal fossa.
3. The infra orbitar branch.

The *superior maxillary* nerve passes through the foramen rotundum and gives off four branches: 1. The *orbitar*, to the

orbit. 2. The *posterior dental*, to the last three molar teeth and gums. 3. The *anterior dental*, to the incisor, canine and two lesser molars. 4. The *infra-orbitar*, to the upper lip, cheek and nose.

The *inferior maxillary* nerve passes through the foramen ovale, and gives off seven branches, distributed upon the jaws, teeth, tongue and ear.

The ABDUCENTES (sixth pair) passes through the opening by which the carotid artery enters the cranial cavity. It is the smallest of the cerebral nerves, and is appropriated to the external straight muscle of the eye.

The PORTIO MOLLIS (seventh pair) enters the hard portion of the *temporal* bone at the internal auditory opening, and is distributed upon the internal ear.

The FACIAL NERVE (eighth pair) passes through the mastoid foramen, and is distributed over the muscles of the face.

The GLOSSO-PHARYNGEAL NERVE (ninth pair) passes from the brain, through an opening, with the jugular vein, (*foramen lacerum.*) It is distributed to the mucous membrane of the tongue and throat, and also to the mucous glands of the mouth.

The PNEUMOGASTRIC NERVE (tenth pair) escapes from the brain through the foramen lacerum. It sends branches to the larynx, pharynx, œsophagus, lungs, spleen, pancreas, liver, stomach and intestines.

The SPINAL ACCESSORY NERVE (eleventh pair) has its origin in the respiratory tract of the spinal cord. It connects with the ninth and tenth pairs of nerves, and is distributed to the muscles about the neck.

The HYPO-GLOSSAL NERVE (twelfth pair) passes from the brain, through a small opening (*condyloid foramen.*) It ramifies upon the muscles of the tongue, and is its motor nerve.

The SPINAL NERVES, as has already been stated, have, each, two roots arising from the anterior and posterior columns of the spinal cords. The posterior roots are larger than the anterior. The anterior are the *motor* radicals, and the posterior the *sensitive.*

On each of the posterior roots a ganglion is formed, in the openings between the bones of the spinal column. After the formation of the ganglions, the anterior and posterior roots of the nerve unite and form the regular spinal nerve.

The GANGLIA may be considered as distinct centers, giving off branches in four directions; namely, the superior, or ascending, to communicate with the ganglion above; the inferior, or descending, to communicate with the ganglion below; the external, to communicate with the spinal nerves; and the internal, to communicate with the sympathetic filaments. It is generally

Fig. 9.

Back view of the Nervous System.

1. Cerebrum. 2. Cerebellum. 3, 3. Spinal nerves. 4. Sciatic nerve.

admitted that the nerves that pass from the ganglia are larger than those that entered them ; as if they imparted to the nerve some additional power.

The branches of distribution accompany the arteries which supply the different organs, and form communications around them, which are called plexuses, and take the name of the artery with which they are associated. Thus we have the mesenteric plexus, hepatic plexus, splenic plexus, etc. All the internal organs of the head, neck and trunk, are supplied with branches from the sympathetic, and some of them exclusively; for this reason, it is considered a nerve of organic life.]

CHAPTER VII.

OF THE FUNCTIONS OF THE NERVOUS SYSTEM.

[THE brain may be regarded as the organ of the mind. The cerebrum is considered the seat of the moral and intellectual faculties, while the cerebellum is that of the animal propensities.

It is upon the relative development of the various organs or convolutions of the brain that the science of phrenology is based.

The brain is not much sensitive, and may be lacerated or even portions cut away without giving rise to much pain, but all such impressions immediately affect the mental faculties.

The cerebellum, on the other hand, has its relations to the functions of animal life, and impressions upon it will immediately affect the various functions of life, as respiration, digestion, and the circulation.

The medulla oblongata, seems to be the general receptacle of the impressions of the nerves of *special* sense, and the spinal cord that of *general* sensation.

In regard to the spinal nerves, and one of the cranial, (trifacial), it has already been stated that they have two roots, one for motory, and one for sensorial functions. In other words, one set for the functions of motion and the other those of sensation.

No difference can be discovered in the structure of the several kinds of nerves in any part of their course, and the functions they are designed to perform can only be known by ascertaining the place of their origin. The nerves may be functionally divided into five groups.

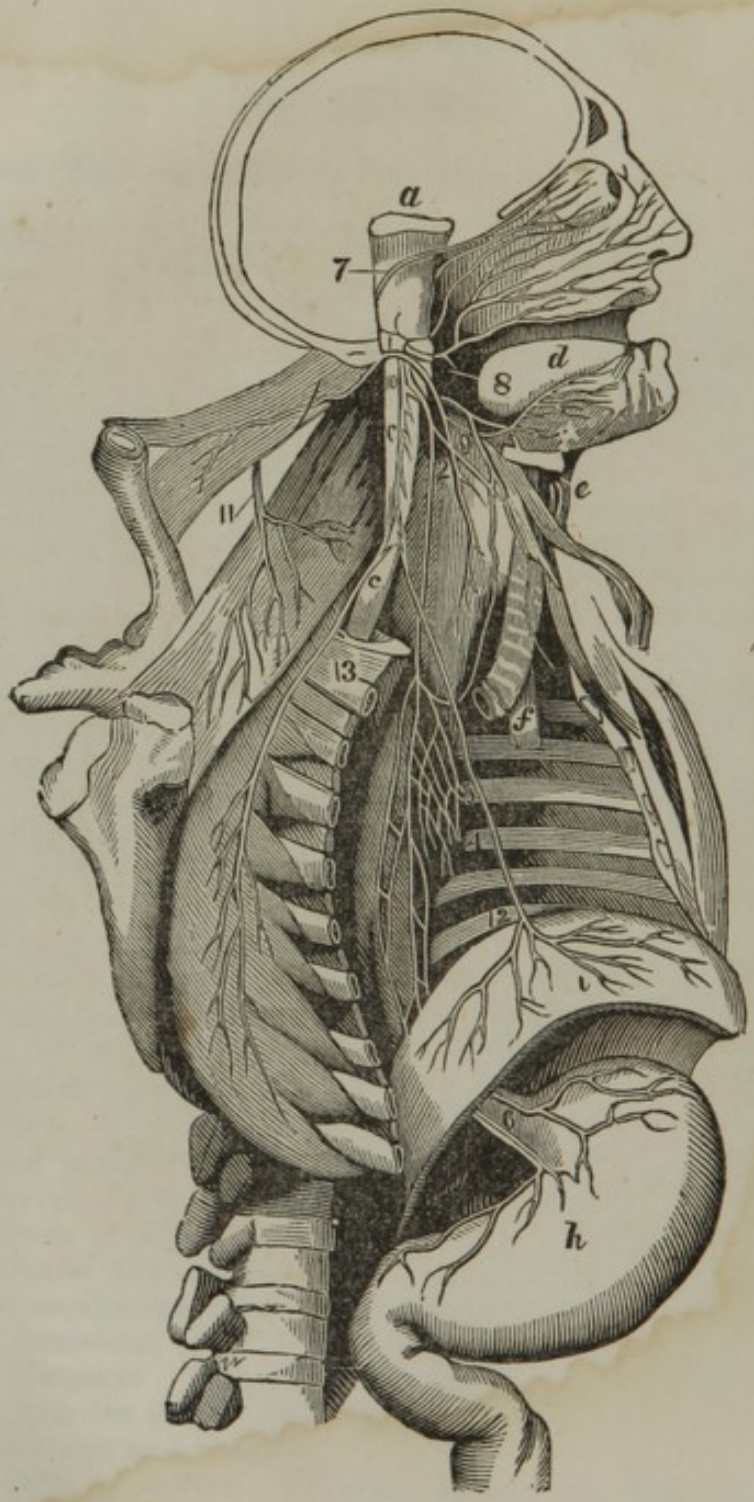
1st. *Nerves of special sensation.* These are the first, second, eighth, and perhaps one of the branches of the fifth pair of cranial nerves, which relate to the *smell, sight, taste* and *hearing.*

2d. *Nerves of general sensation.* These embrace the fifth pair of cranial nerves, and all the spinal nerves. In those parts that require sensation for their safety and the performance of their functions, there is an abundant supply of sensitive nervous filaments. The nerves of sensation are mostly distributed upon the skin. Few filaments ramify upon the mucous membranes and muscles.

3d. *Nerves of motion.* To these belong the third, sixth, and twelfth pairs of cranial nerves and all the spinal nerves. These are distributed upon the muscular fibers, and by their action give rise to muscular contraction.]

Fig. 10.

View of the Nerves of Respiration.



Explanation of Fig. 10.

a. Section of the brain and medulla oblongata.
b. The lateral columns of the spinal cord.
c. The respiratory tract of the spinal cord.
d. The tongue.
e. The larynx.
f. The bronchia.
g. The œsophagus.
h. The stomach.
i. The diaphragm.
1. The pneumogastric nerve.
2. The superior laryngeal nerve.
3. The recurrent laryngeal nerve. These two ramify on the larynx.
4. The pulmonary plexus of the tenth nerve.
5. The cardiac plexus of the tenth nerve. These two plexuses supply the heart and lungs with nervous filaments.
7. The origin of the fourth pair of nerves, that passes to the superior oblique muscle of the eye.
8. The origin of the facial nerve, that is spread out on the side of the face and nose.
9. The origin of the glosso-pharyngeal nerve, that passes to the tongue and pharynx.
10. The origin of the spinal accessory nerve.
11. This nerve penetrating the sterno-mastoideus muscle.
12. The origin of the internal respiratory or phrenic nerve that is seen to ramify on the diaphragm.
13. The origin of the external respiratory nerve, that ramifies on the pectorial and scaleni muscles.

[4th. *Nerves of respiration.* These are the fourth, seventh, ninth, tenth and eleventh pair of cranial nerves, also the phrenic and the external respiratory nerve. All of these nerves have their origin in a distinct tract or column, called the lateral, in the upper part of the spinal cord. Hence it is sometimes named the respiratory column. These nerves are distributed to one of the muscles of the eye; to the muscles of the face; to the tongue, pharynx, œsophagus, stomach, heart, lungs, diaphragm, and some of the muscles of the neck and chest. It is through the instrumentality of the accessory, phrenic and external respiratory nerves (Fig. 10), that the muscles employed in respiration are brought into action without the necessary coöperation of the will.

5th. *Sympathetic nerve.* The *sympathetic*, which is also called the *trisplanchnic* nerve, is a system of nervous arrangement, adapted particularly to the functions of organic life. It consists of a series of ganglia united by intermediate branches, and distributes its regular branches in the three great splanchnic cavities—those of the *head, chest* and *abdomen.* In the trunk, its main position is on the side of the spine, and communicates with all the spinal and several of the cranial nerves. The sympathetic nerve maintains vitality in all the important portions of the system. It exerts a controlling influence over the involuntary functions of digestion, absorption, secretion, circulation and nutrition. Every portion of the body is, to a certain extent, under its influence, as filaments from this system of nerves accompany the blood-vessels throughout their course.

"An important use of the sympathetic nerve is to form a communication of one part of the system with another, so that one organ can take cognizance of the condition of every other, and act accordingly. If, for example, disease seizes the brain, the stomach, by its sympathetic connection, knows it; and as nourishment would add to the disease, it refuses to receive food, and perhaps throws off what has already been taken. Loss of appetite in sickness is thus a kind provision of nature, to prevent our taking food when it would be injurious; and following this intimation, we, as a general rule, should abstain from food until the appetite returns."]

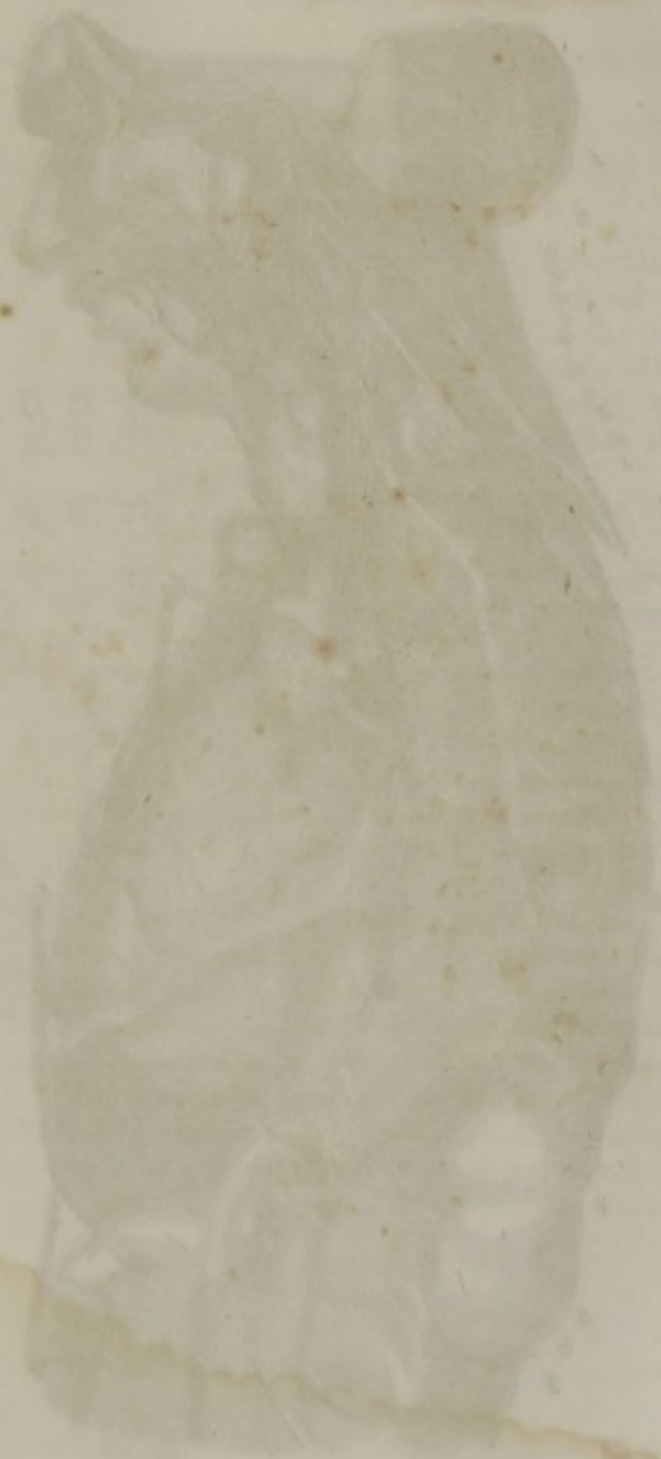


Fig. 11.

A view of the Great Sympathetic Nerve and its Connections and Distributions.

Explanation of Fig. 11.

A, A, A. The semilunar ganglion and solar plexus, situated below the diaphragm and behind the stomach. This ganglion is situated in the region (pit of the stomach) where a blow gives severe suffering.

D, D, D. The thoracic ganglia, ten or eleven in number.

E, E. The external and internal branches of the thoracic ganglia.

G, H. The right and left coronary plexus, situated upon the heart.

I, N, Q. The inferior, middle and superior cervical ganglia.

1. The renal plexus of nerves that surrounds the kidneys.
2. The lumbar ganglion.
3. Their internal branches.
4. Their external branches.
5. The aortic plexus of nerves that lies upon the aorta.

The other letters and figures represent nerves that connect important organs and nerves with the sympathetic ganglia.

The above is a beautiful representation of the sympathetic ganglia and their connection with other nerves. It is from the grand engraving of Manec, reduced in size.

CHAPTER VIII.

OF THE DIGESTIVE ORGANS AND ALIMENTARY CANAL.

[THE STOMACH and INTESTINES, with the ŒSOPHAGUS and MOUTH, constitute the alimentary canal, as it is through the passage afforded by these organs that the aliment or food passes, in order to yield its nutritious particles to the blood in the form of chyle.]

SECTION 1.

OF THE STOMACH.

[THE stomach is situated in the left side of the upper portion of the abdomen. Its left extremity is in contact with the diaphragm, and its right is overlaped by the liver. It has two openings: one connected with the œsophagus, called the *cardiac* orifice; the other connected with the upper portion of the intestine, called the *pyloric* orifice. It is composed of three coats or membranes. The exterior or serous coat is very tough and strong, and invests every part of this important organ. The middle or muscular coat is composed of two layers of muscular fibers, one set of which is arranged longitudinally, the other circularly. The interior coat is called the mucous, and is arranged in *rugæ*, (folds). The stomach is provided with a multitude of small glands, in which is secreted the gastric fluid.

The gastric juice is of an acid character and possesses very great solvent powers. The presence of food in the stomach excites the gastric glands to pour it forth into the stomach; then, by the violent mechanical motions of this organ performed by its muscles, which are so diverse in the direction of their fibers, the gastric juice becomes thoroughly mixed with the food while the digestion of the latter goes rapidly on.]

SECTION 2.

OF THE INTESTINES.

[THE intestines are commonly, in their description, divided into two parts—the *small* and the *large*. The small intestine is about twenty-five feet in length, and is described in three parts, the *Duodenum*, *Jejunum* and *Ileum*.

Fig. 12.

Represents the vicera of the Abdomen and Chest.

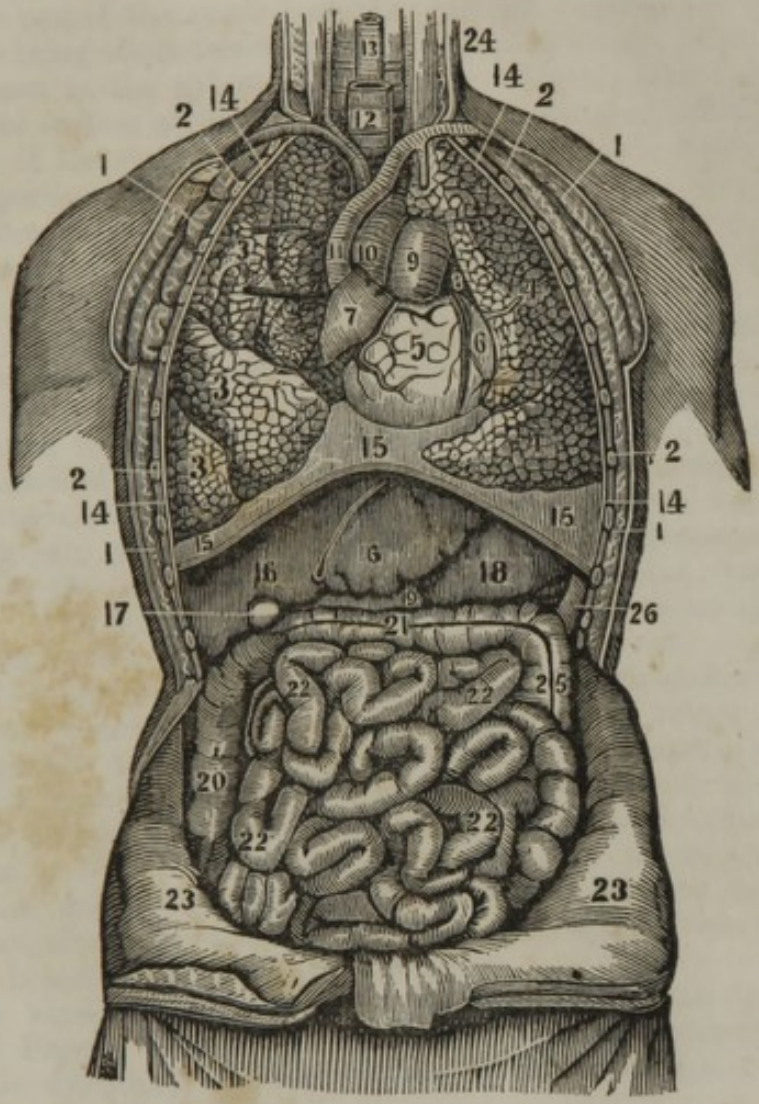


Fig. 12. A front view of the organs within the chest and abdomen. 1, 1, 1, 1. The muscles of the chest. 2, 2, 2, 2. The ribs. 3, 3, 3. The upper, middle and lower lobes of the right lung. 4, 4. The lobes of the left lung. 5. The right ventricle of the heart. 6. The left ventricle. 7. The right auricle of the heart. 8. The left auricle. 9. The pulmonary artery. 10. The aorta. 11. The vena cava descendens. 12. The trachea. 13. The œsophagus. 14, 14, 14, 14. The pleura. 15, 15, 15. The diaphragm. 16, 16. The right and left lobe of the liver. 17. The gall-cyst. 18. The stomach. 26. The spleen. 19, 19. The duodenum. 20. The ascending colon. 21. The transverse colon. 25. The descending colon. 22, 22, 22, 22. The small intestine. 23, 23. The abdominal walls turned down. 24. The thoracic duct, opening into the left subclavian vein.

The large intestine is about five feet in length, and is also divided in its description into three parts, the *Cæcum, Colon* and *Rectum.*

Duodenum.—This portion is somewhat greater, in diameter, than the rest of the small intestine, and has received its name from its being about twelve finger's breadth in length. Above, it commences at the pylorus, and ascends obliquely backward to the under surface of the liver. It then descends perpendicularly in front of the right kidney, and passes transversely across the lower portion of the spinal column, behind the colon, and terminates in the jejunum. The ducts from the liver and pancreas open into the perpendicular portion, about six inches from the stomach.

The *jejunum* is continuous with the duodenum. It is thicker than the rest of the small intestine, and has a pinkish tinge.

The *ileum* is smaller, and thinner in texture, and somewhat paler, than the jejunum. There is no mark to distinguish the termination of the one or the commencement of the other. The ileum terminates near the right haunch-bone, by a valvular opening into the colon at an obtuse angle. This arrangement prevents the passing of substances from the colon into the ileum. The jejunum and ileum are surrounded above and at the sides by the colon.

The small intestine, like the stomach, has three coats. The inner or mucous coat is thrown into folds or valves. In consequence of this valvular arrangement, the mucous membrane is more extensive than the other tissues, and gives a greater extent of surface with which the aliment comes in contact. There are imbedded under this membrane an immense number of minute glands, and it has a great number of piles, like those upon velvet. For this reason, this membrane is sometimes called the *vilous* coat.

The small intestine is beset with numerous small glands, called Peyer's glands, which are liable to become ulcerated in chronic dysentery, and are the seat of the ulceration of this intestine in typhoid fever.

The *cæcum* (cul-de-sac) or blind pouch, as it is sometimes called, is the commencement of the large intestine. It is closed at the end, and has projecting from this end a slender worm-like appendix, called *appendix vermiformis.* It is situated in the right iliac region, and is about three or four finger's breadth in length. The cæcum, like the other portions of the large intestine, has a pouch-like arrangement caused by the peculiar position of the muscular fibers of its muscular coat.

The *colon* is divided into three parts—the *ascending, trans-*

verse, and *descending*. The ascending colon passes upward from the right haunch-bone to the under surface of the liver. It then bends inward, and crosses the upper part of the abdomen, below the liver and stomach, to the left side under the name of the transverse colon. At the left side, it turns, and descends to the left haunch-bone, and is called the descending colon. Here it makes a peculiar curve upon itself, which is called the *sigmoid flexure*, from its resemblance to the letter S. The colon has many sack-like folds on its internal surface which are designed to retain the food in its passage for a long period.

The *rectum* is the lowermost, or last portion of the large intestine, and terminates in the anus, where it is surrounded by a sphincter or circular muscle that keeps it closed except at deffecation.

The motion by which the contents of the bowels are carried downward comprises the *peristaltic* and *vermicular* movements of the bowels.]

Digestion is one of the most important functions performed in the human system; and any considerable deviation from its regular action, has a ruinous influence on health. And in consequence of the great number of organs concerned in the digestive process, its operation is liable often to be disturbed; suffering more or less from every disease to which the human frame is liable. We believe that JOHN HUNTER was the first who remarked that the stomach was the center of sympathy in the system; and of this fact there appears to be but one opinion with physiologists of the present day. We have no where, that we recollect, seen any reason assigned for this phenomenon; but we think it may be found in the association of so many organs in the performance of one common function, and in the mutual dependence and connection of the stomach upon, and with, every other part of the system, and *vice versa*.

It is only by considering the great end of the digestive process, that we shall be capable of fully appreciating its vast importance in the animal economy. By this process our food and drink is prepared to yield its nutritious particles to the blood, from which all the other fluids as well as the solids are made, and upon which our very existence depends. Whenever, therefore, the digestion becomes too feeble, the living power must also become weak; and a long continued weakness of the digestive organs must produce disease, and ultimately death.

[The *lacteals* are minute vessels, which commence in the villi, upon the mucous surface of the intestines. From the intestines they pass between the membranes of the *mesentery* to small glands, which they enter. The first range of glands

collects many small vessels, and transmits a few larger branches to a second range of glands; and, finally, after passing through several successive ranges of these glandular bodies, the lacteals, diminished in number and increased in size, proceed to the enlarged portion of the thoracic duct, into which they open. They are most numerous in the upper portion of the small intestine.

The *thoracic duct* commences in the abdomen, by a considerable dilatation, which is situated in front of the lower portion of the spinal column. From this point it passes through the diaphragm, and ascends to the lower part of the neck. In its ascent, it lies anterior to the spine, and by the side of the aorta and œsophagus. At the lower part of the neck, it makes a sudden turn downward and forward, and terminates by opening into a large vein (left subclavian) which passes to the heart. The thoracic duct is equal in diameter to a goose-quill, and, at its termination, is provided with a pair of semilunar valves, which prevent the admission of venous blood into it.

CHAPTER IX.

OF THE RESPIRATORY ORGANS.

[THE materials furnished to the circulation from the alimentary canal are in a condition, that, with reference to the atmosphere, will admit of free combination with oxygen, which latter agent is quite necessary to the function of assimilation and nutrition, to prepare the tissues for this process.

Besides this, the venous blood is also charged with carbonated materials that become eliminated and pass off in the form of carbonic acid gas when exposed to oxygen.

To effect these several purposes and thus to keep up the motive power of the system, while also its recremental materials are removed, the apparatus of respiration is provided.

The lungs are so constructed as to receive a very large amount of atmosphere, and by the most extraordinary mechanism of the cellular structures, the blood and air come into a state equivalent to direct contact with each other. Thus the oxygen of the air combines with the blood, while a portion of the carbonated and recremental materials also take on new combinations and pass off.

In describing the lungs, it may be well in the first place to compare them to a bellows, which takes in air freely and then forcibly projects it forth again, only that in the case of the lungs the air is materially changed when it passes out, having yielded its oxygen, that was before in a free state, and holding the oxygen now passing out in a purely chemical state.]

SECTION 1.

OF THE LUNGS.

[THE lungs are situated in the uppermost portion of the chest, and when inflated fill that cavity completely. They are of irregular shape, having two main divisions, one right, and the other left, and each inclosed in a sack formed by the pleura membrane and the mediastinum. The right lung is the largest, and is divided by two fissures into three lobes, while the left is divided by one fissure into two lobes.

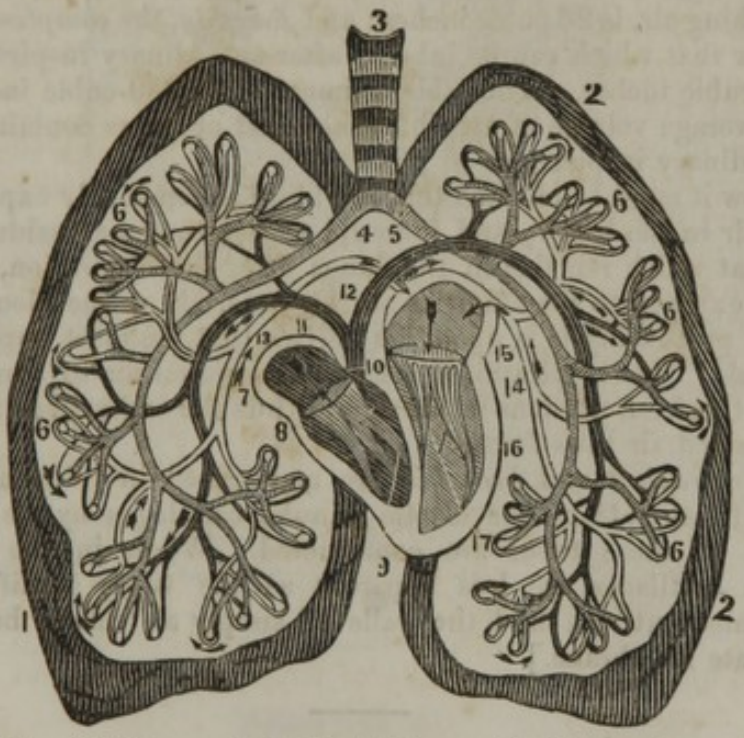
In their superior portion they receive the *trachea* or wind pipe, which divides into two *bronchiæ*, one of which goes to the right lobe and the other to the left. These bronchial tubes continue to divide and branch off in the *parenchymatous* substance of the lungs until they are extremely minute in their ultimate attenuation.

The lungs and heart, which latter is embraced principally under the left lobe, form a conical shape, in the chest.

The following cut will give some idea of the shape of the lungs and the position of the heart, as also the arrangement by which the blood and the air in the lungs become exposed to contact.]

Fig. 13.

An ideal view of the Pulmonary Circulation.



1, 1. The right lung. 2, 2. The left lung. 3. The trachea. 4. The right bronchial tube. 5. The left bronchial tube. 6, 6, 6, 6. Air-cells. 7. The right auricle. 8. The right ventricle. 9. The tricuspid valves. 10. The pulmonary artery. 11. The branch to the right lung. 12. The branch to the left lung. 13. The right pulmonary vein. 14. The left pulmonary vein. 15. The left auricle. 16. The left ventricle. 17. The mitral valves.

The arrows show the direction of the blood.

The substance of the lungs is exceedingly light and spongy, consisting entirely of air-cells, vessels and tubes, with their delicate walls. The color of the lungs varies in the age of the

subject, being of a light pinkish red in youth, while it becomes more dark or purplish or mottled in age. The lungs, like the other organs are supplied with nerves and vessels, for their nutrition and support.

The respiration in health is free, easy and without noise. The respirations average about thirty-five per minute, in the first year of life; twenty-five, during the second; twenty, at puberty, and eighteen, in the adult age.

In regard to the amount of air taken into the lungs during respiration, the following estimates have been made: *first*, the *residual* air or that which can not be expelled from the lungs, but remains after a full and forcible expiration, is 120 cubic inches; *secondly*, the *supplementary* or reserve air, or that which can be expelled by a forcible expiration, after an ordinary out-breathing, is 130 cubic inches; *thirdly*, the *breath*, tidal or breathing air, is 26 cubic inches; and *fourthly*, the *complementary* air, or that which can be inhaled after an ordinary inspiration is 100 cubic inches. Thus this estimate gives 250 cubic inches as the average volume of air which the chest or lungs contains after an ordinary inspiration.

Now it must be obvious that the blood is constantly exposed to the air in the lungs; and it would appear that the residual air, or that which remains in the lungs after the expiration, is the most exposed to the affinities of the materials of the blood, that in all probability it is upon this portion that the most impression is made. The respirations replace this residual air by admixture with the fresh portions inspired, and thus the expirations remove the mixed air thus formed.

The *trachea* and *bronchia* are maintained in a distended or cylindrical state by the elastic annular cartilages by which the walls of these tubes are constructed. When in the lungs, these cartilages are less apparent as the tubes ramify, and diminish until we find the walls of simply an elastic but very delicate membrane.]

SECTION 2.

OF OTHER ACCESSORY ORGANS TO RESPIRATION.

[In the function of respiration there are various organs that become accessory besides the lungs, bronchia and trachea.

The *diaphragm*, the *intercostal muscles*, and the *abdominal muscles*, and in difficult respiration various other muscles of the chest participate. These are all under the control of one nervous

apparatus, called the respiratory nerves. The pneumo-gastric or par vagum is however the principal nerve of respiration.

The ribs are raised during inspiration and fall in expiration, and thus the chest is enlarged when air is taken in, and contracted when it is given out. The following diagram will illustrate this motion of the ribs:

Fig. 14.

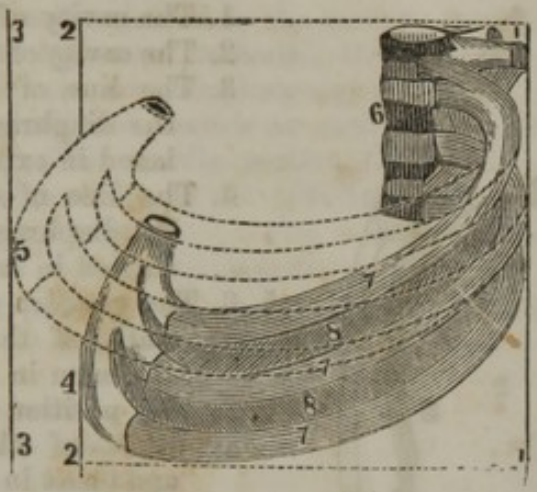


Fig. 14. 6. Four of the vertebræ, to which are attached three ribs, (7, 7, 7,) with their intercostal muscles, (8, 8). These ribs, in their natural position, have their anterior cartilaginous extremity at 4, while the posterior extremity is attached to the vertebræ, (6), which are neither elevated nor depressed in respiration. 1, 1, and 2, 2, parallel lines, within which the ribs lie in their natural position. If the anterior extremity of the ribs is elevated from 4 to 5, they will not lie within the line 2, 2, but will reach the line 3, 3. If two bands extend from 1, 1, to 2, 2, they will effectually prevent the elevation of the ribs from 4 to 5, as the line 2, 2, can not be moved to 3, 3.]

SECTION 3.

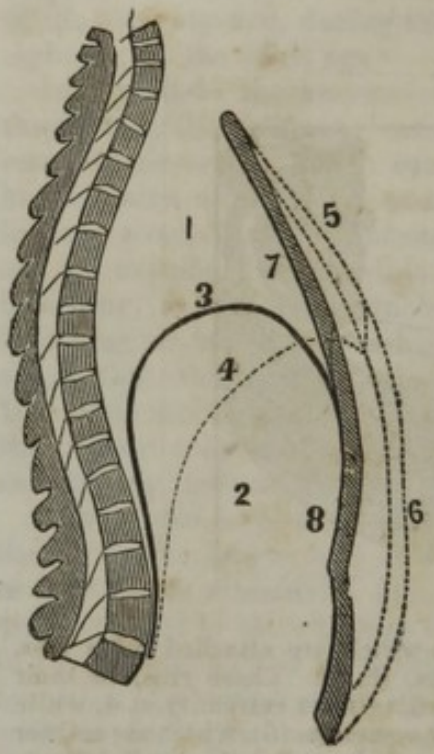
OF THE DIAPHRAGM.

[THIS is a firm, muscular membrane, transversely situated across the cavity of the trunk, at the lower margin of the bony walls of the chest. It is convex on its upper, and concave in its lower surface. By the contraction of its fibers in inspiration, its plane becomes more direct—that is, the diaphragm becomes flattened and the lungs swell and fill the enlarged cavity of the chest, the air rushing in on the principle of its common pressure.

In the annexed cut the different positions of the diaphragm in respiration are seen:

Fig. 15.

A side view of the Chest and Abdomen in Respiration.



1. The cavity of the chest.
2. The cavity of the abdomen.
3. The line of direction for the diaphragm when relaxed in expiration.
4. The line of direction for the diaphragm when contracted in inspiration.

5 6. The position of the front walls of the chest and abdomen in inspiration.

7, 8. The position of the front walls of the abdomen and chest in expiration.]

CHAPTER X.

OF THE SKIN.

[THE skin is a dense but very flexible membraneous covering which neatly envelops the entire body, and is reflected into the openings where it is joined by the mucous membranes. It consists of three layers of material, the external, or *epidermis*, called scarf-skin in common language; the middle or *rete mucosum*, and the inner, *dermis* or *cutis vera*, which is the firm fibrous layer. The middle portion, the *rete*, is that on which the color is dependent, in the different nations of people. In the African, it is black.]

Fig. 16.

A magnified view of a transverse section of the Skin, shows its layers and sudorific apparatus.

1, 1. The epidermis.
2. The root of a hair.
3. A sudorific gland.
4, 4. The spiral ducts or outlets of the sweat glands.
5. Dermis or true skin.

On the ends of the fingers the epidermis, which is throughout of a horny consistence, but so thin as to readily admit of flexibility, is here replaced by a thicker and more permanent texture of horny substance, called the nails (clavus).

In the palms and bottoms of the feet, the skin is thickened and more firm, according as is the exposure or use of the part to friction and wear.

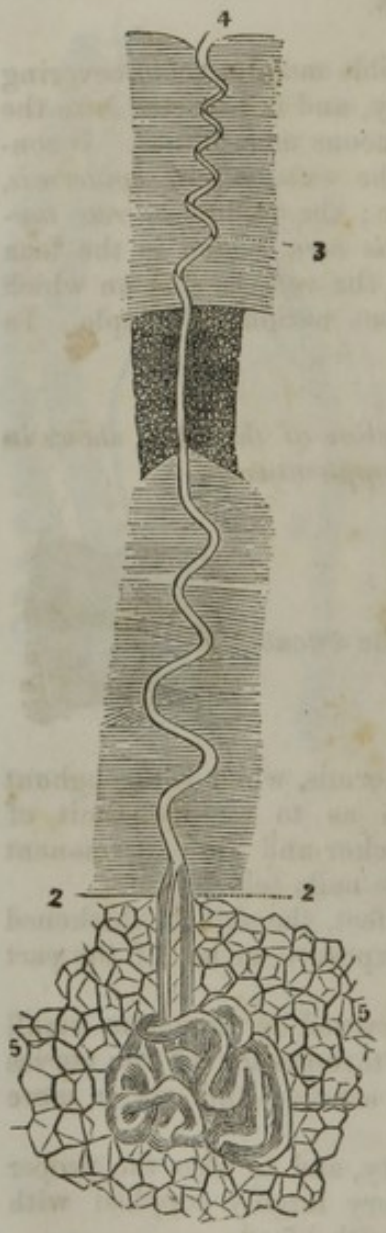
The outer surface of the skin is covered by numerous small eminences or papillæ, which are the termination of the nerves and vessels, each papilla containing a nerve and one or more vessels.

The skin possesses great sensibility, and is also the proper organ of touch. It is, therefore, very largely supplied with nerves; and it is also well furnished with blood.

The outer layer or epidermis has no sensibility, yet as it is so extremely thin or delicate it offers but little obstruction to the sense of touch. Its chief use is as a covering or shield to the under parts, to prevent irritation, corrosion and the absorption of pernicious materials into the circulation.

Fig. 17.

A magnified view of a Sudorific Gland with its outlet through the different layers of the skin.



1. The gland.
2. The duct.
3. Its passage through the epidermis.
4. Its oblique opening on the surface.

5, 5. The cellular tissue.

The skin is in many places beset with hairs, the roots of which may be found in most parts; but on the scalp, and, at proper age, on the pubis, arm pits, and—on males—the beard, the hair is thick and of a coarser character.

The skin is furnished by numerous glands, which are secretory organs, and they secrete the sweat or perspirable fluid from the circulation. This function is of great importance, and serves, in the first place, to remove the recremental or exhausted materials of the body; and secondly, to regulate the temperature by means of evaporation of the fluid thus thrown out. Thus, when the body is much exposed to heat, or to exercise, the perspiration is always more abundant, so that by its evaporation, the heat may be kept moderate.

These little sweat or sudorific glands have a spiral outlet upon the surface. But their entire arrangement is so delicate and minute as to be below our unassisted vision. In the subjoined cut, we have a largely magnified illustration of a sudorific gland, and its spiral outlet, passing through the different layers of the skin.

The skin is also furnished with other glandular organs, as the sebaceous glands, which are situated in the arm pits, and in the face, as about the nose and ears.

There is also an oily secretion furnished by the skin in all parts, which keeps it soft and pliable.]

CHAPTER XI.

OF THE MEMBRANES.

[THE MUCOUS MEMBRANE is the proper lining to the alimentary canal, the respiratory, the urinary and the genital organs. It is of glandular construction, and secretes mucus copiously, in some parts. This membrane, like the skin, has exhalent vessels opening upon it, by which great amounts of fluid materials are removed. In diarrhea and dysentery we have an example of the copious flow of this internal exhalation.

The URINARY BLADDER, which is of a fibrous texture in its main construction, has a thick mucous membrane that protects the organ from corrosion by the acrid materials in the urine.

The SEROUS MEMBRANES are found on the internal surfaces which have no outlets, as in the *pleura*, *peritoneum*, *pericardium*, and *membranes of the brain*.

These membranes serve to support the several organs that they invest, in their various places and positions.

The *pericardium* forms a sack for the heart; the *peritoneum* invests the contents of the bowels, and the *pleura* forms two sacks to support the lungs. The diaphragm is also a sero-muscular membrane.

The serous membranes effuse a serous or watery fluid, to afford a moist and smooth surface for the play of the several organs upon them. They are of a light red color and well supplied with blood. They are in some places much liable to inflammation, and sometimes form attachments to other organs under the inflammatory action.]

CHAPTER XII.

OF THE GENITAL ORGANS.

[The genitals distinguish the sexes and are the instruments of reproduction.

In the male, the principal organs are the *penis* and the *testicles*. The former is an oblong pendulous body, capable of forcible erection. It is enveloped, loosely, by the common integument, except, in the adult, its glans or head which is free. It comprises the *corpus cavernosa* or *erectile* bodies on the lateral portion; the *corpus spongiosum* of the urethra, and the *urethra* or tube which conveys the urine and the semen.

The use of the penis is to convey the semen into the female organs of generation, and for this purpose we discover there is a projectile apparatus, and when the organ is erected and turgid, the sperm may be projected with some force from the organ.

The *testicles* are inclosed in a soft pouch called the *scrotum*, situated immediately below the junction of the penis.

They are two oval bodies of glandular texture. The substance of the testicle consists of numerous conical, flattened lobules, *lobuli testis*, whose *base* is directed toward the surface of the organ, and the *apices* toward the *corpus heighmorianum*. They are composed of a grayish soft substance, forming tortuous canals, called *tubuli seminiferi*, the number of which have been estimated at 62,500, and the total length of them 5,208 feet. All these canals, uniting in their course, pass through the corpus heighmorianum, concur in forming the *epididymis*, and give origin to the *vas deferens*. The testes are covered immediately by a fibrous membrane of an opaque white color and is very tough, called *tunica albuginea*, of which the corpus heighmorianum is only an enlargement.

The use of the testicles is to secrete the seminal fluid, and thus they are the fountain of generation in the animal.

The principal female organs are the *uterus*, *ovaries* and *vagina*.

The *uterus* is a pear-shaped sack, supported in an inverted position, in the pelvis. In the unimpregnated state it is comparatively small. But in gestation it very much enlarges and then comprises the fetus and its appendages. In the advanced months of pregnancy the uterus rises out of the lower pelvis, and occupies a position in the abdomen and upper basin of the pelvis.

The *ovaries* are two glandular bodies, situated on the right and left side of the uterus, above. They furnish the rudiments of the new being, in the form of a minute ovum, that becomes impregnated by the sperm from the male, and breaks loose from the ovaries, and is then conducted into the uterus, by the fallopian tube.

The *vagina* is the elastic channel leading from the external orifice to the uterus. It is invested by a mucous membrane, and though of small diameter in the common state, is nevertheless, like the uterus, capable of great distention.

In another part of this work, the female organs are more fully described and their functions explained.]

CHAPTER XIII.

OF THE ORGANS OF SPECIAL SENSE.

SECTION 1.

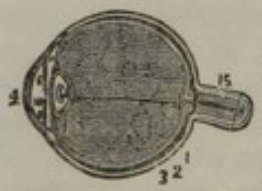
OF SIGHT.

[THE EYES are two globular bodies, situated in the orbits of the face, and are the organs of vision. They are inclosed in part by the lids, and partly by the bony socket.

The eye ball is covered by several membranes. In front, we have the *tunica conjunctiva*, then the *sclerotic coat* or white firm membrane which surrounds all of the ball except the front, where the *cornea* takes its place. The *cornea* is a transparent membrane that admits the rays of light in order for vision. We have then the *choroid* coat, the *tunica jacobi, retina,* the *iris,* the *hyaloid,* and, in the fetus, the *membrana pupillaris* The humors are the *aqueous, crystalline,* and *vitreous.*

Fig. 18.

A view of the Eye divided through the center.



1. Sclerotic coat. 2. Choroid coat. 3. Retina. 4. Cornea. 6, 6. Iris. 7. Pupil. 9, 10, 11. Chambers of the eye. 12. Crystalline lens. 13 Vitreous humor. 15. Optic nerve. 16. Central artery of the eye.

The SCLEROTIC COAT is a dense, fibrous membrane, and invests about four-fifths of the globe of the eye. It gives form to this organ, and serves for the attachment of the muscles that move the eye in various directions. This coat, from the brilliancy of its whiteness, is known by the name of "the white of the eye." Anteriorly, the sclerotic coat presents a beveled edge, which receives the cornea in the same way that a watch-glass is received by the groove in its case.

The CORNEA is the transparent projecting layer, that forms the anterior fifth of the globe of the eye. In form, it is circular, convexo-concave, and resembles a watch-glass. It is received by its edge, which is sharp and thin, within the beveled border of the sclerotic, to which it is firmly attached. The cornea is composed of several different layers; its blood-vessels

are so small that they exclude the red particles altogether, and admit nothing but serum.

The CHOROID COAT is a vascular membrane, of a rich chocolate-brown color upon its external surface, and of a deep black color within. It is connected, externally, with the sclerotic, by an extremely fine cellular tissue, and by the passage of nerves and vessels; internally, it is in contact with the retina. The choroid membrane is composed of three layers. It secretes upon its internal surface a dark substance, called *pigmentum nigrum*, which is of great importance in the function of vision.

The IRIS is so called from its variety of color in different persons. It forms a partition between the anterior and posterior chambers of the eye, and is pierced by a circular opening, called the *pupil*. It is composed of two layers. The radiating fibers of the anterior layer converge from the circumference to the center. Through the action of these radiating fibers the pupil is dilated. The circular fibers surround the pupil, and by their action produce contraction of its area. The posterior layer is of a deep purple tint, and is called *uvea*, from its resemblance in color to a ripe grape.

The CILIARY PROCESSES consist of a number of triangular folds, formed, apparently, by the plaiting of the internal layer of the choroid coat. They are about sixty in number. Their external border is continuous with the internal layer of the choroid coat. The central border is free, and rests against the circumference of the crystalline lens. These processes are covered by a layer of the pigmentum nigrum.

The RETINA is composed of three layers: the external; middle, or nervous; and internal, or vascular. The external membrane is extremely thin, and is seen as a flocculent film, when the eye is suspended in water. The nervous membrane is the expansion of the optic nerve, and forms a thin, semi-transparent, bluish-white layer. The vascular membrane consists of the ramifications of a minute artery and its accompanying vein. This vascular layer forms distinct sheaths for the nervous papillæ, which constitute the inner surface of the retina.

The AQUEOUS HUMOR is situated in the anterior and posterior chambers of the eye. It is an albuminous fluid, having an alkaline reaction. Its specific gravity is a very little greater than distilled water. The anterior chamber is the space intervening between the cornea, in front, and the iris and pupil, behind. The posterior chamber is the narrow space, less than half a line in depth, bounded by the posterior surface of the iris and pupil, in front, and by the ciliary processes and crystalline lens, behind. The two chambers are lined by a thin layer, the secreting membrane of the aqueous humor.

The CRYSTALLINE HUMOR, or lens, is situated immediately behind the pupil, and is surrounded by the ciliary processes. This humor is more convex on the posterior than on the anterior surface, and, in different portions of the surface of each, the convexity varies from their oval character. It is imbedded in the anterior part of the vitreous humor, from which it is separated by a thin membrane, and is invested by a transparent elastic membrane, called the capsule of the lens. The lens consist of concentric layers, disposed like the coats of an onion. The external layer is soft, and each successive one increases in firmness until the central layer forms a hardened nucleus. These layers are best demonstrated by boiling, or by immersion in alcohol, when they separate easily from each other.

The VITREOUS HUMOR forms the principal bulk of the globe of the eye. It is an albuminous fluid, resembling the aqueous humor, but is more dense, and differs from the aqueous in this important particular, that it has not the power of reproducing itself. If by accident it is discharged, the eye is irrecoverably lost; while the aqueous humor may be let out, and will be again restored. It is inclosed in a delicate membrane, called the *hyaloid*, which sends processes into the interior of the globe of the eye, forming the cells in which the humor is retained.]

SECTION 2.

OF HEARING.

[THE EAR is the organ of hearing, and consists of a series of cavities so arranged as to receive the vibrations in the atmosphere (sounds) and convey them to the delicate nervous membranes within its structure.

The EAR is composed of three parts: 1st. The *External Ear*. 2d. The *Tympanum*, or middle ear. 3d. The *Labyrinth*, or internal ear.

The EXTERNAL EAR is composed of two parts: The *Pinna*, (pavilion of the ear), and the *Meatus Auditorius Externus*, (auditory canal).

The PINNA is a cartilaginous plate which surrounds the entrance of the auditory canal. It presents several ridges and furrows, arising from the folds of the cartilage that forms it.

The MEATUS AUDITORIUS is a canal partly cartilaginous, and partly bony, about an inch in length, which extends inward from the pinna to the *Membrana Tympani*, (drum of the ear). It is narrower in the middle than at the extremities. It is

lined by an extremely thin pouch of cuticle, which, when withdrawn, after maceration, preserves the form of the canal. Some stiff, short hairs are also found in the interior of the channel, which stretch across the tube, and prevent the ingress of insects. Beneath the cuticle are a number of small follicles, which secrete the wax of the ear.

The MEMBRANA TYMPANI is a thin, semi-transparent membrane, of an oval shape. It is about three-eighths of an inch in diameter, and is inserted into a groove around the circumference of the meatus, near its termination. This membrane is placed obliquely across the area of that tube. It is concave toward the meatus, and convex toward the tympanum.

The TYMPANUM consists of an irregular bony cavity, situated within the temporal bone. It is bounded externally by the membrana tympani; internally, by its inner wall; and in its circumference, by the petrous portion of the temporal bone and mastoid cells. The tympanum contains four small bones, called the *ossicula auditus*. These are named separately, the *malleus*, *incus*, *stapes*, and *orbicular*.

There are ten openings in the middle ear; five large and five small. The larger openings are, the *Meatus Auditorius Externus*, *Fenescra Ovalis*, (oval window), *Fenestra Rotunda* (round window), *Mastoid Cells*, and *Eustachian Tube*.

The FENESTRA OVALIS is the opening of communication between the tympanum and the vestibule. It is closed by the foot of the stapes, or bone of the ear, and by the lining membrane of both cavities.

The FENESTRA ROTUNDA serves to establish a communication between the tympanum and the cochlea. It is closed by a proper membrane, as well as by the lining of both cavities.

The MASTOID CELLS are very numerous, and occupy the whole of the interior of the mastoid process of the temporal bone, and part of the petrous bone. They communicate by a large, irregular opening, with the upper and posterior circumference of the tympanum.

The EUSTACHIAN TUBE is a canal of communication, extending obliquely between the pharynx and the anterior circumference of the tympanum. In structure it is partly fibro-cartilaginous and partly bony. It is broad and expanded at its pharyngeal extremity, and narrow and compressed at the tympanum.

The small openings of the middle ear are for the entrance and exit of the chorda tympani (a small nerve that crosses the tympanum), and for the exit of the muscles that act upon the membrana tympani and bones of the ear.

The LABYRINTH consists of a membranous and a bony portion. The bony labyrinth presents a series of cavities

which are channeled through the substance of the petrous bone. It is situated between the cavity of the tympanum and the *Auditory Nerve*. The labyrinth is divided into the *Vestibule*, *Semicircular Canals*, and *Cochlea*.

The VESTIBULE is a small, three-cornered cavity, situated immediately within the inner wall of the tympanum.

The SEMICIRCULAR CANALS are three bony passages which communicate with the vestibule, into which two of them open at both extremities, and the third at one extremity.

The COCHLEA forms the anterior portion of the labyrinth. It consists of a bony and gradually tapering canal, about one and a half inches in length, which makes two turns and a half, spirally, around a central axis, called the *modiolus*. The modiolus is large near its base, where it corresponds with the first turn of the cochlea, and diminishes in diameter toward its extremity.

The interior of the canal of the cochlea is partially divided into two passages, by means of a bony and membranous plate. At the extremity of the modiolus, the two passages communicate with each other. At the other extremity, one opens into the vestibule; the other, into the tympanum, by the foramen rotundum. The internal surface of the bony labyrinth is lined by a fibro-serous membrane.

The membranous labyrinth is smaller in size, but a perfect counterpart, with respect to form, of the bony vestibule, cochlea, and semicircular canals. Within this labyrinth are two small, elongated sacs, which are filled with a fluid.

The *auditory nerve* enters the temporal bone upon its internal surface, and divides into two branches, at the bottom of the cavity of the internal ear. These branches enter the structure of the elongated sacs and membranous labyrinth, radiating in all directions, and finally, they terminate upon the inner surface of the membrane, in minute papillæ resembling those of the retina.]

Fig. 19.

A view of the Structure of the Ear.

1. The tube that leads to the internal ear. 2. The membrana tympani. 3, 4, 5. The bones of the ear. 7. The centrai part of the labyrinth (vestibule). 8, 9, 10. The semicircular canals. 11, 12. The channels of the cochlea. 13. The auditory nerve. 14. The channel from the middle ear to the throat, (eustachian tube).

SECTION 3.

OF TASTE.

[THE chief organ of taste is the tongue; yet the palate, lips and even the upper part of the œsophagus, participate in receiving the impressions made by substances taken into the mouth. These impressions are conveyed to the brain by the nerves, and thus a perception of the quality of the taste or impression on the tongue is effected.

The tongue is a double organ, composed chiefly of muscular fibers, which run in almost every direction. The two sides are so perfectly distinct, that sometimes, in paralysis, one side is affected, while the functions of the other remain perfect. It possesses great versatility of motion, and can be molded into a great variety of shapes. In articulation, mastication and deglutition, the tongue is an auxiliary to other organs.

This organ is abundantly supplied with blood-vessels, having a large artery sent to each side of it. It is also very largely furnished with nerves; it receives nervous filaments from the fifth, ninth and twelfth pairs of nerves. The branch of the fifth, called the gustatory, is the nerve most commonly regarded as the nerve of taste, although some impute this sense to the ninth pair, while others to the twelfth pair, and still others to the concurrent action of the fifth, ninth and twelfth pairs.

The twelfth, or *hypo-glossal*, is a nerve of voluntary motion. The ninth, or *glosso-pharyngeal*, is also a nerve of voluntary motion. It serves to bring the tongue, fauces, œsophagus and larynx together, which is necessary to promote the full effect of taste.

The surface of the tongue is very thickly beset with fine papillæ, or *villi*, which give the organ a velvety appearance. These papillæ are of three varieties. The first is situated near the base of the tongue. They belong to the class of mucous follicles. They are larger than the others, and are called *lenticular*, from being shaped like a lens. These, together with the tonsils, (sometimes called the almonds of the ears), secrete mucus to lubricate the food in the act of deglutition.

The instruments of taste are the two other sets of papillæ. One set consists of small, oval-shaped bodies which are scattered over the whole surface of the tongue. They give it a rough appearance, and are called the *filiform* papillæ.

The other set of papillæ is called the *jungiform*. They are larger than the former, and consist of small, rounded heads, supported on short stalks, something in the shape of mushrooms,

from which they derive their name. In the last two described sets of sensitive papillæ, the gustatory branch of the fifth pair of nerves ramifies.]

SECTION 4.

OF SMELL.

[THE sense of SMELL is located in the membranes of the nose.

To understand fully the function of smell, it is necessary to know something of the structure of the nasal cavity and the distribution of the olfactory nerves.

The *nose* is composed of the *Bones*, *Fibro-cartilages* and *Mucous Membrane*, together with its integuments.

The *bones* of the nose are the nasal, and the nasal processes of the upper jaw.

The *fibro-cartilages* give form and stability to the framework of the nose, providing at the same time, by their elasticity, against injuries. They are five in number.

The *mucous membrane*, which lines the interior of the nose, is continuous with the skin externally, and with the lining membrane of the parts of the throat. The entrance of the nostrils is provided with numerous hairs which serve as guardians to the delicate membrane of the nose.

The *nasal fossæ*, or nostrils, are two irregular, compressed cavities, extending from the nose to the pharynx. These cavities are bounded superiorly by the sphenoid and ethmoid bones; inferiorly, by the hard palate. In the middle line they are separated from each other by a bony and fibro-cartilaginous septum; upon the outer walls of each fossa, in the dried skull, are three projecting processes, termed spongy bones. In the fresh fossa, these are covered by a mucous membrane.

The space that intervenes between the superior and middle spongy bone, is called the *superior meatus*, or channel; the space between the middle and inferior bone, is the *middle meatus;* and that between the inferior bone and the floor of the fossa, is the *inferior meatus.*

The *meatuses* are passages that extend backward, from the nostrils, into which are several openings. They are lined by a mucous membrane, called the *pituitary*, or *schneiderian*, from Schneider, who first showed that the secretion of the nasal fossæ proceeded from the mucous membrane, and not from the brain.

Upon the mucous membrane of the nasal passages, the olfactory nerve ramifies, and also a branch of other nerves.

This membrane is of considerable extent in man; and in those animals whose sense of smell is very acute, it is still more extensive.

SECTION 5.

OF TOUCH, OR THE SENSE OF FEELING.

[TOUCH is the sense by which the mind becomes acquainted with some of the properties of bodies, and enables us to determine whether their surfaces are smooth or rough, their relative temperature, and, to a certain degree, also, their form and weight.

Some physiologists make a distinction between the sense of touch and tact. Tact, or feeling, is more general, extending over the whole surface of the skin and mucous membranes, while touch exists chiefly in the fingers of man and in the noses of certain quadrupeds.

"In the exercise of these functions, tact is considered passive; as, when any part of the system comes into contact with another body, a sensation of its presence is given, without the exercise of volition. On the contrary, touch is active, and is exercised voluntarily, for the purpose of conveying to the mind a knowledge of the qualities, or properties of the surfaces of bodies; as when we feel of a piece of cloth to ascertain its qualities, or a polished surface, to prove its smoothness."

In man, the hand is admirably adapted to the exercise of touch. "The fineness of the skin, its great sensibility, the species of cushion formed by the sub-cutaneous fat at the extremities of the fingers, the length and flexibility of these organs, and the capability of opposing the thumb to the fingers, like a pair of forceps, are so many conditions essentially favorable to the delicacy of this sense, and to enable us to appreciate with exactitude the qualities of the bodies we may feel."]

CHAPTER XIV.

OF THE POWER WHICH KEEPS THE ORGANS IN MOTION; OR, THE DOCTRINE OF LIFE.

HAVING taken a concise view of the compound nature of man, both as to the materials of which he is composed, and the organs by which he is constituted; and having also briefly pointed out the different uses of many of the organs and parts that we have described; we will now turn our attention to a consideration of the power that keeps the organs in motion; which phenomenon essentially constitutes life.

We have shown that each organ of the system is charged with the performance of an office or function. Now, the performance of a function implies both an action and the power to act; as without action there could be no performance; and without power to act there could be no action. There must, therefore, be either a power invested in, or furnished to, the organs, by which they are enabled to act. It is of this power we now intend to speak, and which may be termed the *living* power, *vital* power, or power of *life*. These terms will, therefore, be used synonymously, and must always be understood as referring to that power or principle by which the vital actions are kept up and life sustained. We are not sure that we have made a choice of the best terms in the language for expressing in the clearest manner the idea of that vital force which keeps the living machine in motion; but the most careful consideration which we have been able to give the subject has elicited in our minds nothing better.

[Prof. LIEBIG, in his Organic Chemistry, in his first paragraph, says: "In the animal ovum, as well as in the seed of a plant, we recognize a certain remarkable force, the source of growth or increase of mass and reproduction, or of supply of the matter consumed; a force in a state of rest. By the action of external influences, by impregnation, by the presence of air and moisture, the condition of static equilibrium of this force is disturbed; entering into a state of motion or activity, it exhibits itself in the production of a series of forms, which, although occasionally bounded by right lines, are yet widely distinct from geometrical forms, such as we observe in crystallized minerals. This force is called the *vital force*, *vis vitæ*, or vitality."

This great chemical philosopher illustrates the existence and office of the *peculiar vital force* very happily, and some further quotations will exactly serve us here:

"The equilibrium in the chemical attractions of the constituents of our food is disturbed by the *vital principle*, and the union of its elements, so as to produce new combinations and forms, indicates a peculiar mode of attraction, and the existence of a *power distinct from all other powers of nature*, namely, the VITAL PRINCIPLE."

"The constituents of vegetable and animal substances are formed under the guidance and power of the *vital principle*, which determines the direction of their molecular attraction."

"If we assume that all the phenomena exhibited by the organism of plants, and animals, are to be ascribed to a peculiar cause, different in its manifestations from all other causes which produce motion or change of condition; if, therefore, we regard the vital force as an independent force, then in the phenomena of organic life, as in all other phenomena ascribed to the action of forces, we have the *statics* (state of rest), that is, the equilibrium determined by a *resistance* (chemical in kind), and the *dynamics* (activity), by the *vital force*. Every thing in the organism goes on under the influence of the vital force, *an immaterial agent*, which the chemist can not employ at will."

"The vital force unites in its manifestations all the peculiarities of chemical forces, and of the not less wonderful cause which we regard as the ultimate origin of electrical phenomena."

"There is nothing to prevent us from considering the *vital force* as a *peculiar property* which is possessed by certain material bodies, and becomes sensible when their elementary particles are combined in a certain arrangement or form. This supposition takes from the *vital phenomena* nothing of their wonderful peculiarity. It may, therefore, be considered as a RESTING POINT from which investigation into these phenomena, and the laws which regulate them, may be commenced; exactly as we consider the properties and laws of *light* to be dependent on a certain *luminiferous matter* or ether, which has no further connection with the laws ascertained by investigation."—LIEBIG'S *Animal Chemistry*.

"There is not, indeed," says PAINE, "in the whole range of medical literature, one author, however devoted to the physical and chemical views of life, who does not evince the necessity of admitting a governing *vital principle* as a distinct entity, distinct from all other things in nature. I say, there can not be produced one author of any consideration who does not summon to the aid of his discussion a *vital principle* whenever he touches upon the abstract principle of life."

This principle was first distinctly defined by Hippocrates, under the designation of the "*Vis Medicatrix Naturæ*," and after this great man, his no less illustrious follower, Galen, spent much time to illustrate this cardinal doctrine on which their medical superstructure rested, and which governed the medical world for more than sixteen hundred years without any material modification.

This vital principle, under the various names of "*Anima*," "*Callidum Innatum*," "*Anima Vegetans*," "*Vis Vitæ*," "*Vis Conservatrix*," "*Spiritus Archæus*," "*Vis Insita*," "*Vis Nervea*," "*Vital Force*," "*Vitality*," &c., has been honored with illustrious names from Hippocrates down to the present. Celsus, Galen, Avicena, Paracelsus, Van Helmont, Stahl, Lord Bacon, Baglivi, Glisson, Haller, Hoffman, Mulder, Fiedeman, Cullen; and Marshall Hall, Liebig and Paine of the present day.

Justice may, however, again require the remark that the author of the present work, though he recognized definitely the existence and office of this vital power, yet he inclined to the views of the matter as first set forth by Des Cartes, and afterward maintained and so successfully promulgated by Monroe and Sir Humphry Davy, who supposed that the vital principle was produced in the organic being by a certain arrangement of matter. Carpenter, Pritchard, and Lyell, the geologist, have fully espoused the doctrine of the celebrated Darwin, who imagined the existence of an universal *generative* and *vitative aura*, conjectured to be a part of the essence of the Deity himself.]

CHAPTER XV.

OF THE WASTE OF THE POWER OF LIFE.

[Now, although the vital power has been represented as superadded to the organism and performing the office of superintendent and governor of the functions of life; yet it must be obvious that there is a mutual dependence between the vital principle and the organism for their integrity respectively—that it is only a certain condition of matter that will admit of organization and of being sustained in the organic form; in other words, the vital principle can not organize and control matter in *every* form. Limits and conditions are necessary to all finite things. Thus the vital power in the generative fluid may be brought in contact with matter in the primary acts of generation in many instances, and yet no vital results may follow, because the proper conditions may not exist for such results. In the vegetable we discover that the life principle in the pollen of flowers may be brought into contact with the stigma or germinal organ, and yet conception of life does not always take place. This results also from the want of a proper condition of the materials in the stigma or vegetable uterus.

So, also, we find it the case, that even when the phenomena or functions of organic life have been established, these may, nevertheless, be interrupted, and thus disease and death have their origin.

It must be observed, also, that in the external world there are many causes of the disturbance of the conditions necessary to life. In other words, it may be remarked, that the several laws of nature are not in all respects congenial, or compatible with each other—that the chemical and mechanical laws, for instance, although subject to the vital laws, are, nevertheless, in the *extent* and *order* of their display, often inimical to life.

To *compensate* this, provisions for defense are made in the organism. This provision, in the vegetable kingdom and in the inferior animals, is found in the form of *instinct;* and in man it is reason, judgment and intelligence, by which dangers are guarded against or warded off. Still, however, there are some causes of waste to the powers of life which those provisions can not forestall. These are the *frictions* or wear of the machinery, which are not fully compensated by nutrition.]

We may also observe, that the wise Author of our existence

has so constituted the material world, that we are under the necessity of making some degree of bodily exertion, in order to procure a part of the materials by which the vital power is supported. These materials do not grow spontaneously, nor can they be cultivated ready prepared for use. Our bodies also require something to protect them from the inclemencies of the weather; to which also the Creator has superadded a sense of decency that requires us to keep them covered. He has likewise made a share of our happiness dependent upon bodily exercise.

Now, it is by the aid of the vital power that we are enabled to make the exertion necessary to procure and prepare food for our subsistence; materials to cover our bodies, for comfort and decency; and to do whatever else may be necessary for health and happiness. These exertions are the result of muscular motions or actions.

There are also internal actions carried on by the vital organs, to which they are impelled by the living power; such as respiration; the circulation of the blood and other fluids; the digestive process; the glandular secretions; the peristaltic motion, &c. Now, it must be evident that as the living power is not absolutely a self-existent power, but depends upon other matter foreign to the body which it animates, it must waste and become deficient, by the constant demand upon it to sustain both bodily or muscular, and internal, organic or vital exertion. Likewise the fact, familiar to all, that we are under the necessity of eating, drinking and breathing, to supply the call of nature and sustain life, confirms, beyond contradiction, the correctness of our proposition, that the vital power is continually wasting away. And any increased excitement of the vital organs, or of the muscular motions, exhausts still more rapidly the living power, and proportionally weakens its vital force.

The living power may also be weakened, impaired and annihilated by other means than the ordinary demands of the system. Any thing which has an enervating influence upon the body produces this effect; either by using the vital power in excess, or by exerting such an injurious influence upon a part or the whole of the living machinery, as to disqualify it for the performance of the proper functions. The use of ardent spirits, stimulating the heart and arteries in excess, without adding any thing to the living power, as food, &c., do, may be regarded as using the living power in excess, and, at the same time, impairing the tone of the organs, whereby they are rendered incapable of performing their offices.

Eating too much; drinking too much; sleeping too much; neglecting proper exercise; excessive indulgence in sensual pleasures; all produce an enervating effect upon the system,

either by exhausting the living power, or by preventing its accumulation; and ought, therefore, to be shunned as dangerous to health and life.

The passions, particularly those termed the depressing ones, and mental exertions, indulged in to excess, waste or wear out the power of life and shorten existence.

Finally, when the organs by long continued use, so far lose their tone as to be incapable of performing their functions; that is, incompetent to the task of manufacturing food, drink and air, into the proper material for supplying the ordinary waste of the living power; or of performing any other vital operation; we say, when the organs thus fail, life then ceases, and death closes the scene.

CHAPTER XVI.

OF THE WASTE OF THE SUBSTANCE OF THE ORGANS.

[THE necessity of our taking food, implies the exhaustion of the materials of our body. To inquire into the phenomena of this waste of the substance of our tissues, may be a matter of interest to the reader, as well as to afford such information as will be available to any who are seeking a knowledge of our physiological constitution.

The necessity of the waste of matter in the system, arises from another necessity—that of the generation of *force*. It may thus be remarked, that all available or active physical force displayed in the voluntary or involuntary motions of our bodies, is derived from the force of the several *affinities of the primary elements which enter into the structures*. By disturbing the static state of the chemical forces, power is generated. All the materials which have their affinities thus exhausted, become useless in the position they occupy, and must be replaced by other or fresh materials. Here, then, is the source of waste.

The waste of the materials of the body, in the generation of force, is occurring exactly on the principle, that the waste of fuel takes place in the furnace of an engine where force is thereby generated; and it must be borne in mind, that the material exhausted must be that really occupying the structures, for it is only in that position that it may be said to be in the "*furnace*." In other words, we may say, that the point in which alone the change or oxydation of material can be made available, is in the structures. This is the point in which alone the power can be directed upon the machinery of the body.

We might as well attempt to generate force in a steam engine by burning the fuel in the open air, instead of the furnace, as to expect to derive available force from our food, in any changes it undergoes, before it is brought into the proper structures.

Thus, it may again be said, we plainly discover the absolute necessity of the waste of the tissues of the body, in order to perform any function of the organs.

It is the vital principle that directs the *formulæ* for these chemical changes, according as the involuntary actions or motions of the body may require force, or as the mind may call

upon the voluntary muscles to expend force. The integrity of the tissues or their composition, is maintained by the vital principle, and when force is to be generated, it is only necessary that this guardian power should recede in its protection, and the static equilibrium of affinities will be at once disturbed by the power of the free oxygen in the fresh blood around them. The endowment of the vital principle here predicated upon, is in no degree more incredible than others in the economy, whose office we daily witness, and can not deny. Is the ground of the assumption here, near so marvelous as the phenomena themselves, which are here attempted to be explained?

Reader, reflect for a moment that you can not *act*, *move*, or even *think*, without requiring the sacrifice or destruction of a portion of your body in extent equal to such motion, whether it be of the mind or of the body. Thus we constantly *die* while we *live*, and in this we bear a complete analogy to the entire order of organic life.

The materials, after having undergone this metamorphosis, and having been neutralized by the satiety of their affinities, now require to be removed, to prevent the obstruction they would otherwise give rise to.

These materials now correspond to the ashes of a furnace—they are the results of combustion or oxydation. They are absorbed from the circulation by means, principally, of the sudorific glands, and carried off by what is called *cutaneous transpiration*, or perspiration. Mucous surfaces, especially that of the alimentary canal, also secrete from the circulation peccant or exhausted materials, and eliminate them in the dejecta.

Pulmonary transpiration corresponds to the chimney of the furnace—it gives off the smoke or carbonic acid gas, and other dephlogisticated materials.

The kidneys remove saline and acrid products of the metamorphosis, similar to, but much more acrid than, the perspirable fluid.

It would be superfluous to add here any thing relative to the importance of keeping the outlets of the system free, so as to prevent the accumulation of the exhausted materials in them, and thus to cause obstruction to the functions of the system. The consequences of such obstruction might be well compared to the effects of "*back water*" upon the wheel, or the effects of accumulated ashes in the furnace—they would stop the machinery.]

CHAPTER XVII.

OF THE MEANS OF SUPPLYING THE WASTE OF THE POWER OF LIFE.

[WHAT is proposed under this head must be already anticipated. If the power of life is dependent upon a proper supply of materials in the tissues to compensate the waste or exhaustion necessarily going on, it must be obvious that the means to afford the supply are to be found in our food and drink.

When this is digested and carried into the circulation, and thus supplied to the tissues by the ramifications of the arteries the function of nutrition will be kept up.

SECTION 1.

OF NUTRITION.

THE necessity of the continued supply of material has already been indicated. The source of this supply, i. e., our food, &c., has also been just referred to. Yet there still remains a question in the matter of nutrition that is by no means cleared up—that is: What is the precise modus operandi of nutrition?

To throw any light upon this subject, it is necessary to revert to the process of vegetation.

The vegetable stands in an inverse relation to oxygen, in its nutrition, from the animal in the same function. The vegetable collects *phlogiston*, if we may use the language of the last century. It absorbs carbonic acid and appropriates its carbon in a comparatively free state, and yields its oxygen in a similarly free state. Such is the power of vegetable life over the natural elements and chemical laws. The free carbonaceous compounds thus formed are, by the wise order of providence, exactly adapted for the nutrition of animals. The proximate principles of plants, such as *starch*, *sugar*, *fecula*, *gum*, *oil*, *gluten*, &c., are precisely such principles as the exhausted tissues of the animal body will take up with avidity.

By the action of the various acids, salts and other secreted products of animal combustion, which are now furnished by

the glandular viscera, as the liver, pancreas, and the lymphatics, the food, or ingesta, on becoming admixed with these secretions in the process of digestion and the rounds of the circulation, becomes still more fitted for ready combination with the substance of the tissues. There is no force required for this nutrition except the affinity that the several substances have for each other.

It must, however, be understood that all these processes go on under vital direction of these affinities. These latter are not by any means of a definite form, and but for vital direction they might form very anomalous combinations. Such is nutrition.]

CHAPTER XVIII.

ON ANIMAL HEAT.

ALTHOUGH we have placed the terms animal heat at the head of this chapter, we do not wish it understood that we think the heat of an animal is in any respect different from the heat of any other body. We use the term in common with other writers, merely to express the heat of animals, without designing to distinguish animal from any other heat. Its generation in the system is of vast importance to health, over which it exercises a most controlling influence. We have, therefore, devoted a chapter to its consideration.

SECTION 1.

ON THE PRODUCTION OF ANIMAL HEAT.

[IN Chapter XVI, some extended remarks were made in reference to the agency of oxygen in the metamorphosis or change of the material composing the tissues of the organs. It may here be observed, that in all these changes there are constantly modifications occurring in the relative condition of caloric, whether sensible or latent in its state. Oxygen has never been known to combine with any other element without, to some extent, affecting the temperature of the materials. It may be regarded as a rule that heat is always evolved when free oxygen combines with other elements. The example of the common combustion of wood or coal in the grate, or open air, presents us nothing more than the rapid oxydation of the material. In the animal body, it is true, oxydation never goes on so rapidly as in conflagrations in open air; yet when it is considered how great an amount of oxygen is taken into the system by the process of respiration alone, and that this is not given off again in the form as taken in —it being received as being mechanically combined with nitrogen, and given off chemically united with carbon in the form of carbonic acid gas. While it is, moreover, known that such a combination of oxygen and carbon can not take place, either *in* or *out* of the body, without the evolution of a large amount of heat, it is by no means difficult to believe that

what is called *animal heat* has its source in this phenomenon. It has, however, been objected to the agency of oxygen in the generation of the animal heat—and this objection was alleged by the author of this work—that if oxydation were the cause it would be necessary to explain why it is that the supposed point or theater of the action of oxygen upon the blood is not liable to a higher temperature than other and more remote parts of the body.

This query arises upon the supposition that this agency of oxygen is entirely displayed in the lungs, whereas this is most certainly not the case. Oxygen does combine with the blood in the lungs, as is evinced by the change it produces in the color and consistence of this fluid, which is just the same that takes place in the experiment of exposing venous blood to oxygen gas out of the body. But it must be evident that this combination is not thoroughly chemical; or, at least, it is a combination with the mass of the blood, and not one between this element and the individual constituents of the vital fluid. In the latter case, the effects must of necessity be quite different from those which do take place in the lungs.

It may be safe to suggest, that the union that occurs between the oxygen of the atmosphere and the blood in the lungs, is one of a semi-mechanical character, much like that before existing between the oxygen and the nitrogen in the atmosphere.

It is a fact, which appears self-evident, that the combination of the oxygen and carbon, forming the carbonic acid gas, takes place after the oxygen is carried by the circulation into the capillary vessels, as it is here that the peculiar evidences of this process are evinced. The blood, in this part of its passage, undegoes its remarkable change, and it is here that it acquires its dark purple color, and also the presence of carbonic acid, which is the evidence of combustion, or the chemical union of oxygen and carbon. The phenomena here evinced are further explained in the reviser's remarks in a preceding chapter.

If we trace the point or locality of the oxydation, here alleged to be the cause of the evolution of animal heat, it is found that the foregoing objection is entirely obviated; for, instead of the phenomenon occurring entirely in the lungs, it takes place throughout the system, in every tissue and organ of the entire body.

In the revolution of the blood, we find two prominent changes to occur, which might be said to take place at completely opposite points. One of these changes turns the blood into a lively red, and the other changes it to a dark or purple color; and it is the change last named that indicates the specified office of the oxygen, and not the first.

The truth is, the office of the oxygen is performed in the general metamorphosis of the tissues, as before stated. In this process we at once find an evolution of heat and force, which is the result of the same phenomenon.

This subject will be found still further illustrated by reference to a treatise on Fever in *Kost's Practice;* where it will be observed that that author has also shown that the increased temperature evolved in fever arises on the same principle here proposed.]

SECTION 2.

OF THE USE OF ANIMAL HEAT.

ANIMALS, like all other organized living bodies, require a certain portion of caloric or heat to promote their growth and sustain life; and some, both of ancient and modern times, have supposed, from the important influence which it exercises over the animal functions, that it was really the principle of life. This indeed is the theory of Dr. THOMSON, whose opinions have been so extensively disseminated in the United States. But the incorrectness of this ancient and exploded doctrine has been elsewhere shown, * and will be further occasionally noticed in the progress of this work; which will supersede the necessity of dwelling upon it here.

The most obvious uses of animal heat appear to be that of giva proper consistence to the solids and fluids of the body. A due quantity of it, attenuates the juices, and softens and gives pliancy to all the vessels of the system; by which means both the fluids and vessels are qualified for keeping up the circulation with healthful ease and regularity.—By the softening effects of heat, the sensibility of the nervous system is also augmented, and its influence over the body increased, whereby perception, both corporeal and mental, is rendered much more acute.

If a sufficiency of heat be not generated in the system, the fluids become thick and viscid; the vessels stiff and unyielding; the circulation languid and feeble; nutrition interrupted or annihilated; the removal of worn-out matter from the system deranged and checked; and a state of disease ensues. The same result will likewise follow if the heat be by any means reduced or carried off too rapidly from the system; which will take place by exposure to cold, commonly styled "catching cold."

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* See HANCE's Address and Lecture, delivered before the Botanic Society, Columbus, 1830.

Too great a reduction of animal heat also impairs the nervous influence, preventing the prompt communication of external impressions to the brain, and of the power of motion to the organs. The mental faculties are likewise by the same means impaired, and the living power deprived of its proper influence over the living machine.

To be sensible of these facts, it is only necessary for an observing person to notice his sensations with reference to these subjects, when benumbed with cold.

SECTION 3.

OF THE WASTE OF HEAT.

The matter of heat, styled in the modern nomenclature *caloric*, is an inconfinable substance, passing with more or less rapidity through all bodies according to their density, penetrating, in general, those which are most solid with more celerity than such as are more porous. Hence the matter of heat is never at rest, but is continually passing and repassing through matter, seeking an equilibrium or level; as any number of bodies in contact or near to each other, with temperatures ever so diversified, will respectively acquire the same degree of heat; the colder bodies becoming warmer, and the warmer bodies colder.

The human body is also subject to the same law; and as heat is constantly being generated in its tissues, it must also as constantly be passing off; and, indeed, for the very reason that it is thus perpetually being removed, it must be continually generated.

Animal heat is reduced in different ways, and by various causes:

1. By exposure to a medium colder than our bodies.

It is an established fact, as just observed, that heat pervades all bodies in contact alike. This property is one of its peculiar characteristics; it being so extremely subtile that it cannot be confined within any limits, or by any known substance. If we heat a rod of iron red hot, and then plunge it into cold water, it very soon imparts its heat to the water, and both become of equal temperature; the iron becoming colder, and the water warmer; or if the hot iron be laid in the open air, the effect is the same, its temperature being soon reduced to that of the atmosphere.

Just so with man, whose temperature is generally above the surrounding medium or air; he is constantly losing his heat,

and at the same time as constantly generating more to supply the waste. The quantity of heat lost in this way, is always in proportion to the coldness of the atmosphere or medium which surrounds him; and also depends, in some measure, upon the state of the skin whether tense or relaxed, dry or moist. The knowledge of these facts enables us to comprehend how a person exposed to a current of cold air, or the influence of any other cold substance, either externally or internally applied, loses his heat and becomes the subject of disease.

2. By the perspiration and its evaporation from the surface of the body.

Every fluid contains a necessary portion of what is denominated its caloric of fluidity; that is, a sufficient portion of the matter of heat combined with the fluid to keep it, at all temperatures above the freezing point, in a state of fluidity. Hence, the separation of fluids from the body carries off not only the caloric of fluidity, but also the amount of heat necessary to raise the fluids to the temperature of the body from whence they are removed.

Perspiration is thrown upon the surface, ordinarily, in the form of an impalpable vapor, denominated insensible perspiration. This matter is constantly evaporating from the skin, by which means an additional quantity of caloric or heat is removed from the system. In such climates and situations as have a temperature above the human system, this latter process of abstracting the surplus heat is indispensably necessary to existence. Dr. FRANKLIN was the first who suggested the principle upon which this cooling process depends. He illustrated his subject by comparing the human body to a kind of vessel used in some countries for cooling water. This vessel is perforated all over with a great number of minute holes, through which the water very slowly percolates, and by continual evaporation from the surface of the vessel abstracts warmth from it and from the water, which is thus made cool.

In some hot and arid countries, water is carried upon horses or camels, in bags exposed to the burning rays of a vertical sun, which, instead of warming the water, as might naturally be expected, has a contrary effect, making it cooler than it otherwise would be. These bags being made of leather, are sufficiently porous to admit the water slowly to ooze through them, by thousands of imperceptible pores, whilst the grea heat of the sun causes a rapid evaporation from the surface of the bags, which removes the heat and reduces the temperature of the water.

It is a well known fact, that water when heated to the boiling point cannot, by the fiercest or most violent boiling be made any hotter. The more intense the heat, the more rapid is the

evaporation; the vapor carrying off the additional heat as fast as it is infused into the water, and thus preventing the temperature from being increased by the most vehement fire. We adduce this philosophical fact in illustration of the proposition, that the temperature of the human body is reduced by the evaporation of the perspirable fluid from its surface.

If an evaporation could be produced from the surface of cold water, equal to that which takes place from water in the state of violent boiling, it would be almost instantly converted into ice. To be satisfied of this, we only need imagine the vast quantity of heat which must be removed from water when vehemently boiling over an intense fire, the warmth of which cannot be increased after it has arisen to the boiling heat. And thus it is with the human body when exposed to the influence of a hot atmosphere; the increased evaporation from the surface carries off the augmented heat, and prevents its too oppressive accumulation. In India, according to some writer, ice is actually produced by generating artificial cold, upon the principle of evaporation of which we have been speaking; but the means employed to cause the necessary exhalation we do not now recollect.

3. Though not in strict accordance with the subject of this section, we will advert to another cause which, if it do not waste the heat, checks its production in the system.

Excitements of every kind are necessarily followed by a proportional languor. Thus, long continued or violent exertions waste the power of life, and must always be succeeded by lassitude proportioned to the waste. The vigor of the organs is now impaired, and their functions are more feebly performed; the circulation becomes slow and languid, and the generation of heat declines; whilst the liability to suffer from exposure to cold, or to cold and dampness conjoined, is more than doubly increased. Hence, persons who have labored to exhaustion, above all others, should be careful about exposing themselves to a current of air, or of sleeping in cold and damp situations.

The exercises of the day having diminished the force or quantity of the living power, creates the necessity of rest to restore it during the night. Whilst asleep, the functions are performed in a more slow and feeble manner, or entirely cease; animal heat is less rapidly evolved; the living power accumulates; the organs recover their tone, and the whole vital energies are concentrated, ready to meet the exigencies of the coming day.

CHAPTER XIX.

OF THE PERSPIRATION.

The perspiratory excretion holds a pre-eminent influence over the integrity of the living system. A sudden check or long retention of it in the body, is sure to produce more or less serious derangement of the animal functions; and there is no disease, perhaps, in which it is not in some degree affected.

Perspiration is distinguished into sensible and insensible; but as all that makes this distinction, is the difference in quantity, it is unnecessary to take any further notice of it here.

SECTION 1.

OF THE SOURCE OF PERSPIRATION.

The perspirable fluid or sweat is secreted from the blood, which, by this process, is kept in a state of purity. Its constituent parts appear to be water, an animal gas, azotic or nitrogen gas, the subcutaneous oil and serum of the blood.

The organs which separate the perspirable fluid from the blood, are the sudorific glands, which absorb the watery poison of the blood from the capillaries or interstitials of the tissues. During the rounds of the circulation, all the blood, no doubt, in turn, is presented to the secretant vessels which separate the useless parts and remove them from the system.

SECTION 2.

OF THE USE OF PERSPIRATION.

The perspiratory process is one of immense importance to the living machine. Its principal uses are:

1. To moisten the external surface of the body. Every part of the system, the internal surfaces, and even the very substance of the organs themselves, and the external skin, require a certain degree of moisture to lubricate, soften, and qualify them for

the performance of their functions. Too great a dryness of the skin injures the *epidermis* or scarf-skin, and the terminating papillæ or ends of the nerves, which impairs, and ultimately injures the *cutis vera* or true skin.

2. To remove from the system the worn-out materials which are no longer useful; thereby cleansing and purifying the living machine; relieving it from a mass of morbid putrefactive matter, which, if retained in the system, would be an interruption to the play of its organs; a source of irritation to its fibres; an unfailing cause of disease. By this process the blood and all the other fluids are purified, and kept in a condition most conducive to sound health; and it may be justly regarded as the principal natural outlet or emunctory for the surplus matter which is continually accumulating in the blood.

3. The removal of poisonous or other irritating extraneous matter from the body, depends upon this admirably calculated function of the human system. We have heretofore pointed out the direction which every thing entering the body takes in its passage through the system. Whatever is received into the stomach passes to the intestines, and thence some of it through the lacteals and thoracic duct into the blood; whilst gaseous substances, which enter by the lungs, pass directly from these organs into the vital fluid. Hence, solid and liquid poisons usually enter the body through the mouth and stomach; and gaseous ones by the lungs. How, then, when they have thus penetrated the system, does nature expel her internal foe? If the poison be a liquid or a solid substance taken into the stomach, the irritation of the poison, or an emetic, may immediately produce vomiting, and throw it out before any part of it is sucked up by what MAGENDIE styles the venous absorption of the stomach; and thus save the system from further ill consequences. But if it be a gas taken into the lungs, or if the poison enter the circulation before vomiting takes place, it must then be removed from the system through the grand emunctories of the blood, the perspiratory organs; that is, it must pass off by perspiration. Without this most admirable provision of nature to cleanse, to purify, to drain off extraneous matter, the organs must become incommoded or impeded in their movements, as the wheel of a mill with back-water; or corroded, like the wheels of a watch with *aqua fortis*.

[4. Another important use of perspiration is to regulate the temperature of the body. It has already been shown that much heat is abstracted by the process of evaporation. It can not but have been observed by every one, how readily we find ourselves in a perspiration when the body is heated by exercise. This, therefore, is nature's method of regulating the heat of our bodies and of dissipating fevers.]

SECTION 3.

OF THE EFFECTS OF CHECKED PERSPIRATION.

We have already measurably anticipated the effects of any check given to the perspiratory function; but still, in accordance with our original design to make every thing plain, even if we should hazard the charge of repetition thereby, we shall assign a short section to its consideration.

A failure of the perspiratory organs, in any degree, to perform their functions, causes a retention in the system of matter whose presence is exceedingly injurious, which must have a strong tendency to run into putrefaction, whereby all the fluids will become contaminated; their stimulant qualities weakened; and all the secretions so necessary to keep up the vital actions of the system, will be vitiated and corrupt.

It is asserted by almost all writers who have treated upon this subject, that the greatest number of diseases to which we are liable, originate from checked perspiration; and who, after perusing what we have said respecting this important function, will not receive their testimony? Good health can never be enjoyed whilst this excretion is impaired; and hence the propriety of washings, bathings, frictions, &c., to soften and relax the skin, in which are situated the organs that separate the perspiring fluid from the blood.

CHAPTER XX.

OF HEALTH.

We are now to treat upon a subject from which, setting aside morality and religion, and those joys which are purely intellectual, most of the pleasures of existence flow. Without health, the world is little better than a gloomy solitude—a dreary waste—a tasteless scene; and though we may be surrounded by the most splendid monuments of human art—the most cheerful and consoling friends—and a profusion of every thing calculated to give a relish to existence, without health we shall find ourselves destitute of that enjoyment which their presence might otherwise inspire. Even the most luxurious beauties of nature are dimmed in the eye of the sick; the most exquisite joys of life cease to have their accustomed influence; and time, which in our healthy moments passes away almost unheeded and unknown, in sickness seems to wear out existence with its lengthened hours.

SECTION 1.

OF WHAT CONSTITUTES HEALTH.

Health, the invaluable prize and reward of a virtuous, regular, and temperate life, consists in an easy, agreeable, harmonious action of all the organs, and an exact performance of all the functions in the human system. Whilst this state of the body continues, the appetite craves a suitable supply of food; digestion is regular and easy; the blood is supplied with an appropriate quantity of chyle, which nourishes, supports, invigorates and strengthens the body. The secretions being dependent upon the quantity and quality of the blood, are healthful and abundant; all the excretions take place in suitable order, thus removing from the system the worn-out matter, and cleansing and purifying the whole body; promoting health, strength, vivacity and vigor.

The restoration and preservation of health is the great end and object of the medical art; and when we consider its vast importance to the world, we shall not wonder that it has been so much studied, though we may well be astonished that it has so little advanced. The day of its promotion, however, is dawned, and already we are permitted to bask in the beams of the morning

sun, which we trust will continue to ascend until its rays shall illumine every dark maze of disease, and enlighten the paths of the hopeless wanderers who are in the road to death.

SECTION 2.

OF THE POWER WHICH SUPPORTS OR PRESERVES HEALTH.

THE reader who has perused the preceding chapters, and become acquainted with our fundamental principles, will have anticipated our views upon this subject. It must be evident that the preserving power of health can be nothing else than the living power of the system exercising its full and wholesome influence over the vital organs, by which they are kept in a healthy condition. This power, although depending upon matter exterior to the body, may be said to act internally; conjointly with which are many causes having an influence upon health which depend upon the reasoning faculties and the influence of the will. These are, principally, a suitable degree of exercise and rest; the rational indulgence of the propensities and passions; and, in short, the due observance of temperance in every thing which can produce either a moral or physical effect upon the system.

CHAPTER XXI.

OF DISEASE.

HITHERTO we have treated of man, and considered his functions, and some of the relations of his functions, only in a state of health.

We are now to treat of a state of the system different from this, and which it is the grand object and aim of the science of medicine to change. This state of the system is termed its pathological or diseased state.

Disease, when it pervades all the organs of the system, as in fever, &c. is termed general; and when only one, or a part of the organs are effected, it is termed local or partial. Both general and local disease is termed primary or *idiopathic*, when it arises independently of any other affection; and sympathetic, when in consequence of some other complaint. When peculiar to a certain class of persons, or a certain country, diseases are said to be *endemic;* and when the same disease attacks a great number of persons at the same time, or during the same season, in a town, city, district, or country, it is said to be *epidemic.*

SECTION 1.

OF THE VARIOUS THEORIES OF DISEASE.

SINCE the earliest ages of medicine, theories have been progressively succeeding each other in the march of this science; but without materially enlarging the knowledge or improving the practice of this "divine art." Some new truths, however, have resulted from each of them, which, like "beacons on the solitudes of time," have illuminated the dark path of medical investigation. But those truths that occasionally have burst upon the world and which for a while captivated by their novelty, or beauty, have frequently been associated with so many errors and inconsistencies as often to produce even a distrust of what was really correct.

In tracing the history of medicine from the infancy of its existence down to the present moment, we find arising a succession of men whose splendid talents and glittering theories eclipsed the glory of those who had preceded them. Indeed the

history of this science is but the repetition of theories, the existence, durability, and fame of which, if we except Dr. BROWN's, depended more upon the character of their authors, than upon any intrinsic merit in themselves. But it does not comport with our present design, to trace all the various theories which have been offered to the world. CULLEN, BROWN, RUSH, and THOMSON stand most eminent as medical theorists in later times; and to these we shall principally confine our observations.

But it has been, and may very properly still be queried, what authority is there in theories? They have been made not only the sport of speculative writers, as a defence of some favorite practice, but also the stepping-stones to power for medical aspirants. It was the establishment of his own theory in opposition to that of BŒRHAAVE, that elevated CULLEN in the medical school at Edinburg; and it was by similar means, that BROWN attempted to put down CULLEN; in which he failed only for the want of more discretion. It was a succession of men eminent for their hypothetical views, that elevated the school at the Scotch metropolis and gave it pre-eminence over all the colleges of Europe; and he who will trace the history of medicine must find that literature and speculative science, instead of sound practical learning, has been the whole cause of raising the reputation of all the schools which at different times have been regarded as the models of the science in Europe. It has been truly observed, however, that "theories are but the butterflies of the day; they buzz for awhile and then expire; each however in its turn promising itself immortality." It is humiliating to the high dignity of man, and the pride of his aspiring mind, to find, after ages of laborious toil and the most critical observation, that he must still be liable to disappointment—to see the fabric which he has raised, sapped and overthrown. We are constantly called to witness medical theorists, as Dr. ROBINSON very classically observes, "arising, like Roman gladiators, on the arena of combat, to cut each other down;" or "to show that a false pathology or a corrupt practice had pervaded the system from the origin of the science."

The contradictory schemes which have been proposed as standards for medical practice, might well excite language such as Dr. BLANE has put into the mouth of medical sceptics, who, he says, allege "That the history of this pretended art in all ages, so teems with the fanciful influence of superstitious observances, the imaginary virtues of medicines; with nugatory, delusive, inefficient, and capricious practices; fallacious and sophistical reasonings, as to render it little more than a chaos of error, a tissue of deceit unworthy of admission among

the useful arts and liberal pursuits of man." * It is certainly a most melancholy consideration that the state of medical science should produce such reflections as these, and yet be forced to admit that they are just. How much indeed is it to be wished, that the deplorable condition of that science upon which our health and even life so much depends, could not sooner have been improved, and thus much earlier have been admitted to that rank which its great importance claims. In the minds of the multitude, nay even in those of exalted pretensions, it certainly has been classed very high; but what must in reality be the rank of a science which is "beset with every species of fallacy," † uncertainty and doubt.

Dr. CULLEN says, the *autocrateia*, (healing power of nature,) which in some way or other was admitted by every sect, had *corrupted* the practice of *all physicians*, from HIPPOCRATES to STAHL. And Dr. BROWN, in the preface to his Elements of Medicine, remarks that "fifteen years of his life, devoted to study, had passed away without the acquisition of any advantage, and without that which of all things is most agreeable to the mind, the light of truth; and so great, so precious a portion of the fading and short-lived age of man was lost. This led him," he says, "with many eminent men, and even with the vulgar, to deplore the healing art as altogether *uncertain* and *incomprehensible*. It was betwixt the fifteenth and twentieth years of his studies, that, like a traveler in an unknown country, wandering in the shades of night, after losing every trace of his road, a very obscure gleam of light, like that of the first break of day, dawned upon him." And can the reader believe that the dawn of true medical science first burst through the dark bewildering gloom in which it was enveloped, and illuminated the philosophical mind of Dr. JOHN BROWN? It certainly did. But many of his medicines acted contrary to the principles of his theory, which together with the fact that the medical chairs at Edinburg were held by his persecutors, had almost extinguished the feeble light before its rays could illuminate the distant horizon.

We are well aware that most authors affect to discard the theory of BROWN; but there are no practical writers that do not allow his principles to find a place in their works.

"The great and good Dr. Rush," speaking of CULLEN'S Nosology, said that it had led physicians to prescribe for the *names* of disease, instead of their proximate cause: and who, we will ask, can comprehend the terrible and frequently fatal consequences of such a perversion of science. And, notwithstanding the simplicity of his own theory, and the beneficial

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* Blane's Medical Logic, page 12. † Ibid, page 22.

effects which he no doubt anticipated would result from it, Dr. RUSH exclaims, "I am insensibly led to make an apology for the instability of the theories and *practice* of medicine.—Those physicians generally become the most eminent, who have the *soonest emancipated themselves from the* TYRANNY *of the schools of physic.*" *

Examples to the same effect might be multiplied; but the philanthropic mind sickens in contemplation of the tremendous consequences resulting to the world from the false theories and corrupt practices which have degraded medical science, and pauses to inquire if it must always remain so. Is mankind, through all time, destined to suffer under the iron scourge of learned empiricism? Are first principles unattainable in the application of medicine contrary to the other sciences? The goodness of DEITY responds a negative to these important interrogatories—the recent discoveries of Dr. THOMSON respond a negative—the experience of hundreds, nay, of thousands, in the United States, responds a negative to them also.

The theory of Dr. BROWN, from which no doubt Dr. RUSH framed his, we are disposed to regard as more rational, consistent and systematic, in its application to both the healthy and the pathological states of the system, than any which, at the time of its promulgation, had been offered to the world. And notwithstanding the powerful opposition made by CULLEN, who was then living in the full tide of his fame, and aided by the whole College Faculty of Edinburg, BROWN's principles were so well supported by rational and physiological arguments, that in a few years they spread throughout England and the most enlightened parts of the continents of both Europe and America. And it is but justice to acknowledge that our first favorable impressions of Dr. THOMSON's theory were owing to a previous acquaintance with and partiality for Dr. BROWN's. We know that both these great men have erred; BROWN is too complex, and THOMSON too simple; not that we would condemn simplicity, however, when it comes up to nature, or prolixity when it does not exceed it. Dr. THOMSON's theory is superior to BROWN's only in its more simple and successful application to practice; and we deem it but justice to those celebrated individuals, to acknowledge that their theories are the pictures whence we drew the first rude sketches of our own physiological views of life, pathological ideas of disease, and therapeutical conceptions of medicine; subjects so intimately connected and blended in this part of our work as to be scarcely separable.

Dr. CULLEN, in his system, assigns the morbid operations of the body to changes in the state of the solids, induced by

* Robinson's Lectures.

the nervous system; and to rectify those variations was, therefore, the primary object at which he aimed in the restoration of health. He held that an immaterial or vital principle superintended the laws of life, which principle he supposed to act wisely, but to be governed at the same time by the law of necessity. But here it must be obvious that he is deficient in accounting for the origin of the living principle, as well as for the means by which its influence is exerted over the nervous system or moving powers of the body; or the manner in which morbid influences control these powers.

[These doctrines, which have been denominated "*Solidism*" and "*Vitalism*," are maintained in the present day by some of the most popular writers and teachers in medicine, and they form the basis of some of the most satisfactory treatises on Therapeutics. It is unnecessary here to cite authors; but to show how prominent this feature in the present systems is, it may not be improper here to make one quotation. Prof. PAINE, in his Institutes, commences in his first paragraph as follows: "*Solidism* and *Vitalism* will form the basis of these *Institutes*. If consistent in all their parts, without a violation of facts, it is, *prima facie*, a proof of their foundation in nature. To show this consistency, and to develop the great principles and laws of organic beings, and to erect a substantial fabric of Institutes which shall guide the hand of art, we must ascend progressively, along the fundamental facts in physiology, pathology and therapeutics; till, at last, we proceed to convert the great system to practical uses, in the preservation of health, and a just, intelligible and philosophical application of the materia medica to morbid states of the body."

It must be observed, that this view will explain many complicated phenomena which occur in physiology and therapeutics, and which have always baffled those who have held opposite views. Solidism, although coupled with Vitalism by this author, is not inculcated, generally, as an essential truth.]

Dr. CULLEN's system, like almost all others, failed, at least in his hands, in its application to practice. "As a practitioner," says Dr. PARR, who was an admirer of CULLEN, "he was often feeble and indecisive; nor do his doctrines always lead to the most active and successful measures." This seems to be the natural fault of theorists, who depend more upon speculative notions than sound experience; and regulate their practice rather by theoretical rules than ascertained results of medicine.

The theory of Dr. BROWN refers disease to two causes, viz; either excess or deficiency of *stimuli*. Those which arise from an *excess* of stimuli, are said to be caused by an increase of

vigor; and those which arise from a *deficiency* of stimuli, are caused by debility or want of vigor. Diseases arising from the first cause, Dr. Brown styled *sthenic;* and from the last *asthenic;* thus dividing them into two classes, and directing his means of cure to produce contrary states of the system.

We disagree with Dr. Brown in his theory of disease, so far as to believe the distinction into two classes is unfounded in fact, and even inconsistent with his theory of life. For if we even admit that disease may be caused by an excess of vigor, that cause, the moment diseased action takes place, ceases to exist; because a vigorous and a diseased state of the system are incompatible with each other, and could not possibly occur at the same time. To say that there is an excess of vigor, is equivalent to saying that the power of life is in *excess;* a circumstance which we hold to be impossible in a state of health, and which must be much more so in disease. We perfectly agree with Brown in his theory of life, and so far in that of disease as includes the asthenic class; that is, those depending on debility, but no further.

Dr. Rush's theory of life is the same with that of Brown; and his theory of disease varies in nothing important. He considers disease as a *unit;* that is, he makes no general division of diseases, but accounts all a state of *morbid* excitement; which, like Brown, he estimates as being either excessive or deficient. His principle of cure is to equalize the excitement by stimulation or depletion, according as this may be deficient or in excess. Hence, we take the liberty of observing, that Rush's theory is essentially the theory of Brown, and the practice of both, in principle, precisely the same; whatever credit, therefore, may be ascribed to Rush for simplifying the theory, it is but justice to ascribe the origin of it to Brown. The theories of both these individuals, however appear to fall short in accounting for the cause which produces the two great classes of disease in the one theory, or the two adverse states of morbid excitement in the other; a chasm which the reader will find filled up in ours.

The recently propagated theory of Dr. Thomson, so far as respects its application to practice, we regard as coming nearer the truth than any which had preceded it. By the aid of this we have been enabled to supply some of the deficiencies of Brown, and by filling up the chasms with something of our own, and by correcting, as we humbly hope, the errors of both, we have been enabled to give the world something approaching at least towards a correct theory or system of medicine. In this, however, we have not confined ourselves to what is simply included within the term medicine;—we have gone into an investigation of those powers which operate the living machine, and of the secret cau-

ses which sap the foundations of health and life. We shall have briefly detailed the hidden impulses which are in constant operation in man, both in health and disease, from his cradle to his grave.

We are constrained to observe, that however short Dr. THOMSON's theory or practice may fall of perfection, they have certainly done more to reform the medical art than any thing else had previously done; and we cannot avoid fancying that his system will remain for ages a splendid monument to his memory, and of the superior power of genius in an untutored mind. He has, notwithstanding his many imperfections, opened the avenues which lead to the fundamental spring of true medical science, from which issues a strong and limpid stream, bearing on its bosom a healing balm for most of the maladies of man—the bounteous gifts of NATURE'S GOD.

The more the theory of Dr. THOMSON, with its rational and scientific improvements, and explanations, are studied and understood, the more their beauties will be developed and admired; and the better we shall be enabled to comprehend many of the hitherto obscure and mysterious facts in medicine, relative to the causes, effects, and cure of disease. Dr. THOMSON is justly entitled to the honor of introducing into practice the correct principle of operating upon the living power of the system, which he erroneously supposes is heat; and from his hint, or upon this foundation, (that is, the living power,) we have erected our own superstructure which we are vain enough to imagine may, with perhaps some variations, withstand the storms and tempests of time. The traveler upon a strange road is very naturally inquiring his way of those he meets; and if in the right way, each succeeding inquiry confirms his previous information and encourages him in the vigorous prosecution of his journey. Hence, we remark, that the accumulation of scientific, medical and physiological facts, instead of leading to an incessant change in practice, as false theories must necessarily do, will tend more and more to confirm a correct theory and a sound practice, by establishing them upon the immutable basis of truth. And although we do not correspond in theoretical opinions with Dr. THOMSON, yet we confidently trust that the more his system is understood, the stronger will be confirmed the true and real first principles * of this modern HIPPOCRATES—this intrepid, persevering, medical reformer—this mocker at the forms, the science, the systems, and the glory of the schools of medicine.

At one bold adventurous stroke he has scattered, like dust in the sun-beams, all former systems of medicine, of which, like

* Alluding to his doctrine, that the vital power (which he thought to be heat,) must be promoted to cure disease

"the baseless fabric of a vision" there will not, in time, be left "a wreck behind." But unlike other theorists, he first discovered a safe and simple mode of practice, and then framed a theory to correspond, as he supposed, with it: And hence his patients have not suffered as those of other medical reformers have done, by corrupting the practice to suit some favorite but false theory. For false theories, so many of them as have polluted medical science, could never, of themselves, do any injury to the sick; the bad consequences resulting from them have been caused by the attempts of physicians to adapt their practice to an erroneous theory. "And how many cruel and premature deaths, how many impaired and debilitated constitutions, have paid for the folly of theories!—follies which have almost always been fascinating. The study of a system is more easy than the investigation of nature, and in practice it seems to smooth every difficulty."

We are not disposed, however, to condemn the practice of theorising; it has its usefulness, and when employed for explaining the known operations of nature, or the effects of obvious causes, is highly useful. In the investigations of nature the reasoning mind is prone to indulge in theoretical speculations to account for what it otherwise cannot comprehend or explain. But so often have the finest wrought, and apparently consistent theories of medicine failed in their application to practice, that many physicians now affect to discard, in every form, theoretical reasoning as a basis of medical practice.—These failures may principally be attributed to two causes, viz:—the want of some correct principle, starting point, or data, to reason or theorize from; and of medicines which act in unison with theory and the laws of animal life. It was principally from the latter cause that BROWN'S theory failed in its application to practice.

The theorist who has some correct data—some certain starting point—some positive principle to guide him, may go on successfully in his investigations; but without these to reason from and guide him through the dark mazes of uncertainty which he is about to explore, his utmost advancement will only serve eventually to make the gloom more visible. The discovery of facts, which the most impenetrable darkness cannot prevent from occasionally bursting upon him, instead of serving as beacons to guide him forward in the path of investigation, only serve to admonish him that he is entering deeper and deeper into a labyrinth; and at best, can answer no other purpose than as way-marks by which he may wind his way out. Whilst he who is guided and sustained in the progress of his inquiries by established laws or principles, finds new light bursting upon him with every advance, until he arrives at the

full splendor of meridian day. When the mind is satisfied by conclusive evidence, that it has started from a tangible or perceptible point with established laws for its guide, in search of some interesting or important desideratum, it pursues the object with energy, and recurs to it with pleasure: but if it be not sustained by these encouraging considerations, the employment becomes insipid. And although so many attempts at systemizing the operations of nature have failed, we nevertheless consider the disposition of the human understanding to theorize and systemize, as a strong proof that it is the only rational method of properly understanding the phenomena of animated nature.

We attribute all things to the creative enegies of a supremely intelligent GREAT FIRST CAUSE, who, as He comprehended all things, must rationally be supposed to have operated upon some fixed immutable principle; and would consequently have established some certain rules or laws for the government of the matter which He created, under all its varying circumstances, situations, shapes, and forms. Indeed, every natural change which we see taking place in the creation, is in obedience to the laws with which GOD has endowed matter; and he who would be a correct theorist, must study those laws and understand them, or he will unquestionably be misled. Dr. THOMSON, we conceive, has given a clue which, if properly studied and pursued, will lead to a correct knowledge of the laws of animal life. The origin and perfection of a theory in so intricate and important a department as that of medical science in all its bearings, is a task of too great magnitude to be accomplished during the short-lived age of a single man. But Dr. THOMSON has done more by his discoveries than any other man of the present age, to reform the abuses of medicine, both in theory and practice; and by these we have largely profited. The theories of BROWN and RUSH have been stripped of their ambiguities, and we confidently believe the foundation is laid upon which will be built a superstructure perfect in all its parts. And we feel constrained, in this place, to lay down as a general rule for investigating the laws and operations of nature, that every fact, circumstance, and principle should be made to harmonize into a perfect system.

If the facts and principles elicited cannot be consistently systemized, we should consider it as an evidence that we either have not a knowledge of all the facts or of the true principles, or that we are reasoning falsely from correct data.

Dr. THOMSON'S theory is briefly this;—That *life is heat;* and *cold is death:* or in other words, that heat is the vital principle which keeps the organs in motion; which was also a common belief amongst the ancients, and may likewise be found in

some respectable modern works.* He regards food as the fuel—the stomach as the fire-place—and digestion as the process which consumes the fuel, by which means the *fire* is kept up and the whole body warmed, just as the room or house is warmed, by the fuel consumed in the fire-place: And hence he argues, that the more food well digested in the stomach, the more heat and nourishment throughout the system. He considers disease as being caused by cold or a failure in the necessary supply of heat, which produces obstruction in the system. In other words, he compares disease to a *battle* between *heat* and *cold;* heat being the principle of life, and cold the principle of death. Consequently, if the heat be victorious, health will be restored; but if cold prevail, death is the certain result. His practice, therefore, is to direct his remedies to produce a state of the system adverse to death; or in other language, to assist the heat to overpower the cold.

As we feel no disposition to enter into any controversy in this place, we forbear pointing out the defects of Dr. THOMSON's theory; but shall leave these as well as our own theory, for the reader to glean from the physiological observations throughout this part of the work, and to a brief recapitulation which will be found at the conclusion.

SECTION 2.

OF THE CAUSE OF DISEASE.

OUR theory admits of referring disease to but *one proximate cause*, viz: *diminished energy of the vital force or power of life.*

No pathologist, if we except Dr. THOMSON, has heretofore reduced the cause of all diseases to a single point. Dr. BROWN referred them to two causes, the one being in direct opposition to the other; whilst RUSH seemed to approach something nearer to our own views; but then again in prescribing the mode of treatment, his theory resolved itself into the same principles with BROWN. Dr. RUSH called disease an *unit;* it was morbid excitement, and so far he might be esteemed as correct. He regarded the excitement as being sometimes deficient; so far correct; sometimes in excess; here his theory virtually and in fact, became BROWN's.

Disease may be produced by a great many *remote* or *predisposing* causes; but the knowledge of these does not always af-

* See TOURTUELLE's Principles of Health. Dr. Cullen also approaches this doctrine.

ford the true indications of cure, and is, therefore, of less value, excepting to enable us to guard against their future influence. [Yet while the remote or predisposing cause of disease affords no sure or conclusive indications of cure, they should never be overlooked: a bad habit of the system, as a tendency to scrofula or to tubercles; a disposition of the tissues to take on inflammation, as in some cases of erysipelas, &c.; or, on the other hand, habits of intemperance, &c., all serve to unfold the diagnosis, and to suggest the remedial course to be pursued.]

The remote causes are those that produce the proximate cause, which is the same in all cases. Remote causes may also be called exciting causes, as they are the agents which excite the disease. Amongst these may be enumerated great bodily fatigue or violent muscular exertion; want of natural rest; severe evacuations; intemperance in eating or drinking; long fasting; too close application to study; excessive grief, fear or anxiety; unwholesome diet; breathing an impure air; the application of poisonous matter to the body, either in a gaseous, vaporous, liquid, or solid, state &c. &c. The effects of these agents and circumstances are uniformly the same, only varying in degree; that is, if they amount to the production of disease, they do it by diminishing the energy of the vital force; they debilitate and depress the living power that keeps the organs in healthy motion.

A vitiated atmosphere either does not afford a sufficient stimulus to the blood, or imparts something deleterious to it: and hence the origin of epidemics. The application of cold to the body appears powerfully to reduce the vital force, and is a most common and prolific source of disease. In short, whatever ha a tendency to enervate the body or weaken its powers, necessarily diminishes the vital or living energy, and gives rise to every complaint to which human nature is liable; varying its effects according to the predisposition, habits of life, peculiar employment, or the *idiosyncrasy* of the individual.

SECTION 3.

OF THE TRUE DEFINITION OF DISEASE.

The task which we have here imposed upon ourselves, the reader may perhaps think insipid, visionary, uninteresting, or useless. He may also, in the end, think it only a repetition in substance of the preceding section. But we trust, however, that if we do not convey any new ideas by this discussion, we may present old ones in a different view. We shall at least have the privilege of making some remarks which the caption of the preceding section seemed to render improper to introduce

there, and by these means increase the rational evidences of the correctness of our physiological theory or system of medicine. Perhaps we may also excite some interest in the minds of those who are disposed to investigate the science of medicine, especially that part of it termed pathology or the doctrine of disease. The pathological state of the system has furnished a fruitful theme for the mind and the pen, since the first origin of medicine.

But what is disease? that formidable enemy to man—that many headed monster—that insidious serpentine foe—that fell destroyer (without respect to age, sex, or circumstances) of the human family, which shows itself under so many different appearances and names; and which, under all its different aspects and transformations, deceives the "very elect;" that is, those who have elected *themselves** to the exclusive responsibility of detecting and destroying the deceptive, wily enemy of the health of mortal man.

It may be inferred that this enemy is not health; but this answers not the inquiry. Every person knows that disease is "*any alteration* from a state of perfect health:" and yet, singular as it may appear, this is perhaps as good a definition as has hitherto been given in the professed works of science. We are often called, in those publications, to witness a formidable array of names, causes, symptoms, forms, and effects of diseases, and to trace them through all the various parts, tissues and organs, from those which terminate in health aided by the simple powers of nature alone, to those which, in defiance of medicine, terminate in death. But all this does not explain to us the real nature or essential character of that monster which, under so many different characters and disguised names, is liable every moment to sap the foundations of health and human life.

All agree, however, both learned and unlearned, in conferring upon this insidious foe, under all its different characters and names, one general appellation by which they distinguish it under all its different forms and transformations; which general appellation is DISEASE. And if physicians could fully divest themselves of their prejudices, they would be enabled to

* For this sentiment we would refer the reader to the laws of every State and Nation in which the Faculty could succeed in procuring their enactment, which secure to them the exclusive prerogative of practicing the healing art. It is certainly an impeachment of both the professional and moral character of the profession thus to entrench themselves behind the bulwarks of the law, instead of meeting their competitors on the open field of fair and honorable competition. We may add, however, that since the publication of the former edition of this work, the legislature of this state (Ohio) has, by an act of magnanimous independence, repealed the oppressive medical laws.

contemplate disease, under all its various and apparently contradictory modifications, as essentially the same. We learned, when in our youth, from the writings of Dr. BUCHAN, that he did not regard disease as being composed of a single symptom, but as an assemblage of variously differing symptoms; and that the same symptoms, in modified forms, attend many different complaints:—That the different names given to disease generally originate from some one or more of the most prominent symptoms. Thus, when heat, violent agitation or motion of the blood, head-ache, &c., predominate, the disease is called fever; which is again distinguished, by peculiar symptoms, into different kinds of fever; and so of many other complaints. These different symptoms are only to be separately regarded as the evidence of a more severe suffering or affection of particular organs, than of other parts of the system. Hence, when a cause sufficient to produce disease is present, the malady will assume such a character as the peculiar state of the organs, or the idiosyncrasy of the person may chance to give it. It might also be observed, that different deleterious substances, when applied to the living organs, produce peculiar and different effects. This may be owing to the nature or composition of the different tissues making them more susceptible of morbid impressions from one substance than from another. It is well known, at least, that the application of particular deleterious substances to the animal organs, produces the same general effects in similar organs of every individual; though the effects may, and commonly do, vary in their details. Hence the origin of all contagious and epidemic complaints.

And however a malady may affect any particular organ or set of organs, or the whole system, it must be produced by a diminished energy of those "powers" alluded to by Dr. BROWN; the continual application of which is indispensably necessary to keep up a healthy action of all the organs, and thus preserve the living state. *Symptoms* are nothing more than the *effects* of disease, and not the disease itself: they are the *evidences* of a diseased state of the system.

We now think the reader will be able to perceive that disease is, in reality, synonymous with its cause—*diminished energy of that power* which, as we have previously shown, *sustains and preserves life.*

SECTION 4.

OF THE EFFECTS OF DISEASE, PARTIAL AND ULTIMATE.

The first sensible effects of disease generally are, lassitude, weariness, debility, mental despondency, confusion of ideas, pains in some parts of the body, pulse slow and feeble; often a general torpor or lethargy: sometimes restlessness or great anxiety; mental imbecility or perfect insanity; any or all of which symptoms are certain indications of the diminished energy of the power of life. And as this power continues to diminish, some one or more of the attendant symptoms become aggravated: though sometimes at the very onset they are at their height. Such attacks are always attended with a corresponding prostration of the vital power, and a proportionate degree of danger.

The living power continuing to decline, causes the functions to become still more irregular; the secretions are commonly more or less diminished; the excretions are generally impaired, though some of them may be accelerated; the organs lose more and more their tone; all of which diminishes still further and faster the living power of the system. These may be regarded as the partial effects of disease: they are the symptoms or evidences of its existence, and of the organ or organs affected by it; of the nature of the affection; and of the violence or mildness of it. Hence we become sensible of the too common error of prescribing for the *name*, that is, the *effect*, instead of the *cause* of disease.

If the power of nature fails, and the virtue of medicine proves unavailing, the vital force becomes weaker and weaker; the tone of the organs more and more impaired; the living functions languish; the flame of life grows feeble and dim; the extremities become cold and rigid; the eyes fixed in their sockets; the vital organs become incapable of performing their office, and the power of life is worn out—exhausted—annihilated,—and death, the ultimate effect of disease, closes the scene!

CHAPTER XXII.

OF MEDICINE.

The state of the system which constituted the subject of the preceding chapter, indicates the necessity of something to repair the wasted energies of life, and restore the tone of the enfeebled organs. And it seems almost instinctive in man, as in many of the inferior animals, to seize upon and appropriate some of the productions of nature to this purpose.

There is nothing of a sublunary nature in which man is more deeply interested than in the knowledge of the best means which a beneficent Creator has furnished for the restoration of his creatures' health. But how far the popular practitioners of medicine, of the present or preceding ages, have been acquainted with those means, is a matter of both interesting and profitable inquiry.

Substances properly termed medicines, must act in unison and harmony with the laws of nature or animal life. This seems such a self-evident proposition, that it is greatly to be wondered how physicians could have been led to adopt ideas so much at variance with it. For it is a generally received opinion, not only by physicians but by the bulk of mankind, that whatever possesses not the power of doing much harm, can do but little good. In other words, what possesses the power, in a high degree, of restoring health, also possesses in a proportionate degree the power of destroying life! Or, to make the idea still plainer, if need be, the most powerful medicines are the most powerful poisons.

The learned and highly gifted Dr. S. Robinson, says of *medical poisons*, "It would seem a solecism in language, the bare combination of these terms; but such is the fact—poisons, the most violent and destructive, have been denominated the most valuable medicines."

It is indeed a sorrowful truth, that the most active and potent articles used by the Faculty as medicines, and upon which they place their principal reliance, are known and acknowledged to be, in an eminent degree, destructive to life—subversive of the very laws which they are intended to promote. How such substances as these could ever obtain credit as medicines, seems to be among the anomalies of human nature, and bids defiance alike to reason and the dictates of prudence and common sense.

* The term Faculty is, by this author, intended to represent the old school of physicians only.

Dr. THOMSON first submitted to the world the self-evident proposition, that food and medicine must harmonize with each other. They often, says he, "grow in the same field, and may be gathered by the same hand." There must be a perfect correspondency and congruity between food and medicine, as both are intended alike to have a beneficial and healthy influence upon the system—the one to continue a healthy action, the other to restore it when lost; but both, on the same principle or by the same mode of action—food by constantly supplying its portion of the living power in health, and medicine by furnishing the same in disease.

It is too inconsistent for belief, "that life and death can spring from the same source;" or in other words, "that the poison which destroys health, can restore it." Health and disease, and even the whole catalogue of diseases, only comprise a difference in the force of the living power, and a different condition of the organs upon which this power acts. How absurd then, when the living power is weakened and the tone of the organs impaired, to administer such articles as are known to produce the same effects upon the healthy system, and which must, in disease, increase the very disorders they are intended to counteract!

A correct knowledge of proper medicinal substances can only be learned from experience and a close observation of nature. The opportunities for drawing lessons of instruction from both these sources, and the qualification for profiting thereby, were eminently enjoyed by Dr. THOMSON; and unborn milions will yet have cause to bless that Providence which raised him up and sustained him in a most arduous struggle to establish his improvements in the world. When his enemies and persecutors shall have been long mouldered into dust, and their names and memories eternally forgotten, the name of SAMUEL THOMSON shall "stand as a splendid beacon on the solitudes of time, to point the traveler the road to glory."

It will be readily perceived that our indications of cure will lead to the general employment of stimulants and tonics, which must be of a nature readily to be assimilated or converted into the same material with the organs which they are intended to affect, or upon which they are designed to act; otherwise their influence is not in harmony with the laws which govern animal life. Hence, we think it obvious that remedial agents must be mostly drawn from the *vegetable* kingdom, because no mineral substance, however it may have been changed by the labor of the chemist, can be assimilated by the living organs. Admitting these ideas (and we think few will deny them), what becomes of the boasted discoveries and remedies of the famous PARACELSUS, who first applied chemistry to develop the remedial resour-

ces of the mineral kingdom. He, to be sure, is *now* denounced as a miserable quack; but it cannot be denied that he was the author of medical chimistry, the value and success of which is now so highly appreciated by the medical Faculty. And what is the result of all the pretended improvements of mineral preparations which have been so perseveringly studied since the days of PARACELSUS, by the wisest and best of men? Nothing but refinements in error; improvements of the means which have, from that day to this, interrupted the march of true medical science.

It is not denied that the vegetable kingdom furnishes some of the most potent and terrible poisons with which we are acquainted; but we are under no more necessity of employing these for medicine than we are for food. The rich stores of nature furnish a great variety of vegetable matter, only a small portion of which is proper for food; and that is such as experience has taught us is agreeable to nature or the laws of health and life. The same may be said of medicine; and ought long ago to have been enforced upon its students, and upon mankind, with imperishable emphasis. But simple and self-evident as is this proposition, it was reserved for Dr. THOMSON, and our own day, to declare that poisons, in every form, and under all circumstances, are improper remedies, because they are deleterious to health and life. It had escaped the cunning of the wise; the penetration of the profound; the researches of the learned; and the wisdom of philosophers, for four thousand years, but to manifest itself to an illiterate student of NATURE; as almost all other great and important facts have come to the world through similar channels.

The fact that the vegetable world furnishes some of the most active and fatal poisons, will, according to the old school physicians, supply us with strong evidence in favor of it. Nothing but vegetable matter, or the product of it, can be assimilated; that is, made to answer the purposes of nourishment. It inherently possesses an active principle by which it produces its effects whether good or bad; and if it furnishes the most active poisons, it should also, by old school reasoning, yield the most active medicines. Because, as has been observed of *antimony*, by Dr COXE, "all the metallic preparations are uncertain, as it depends entirely upon the *state of the stomach*, whether they have no action at all, or operate with dangerous violence." The same remarks apply with equal force to all the metals, as they possess no power of action in themselves, but depend upon the *state* of the organs. On the other hand, vegetables possess a principle in themselves, by which they are always capable of producing an effect upon the system. And no instance, per-

haps, has ever been recorded, in which the application of vegetables, whether as medicines or poisons, did not produce their peculiar and specific effects, unless they were impaired by age or from other causes.

We repeat again, that the vegetable kingdom furnishes, either directly or indirectly, all our food; and why not all our medicine? Or did a beneficent CREATOR place the means of sustaining our bodies in health, upon the surface of the earth within our immediate grasp, and the means of restoring our health when sick, within its bowels? Impossible! The goodness of DEITY could not do this—could not suffer this! So it follows, that whether we consult the nature of man, of disease, or of DEITY, the evidence and the result are irresistible that the vegetable kingdom furnishes the proper remedies for relieving our maladies.

The subject of this chapter will now be examined more in detail. And we hope to be pardoned for again referring to repetitions, and asking the reader's indulgence for any thing of this nature which might be thought censurable. It seems necessary in new works, which treat subjects in an unusual manner, or which embrace principles not generally admitted to take every opportunity of exhibiting facts and arguments in every way and form that have a tendency to produce conviction in the mind of the reader.

SECTION 1.

OF THE MEDICINES USED BY THE MEDICAL FACULTY.

THE materia medica, as it is technically styled, has been destined to undergo as many revolutions as the theories of medicine have done; and has more often been attempted to be pruned of useless, inefficient articles; whilst others of more destructive character or dangerous powers, have been added to it.

Various writers have taken much pains to contrive what each conceived to be the most suitable arrangement of the articles composing the materia medica. Some have classed them according to their natural resemblance; others according to their real or supposed virtues; others according to their active constituent principles; whilst others have arranged them in alphabetical order. Each of these arrangements has its peculiar advantage as well as defect; but as we claim no affinity with them in practice, we shall pass as lightly as possible over this subject.

The articles composing the materia medica have been arranged, by MURRAY, as follows, viz :—

A. General stimulants.
   - a. Diffusible.
     - Narcotics,
     - Antispasmodics.
   - b. Permanent.
     - Tonics,
     - Astringents.

B. Local stimulants.
   - Emetics,
   - Cathartics,
   - Emmenagogues,
   - Diuretics,
   - Diaphoretics,
   - Expectorants,
   - Sialagogues,
   - Errhines,
   - Epispastics.

C. Chimical remedies.
   - Refrigerants,
   - Antacids,
   - Lithontriptics,
   - Escharotics.

D. Mechanical remedies.
   - Anthelmintics,
   - Demulcents,
   - Diluents,
   - Emollients.

In these different classes is included upwards of two hundred articles; amongst which, from sixty to eighty are accounted *poisonous*. In the whole number, however, not more than forty or fifty, it is affirmed by Dr. EWELL, are needed in practice; though others enumerate eighty or a hundred, and some still more. But of the lowest number mentioned, but little over half, perhaps, are in constant daily use. The chief of these are—

Of the class of Diffusible Stimulants—Brandy, Ether, Camphor, Opium, Hemlock or Cicuta, Digitalis or Foxglove, &c.

Of the Permanent Stimulants, are ranked as Tonics—Mercury or Quicksilver, Iron, Zinc, Copper, Arsenic, Cinchona or Peruvian bark, Columbo root, Gentian root, &c.

Of those ranked as Astringents—Oak bark, Tormentil, Kino, &c.; also, Lead, Zinc, Copper, Iron, &c.

Of the class of Emetics—Ipecacuanha, and Emetic Tartar.

Of the class of Cathartics—Calomel, Jalap, Aloes, Gamboge, Rhubarb, Senna, Castor oil, Salts, &c.

Of Emmenagogues—Castor, Iron, Mercury, Bark, &c.

Of the class of Diuretics—Potash, and its different preparations, Digitalis, Squills, Cantharides or Spanish flies, &c.

The remaining classes comprehend many of the articles just

named, as well as others which it is deemed unnecessary to enumerate.

SECTION 2.

OF THE EFFECTS OF SOME OF THE FOREGOING MEDICINES ON THE ANIMAL ECONOMY.

Having exhibited a method of classifying medicines which, from its simplicity, is perhaps most popular, and enumerated some of the articles embraced in a few of these classes, merely for the purpose of giving the common reader a brief idea of the language and arrangements of the fashionable works on the materia medica, we now turn our attention to the consideration of the effects which some of them produce upon the human system. In doing this we shall confine ourselves to such as are known to be most dangerous; without wishing to be understood, however, as believing that every article of the materia medica possesses dangerous powers, or condemning all as useless or inert. Many articles, especially of the classes of tonics and astringents, are safe and valuable medicines; but it cannot be so said of all.

It is desirable that mankind, even if they persist in using, by direction of physicians, the different popular preparations of Antimony, Arsenic, Foxglove, Hemlock, Nightshade, Nitre, Opium, Quicksilver, &c. should understand the true nature and effects of those poisonous drugs; and then if they become sufferers thereby they may be sensible of the cause of their calamity. By the symptoms arising from the accidental or intentional taking of any of those articles, whether as a medicine or for self-destruction, (which will hereafter be detailed,) most persons of observation may determine with considerable certainty, what kind of poison has been administered or taken. The general mode of treatment will be found in a succeeding part of the work.

It is also worthy of special remark, that many articles used in the old practice of medicine, although they may scarcely be regarded as poisonous, act in so partial a manner upon the system as to be often attended with danger. Thus we see that certain remedies act harshly upon the stomach, or upon the intestines; others are supposed to act specifically upon the liver; others upon the absorbent system; others upon the blood-vessels or circulatory system; others upon the kidneys; others upon the skin; and others upon the uterine system. Now, it is well known that in certain conditions of some of these organs, many medicines, which otherwise might be administered with safety, are highly dangerous and even fatal.

Our remarks apply with still greater propriety to such articles as are acknowledged to be poisonous. And how often have physicians been heard to lament the impropriety of administering the best medicines to remove the principal malady, because some peculiar affection or circumstance indicated that dangerous or even fatal consequences might result from it; an unerring evidence that the remedy would act contrary to the laws of nature in that case, and therefore improper or unsafe in all others. The remedies of Nature's own providing, act upon general beneficial principles; and the best medicine which the peculiar symptoms of any case indicate, may be administered with confidence, because there need be no fear of doing harm. The medicine which is not a *friend* to the system in the *worst* case of disease, must be an *enemy* to it in *all*. And how it ever entered the minds of physicians that such articles as we are about turning our attention to, could be useful as medicines, is beyond conception, and affords but an additional example of the proneness of the human heart to err in despite of reason and common sense.

Antimony. This metal is procured from mines in Hungary, Transylvania, Germany, France and England. Tradition says, that Basil Valentine, a German monk, gave it to some hogs, which, after purging, it very much fattened; and thinking it might produce the same effect on man, gave it to his brother monks, who all died in the experiment; whence the name, *antimony*, is derived from *anti-monk*.

"The antimonial metal," says Dr. Thacher, "is a medicine of the greatest power of any known substance; a quantity too minute to be sensible in the most delicate balance, is capable of producing violent effects, if taken dissolved or in a soluble state." [*Dispensatory, p.* 392.] But, notwithstanding its extraordinary powers, a vast amount of it is used as medicine; particularly in the forms of James' Powders, and Emetic Tartar.

The baneful effects of antimony in its crude or metallic state, have not, to our recollection, been detailed by any author whose works we have perused, or had access to; but those attending the exhibition of tartar emetic, the most common form of its administration, have more frequently been noticed.

For children, emetic tartar is unsafe; "when great debility of the system is present, even a small dose has been known to prove fatal." "As an emetic, it is chiefly given in the beginning of fevers and febrile diseases; but when great debility is present, and in the advanced stages of typhoid fever, its use is improper, and even sometimes fatal." "In larger doses, this salt is capable of acting as a violent poison." [*Hooper's Dictionary*—Art. "*Antimonium Tartarizatum.*"]

Dr. Robinson says, "Tartar emetic, as has been found after

death, produces the most deleterious effects upon the stomach; and yet is given to remove disease, and called an excellent remedy; but it is now denounced by those who are disposed to purge the materia medica,—as may be seen in the Transactions of the Royal Society, for 1811–'12." Tartar emetic even externally applied, produces powerful effects. By its corrosive qualities it destroys warts if applied to them in powder or dissolved in water. Another property which it also has, when rubbed on the skin, is that of producing a crop of pustules very like to the small pox; and with this view it is used for rheumatism, white swelling, &c.

"The preparations of antimony," says ORFILA, "are often administered carelessly, because no danger is thought to attend their use. Experience, however, proves that tartar emetic, if it does not excite vomiting, may produce death when given in the quantity of a few grains: instances, indeed, have occurred, in which an extreme prostration and debility have succeeded the administration of a *single grain* of this poison, when it has occasioned no evacuation. Sometimes, on the contrary, and particularly in infants, it excites vomiting so copious and painful, as to require an immediate arrest." "Mixed with lard and other substances," says the same author, "and applied as an irritant to the surface of the body, tartar may produce poisoning and death!"

To show the great uncertainty and danger attending the employment, not only of antimony, but of all other metallic medicines, we will introduce, before leaving this subject, the following quotation from COXE's Dispensatory, 3d edition, page 171: "All the metallic preparations are uncertain, as it entirely depends on the state of the stomach, whether they have no action at all, or operate with dangerous violence."

ARSENIC. This destructive metal exists in great abundance in the mineral kingdom, combined with almost all the other metals. It is found principally in Italy, Hungary, Germany, and the United States. In the town of Warwick, New York, there is a huge vein of this metal in a mountain range, sufficient, it is said by a traveler, to poison the whole world. It exists here in that condition or state of combination, termed arsenical pyrites, or arsenical iron. *See Hooper's Dictionary*, Art. "*Arsenic*."

Arsenic is used in various arts, as well as in medicine, being prepared in a variety of different ways. The presence of arsenic in iron, in a very small proportion, has a very pernicious effect, rendering the iron brittle when at a red heat. The preparation of arsenic which most frequently proves destructive to human life, is denominated, in the modern nomenclature, arsenious acid.

Arsenious Acid, also called white arsenic, and by the chemists, *oxide* of arsenic, but more commonly known by the name of ratsbane, acts upon the human system as a deadly poison, in quantities so minute as to be insensible to the taste when diffused in water or other vehicles, by which it has often been given with criminal intentions and most fatal effects.

Arsenic has long been used externally in the treatment of cancerous affections in the form of plasters and powder; and in either way is a burning, pungent caustic, possessing very dangerous powers. "Arsenic," says Thacher, "has long been known to be the basis of the celebrated cancer powder. It has been sprinkled in substance upon the ulcer; but this method of using it is excessively painful and extremely dangerous; fatal effects have been produced by its absorption. This fact I have known in several instances, when Davidson's agents, and others, have undertaken to draw out cancers, when the patient would absorb enough of this poison, which seating upon the lungs, caused death by consumption, in the course of one year."

Arsenic has been much used in this country, in agues or intermittent fevers, under the name of Fowler's solution, or Ague drops; and also, according to the testimony of Dr. Duncan, in Great Britain. And "though the most *violent* of mineral *poisons*, arsenic, according to Murray, equals, when *properly* administered, the *first* medicines in the class of *tonics*." "Such are the powers of this medicine, that two grains of it are often sufficient to cure an intermittent that has continued for weeks." [*Thacher.*] But let the intolerable morbid feelings; the shocking depression of spirits; the more or less serious affections of the lungs; and the many other aches and pains, tell at what expense such cures have been often purchased.

So deadly is the effect of arsenic, that "in mines it causes the destruction of numbers who explore them;" and "the fumes are so deleterious to the lungs, that the artist ought to be on his guard to prevent their inhalation by the mouth; for if they be mixed and swallowed with the saliva, effects will take place similar to those which follow its introduction into the stomach in its saline or solid state; namely, a sensation of a piercing, gnawing, and burning kind, accompanied with an acute pain in the stomach and intestines which are violently contorted; convulsive vomiting; insatiable thirst, from the parched and rough state of the tongue and throat. Hickup, palpitation of the heart, and a deadly oppression of the breast, succeed next; the matter ejected by the mouth as well as the stools, exhibiting a black, fœtid, and putrid appearance; at length, with the mortification of the bowels, the pain subsides, and death terminates the sufferings of the patient."

"Arsenious sulphurets," says Coxe, "are much used by pain-

ters, but these advantages are not able to compensate for its bad effects." "The property which it possesses of being soluble in water, increases and facilitates its destructive power; and it ought to be proscribed in commerce, by the strict law which prohibits the sale of poisons to unknown persons. Arsenious acid is every day the instrument by which victims are sacrificed, either by the hand of wickedness or imprudence. It is often mistaken for sugar; and these mistakes are attended with the most dreadful consequences. The symptoms which characterize this poison are, a great constriction of the throat; the teeth set on edge; and the mouth strongly heated; an involuntary spitting, with extreme pains in the stomach, vomiting of glareous and bloody matter, with cold sweats and convulsions.

"On dissection, the stomach and bowels are found to be inflamed, gangrenous, eroded, and the blood is fluid. Soon after death, livid spots appear on the surface of the body, the nails become blue, and often fall off along with the hair, the epidermis separates, and the whole body becomes speedily putrid. When the quantity is so very small as not to prove fatal, tremors, palsies, and lingering hectics succeed."

"The symptoms produced by a dangerous dose of arsenic," says Dr. Black, "begin to appear in a quarter of an hour, or not much longer, after it is taken. First—sickness and great distress at stomach, soon followed by thirst, and burning heat in the bowels. Then come on violent vomiting and severe colic pains, and excessive and painful purging. This brings on faintings with cold sweats, and other signs of great debility. To this succeed painful cramps, and contractions of the legs and thighs, and extreme weakness, and death." "Similar results," adds Dr. Akerly, "have followed the incautious sprinkling of scirrous ulcers with powdered arsenic, or the application of arsenical plasters."

Orfila, in his work on poisons, describes the symptoms which follow the taking of this powerful poison somewhat more in detail; though it is not to be understood that the whole of them are to be met with at the same time, in the same subject. His account is as follows: "An austere taste in the mouth; frequent *ptyalism;* continued spitting; constriction of the *pharynx* and *œsophagus;* teeth set on edge; hickups; nausea; vomiting of brown or bloody matter; anxiety; frequent fainting fits; burning heat at the *præcordia;* inflammation of the lips, tongue, palate, throat, stomach; acute pain of stomach, rendering the mildest drinks intolerable; black stools of an indescribable fœtor; pulse frequent, oppressed, and irregular, sometimes slow and unequal; palpitation of the heart; *syncope;* inextinguishable thirst; burning sensation over the whole body, resembling a consuming fire; at times an icy coldness; difficult respiration; cold sweats;

scanty urine, of a red or bloody appearance; altered expression of countenance; a livid circle round the eye-lids, swelling and itching of the whole body, which becomes covered with livid spots, or with a miliary eruption; prostration of strength; loss of feeling, especially in the hands and feet; delirium, convulsions, sometimes accompanied with an insupportable priapism; loss of hair, separation of the epidermis; horrible convulsions, and death!"

"Many attempts have been made to introduce arsenic into medical practice; but as it is known to be one of the most violent poisons, it is probable that the fear of its bad effects may *deprive* society of the *advantages* it might afford in this way." Experience has, however, taught us that these "attempts" have been but too successful in introducing this demoniac article into medicine; and many, as might rationally have been anticipated, have fallen victims to this destructive mineral;—nay to that reprehensible, inconsistent and diabolical infatuation which has led physicians to the erroneous and life-destroying conclusion, that any substance known to be a potent poison, must likewise be a powerful medicine. It seems impossible that a rational being, in his sober senses, could, by any process of reasoning, arrive at such a fatal conclusion; and the most charitable apology that can be offered for this destructive paradox is, that physicians, in some inauspicious moment, adopted a wrong and perverse theory.

Copper—*Cuprum;* so named from the Island of Cyprus, whence it was formerly brought. This metal abounds in considerable quantity; and is found in the greatest abundance in England, Sweden, Spain, and North and South America. It is used in the manufacture of a variety of cooking utensils; and, from its poisonous quality, has often been known to produce death. "Great care," says Thacher, "ought to be taken that acid liquors, or even water designed for internal use, be not suffered to stand long in vessels made of copper; otherwise they will dissolve so much of it, as will give them very dangerous properties."

Brass, which is an alloy of copper and zinc, is also liable, though in a less degree, to the same objection as copper, and is much employed in the manufacture of cooking utensils. The best brass is composed of four parts of copper and one of zinc.

The effects of copper "when taken into the stomach, are highly deleterious and often fatal. It particularly affects the primæ viæ, exciting excessive nausea, vomiting, colic pains, and purging, sometimes of blood, or, though more rarely, obstinate constipation. It also produces agitation of the mind, headache, vertigo, delirium; renders the pulse small and weak, the countenance pale, and causes fainting, convulsions, paralysis, and apoplexy."—[*Thacher.*]

"Verdigris, and other preparations of copper, act as virulent poisons, when introduced in very small quantities into the stomachs of animals. A few grains are sufficient for this effect. Death is commonly preceded by very decided nervous disorders, such as convulsive movements, tetanus, general insensibility, or a palsy of the lower extremities."—[*Hooper.*]

"But although copper be thus dangerous, some preparations of it are in certain cases used with great advantage, both internally and externally."—[*Thacher.*] Internally, it is used as a *tonic*, and externally, as a *caustic*.

Mercury—*Quicksilver*. This metal or the ores which contain it, abound most plentifully in China, Hungary, Spain, and South America; and of all the metals employed as medicine, is the one most extensively used; "there being scarcely a disease against which some of its preparations are not exhibited."

Mercury is frequently found in the earth in a fluid form, sometimes so pure as not to need refining, when it is called virgin quicksilver: but more often it is mixed with other substances, in the form of ore. The most usual state in which it exists in mines, is a sulphureous ore of a red color, called native cinnabar. "The people who work in the quicksilver mines soon die; when first affected they are seized with tremors, after which salivation comes on, their teeth drop out, and pains of the whole body, particularly of the bones, seize them."

Quicksilver was originally used in the treatment of eruptive diseases; and it is owing to its success in those complaints that it was first employed in the venereal disease. "In the times immediately following this disease, practitioners only attempted to employ this remedy with timorous caution, so that of several of their formulas, mercury scarcely composed a fourth part, and few cures were effected. On the other hand, empirics who noticed the little efficacy of these small doses, ran into the opposite extreme, and exhibited mercury in such large quantities, and with such little care, that most of their patients became suddenly attacked with the most violent salivations, attended with dangerous consequences. From these two very opposite modes of practice, there originated such uncertainty respecting what could be expected from mercury, and such fears of the consequences which might result from its employment, that every plan was eagerly adopted which offered the least chance of cure without having recourse to this mineral.

"A medicine, however, so powerful, and whose salutary effects were seen by attentive practitioners, amid all its inconveniences, could not sink into oblivion. After efforts had been made to discover a substitute for it, and it was seen how little

confidence those means deserved on which the highest praises had been lavished, the attempts to discover its utility were renewed. A medium was pursued, between the too timid methods of those physicians who had first administered it, and the inconsiderate boldness of the empirics. Thus the causes from which both parties failed were avoided; the character of the medicine was revived in a more durable way, and from this period its reputation has always been maintained.

"It was about this epoch that mercury began to be internally given: hitherto it had only been externally employed, which was done in three manners. The first was in the form of liniment or ointment; the second, as a plaster; and the third, as a fumigation. Of the three methods just described, only the first is at present much in use, and even this is very much altered. Mercurial plasters are now only used as topical discutient applications to tumors and indurations. Fumigations, as anciently managed, were liable to many objections, particularly from its not being possible to regulate the quantity of mercury to be used, and from the effect of the vapor on the organs of respiration frequently occasioning trembling, palsies, &c. Frictions with ointment have always been regarded as the most efficacious mode of administering mercury." [*Hooper's Dictionary.*]

It may be observed, however, that the *submurias hydrargyra*, or calomel, and the *pilula hydrargyra*, or blue pill, are the preparations of quicksilver in most common use at the present time.

Mercury, as a medicine, is probably more extensively used than almost any other article of the materia medica; and hence mankind have suffered more from its destructive powers, than from all the other poisonous drugs that have disgraced the science. In bilious and other fevers, which have so universally and fatally prevailed in the United States, calomel has been regarded as almost the only evacuant of the bowels to be depended upon; and by most practitioners it has been considered necessary in malignant cases of fever, and in many other obstinate complaints, to administer a quantity sufficient to produce salivation. And when it is wished to procure this loathsome discharge very speedily, the direful remedy is applied externally, in the form of mercurial ointment, at the same time that it is administered internally, in the form either of calomel or pills. The disastrous effects of this "incendiary" practice have left fearful monuments of its destructive character, in every city, town, village, and hamlet in the United States; and, in fact, in every civilized country where fashion and folly have been allowed to triumph over the dictates of common sense, and mercurial medicines permitted to assume the place of the more salutary productions of the life-preserving vegetable kingdom.

So extensively, indeed, have mercurial medicines spread their

ravages amongst mankind, that it has become an important "part of the physician's study, to learn to designate and remove the maladies which are caused by them."* Mercury is the most general evacuant belonging to the materia medica; whilst its different preparations are made to answer no less than ten different indications in the treatment of disease. And notwithstanding the almost universal employment of mercury, in the treatment of nearly or quite every disease, "it is to be regretted," says the work just quoted, "that for the want of a more precise knowledge of the peculiar properties of mercury, and the modes of its operation, writers have not yet assigned to it an appropriate place among the curatives of disease, nor agreed upon such general principles for its administration as will enable the *best* judgment to *use*, without sometimes *abusing* it; and," continues the same writer, "is not mercury by many rather given as a specific, or for *symptoms of disease* for which they *know not what to give?*"

"Practitioners," says Dr. HAMILTON, "prescribe, on every trifling occasion, calomel or the blue pill: thus, calomel is now almost the universal opening medicine recommended for infants and children; and a course of the blue pill is advised, without any discrimination, for the cure of trifling irregularities of the digestion in grown persons." To show the wretched consequences of this indiscriminate employment of mercury, we need only refer to HOOPER's Dictionary. "Many courses of mercury," says he, "would kill the patient if the medicine were only given internally, because it proves hurtful to the stomach and intestines when given in any form, or joined to the greatest correctors." It "often produces pains like those of rheumatism, and *nodes* of a scrofulous nature;" "and occasionally attacks the bowels, and causes violent purging even of blood." "At other times, it is suddenly determined to the mouth, and produces inflammation, ulceration, and an excessive flow of saliva." The teeth also become loose, and mortification sometimes succeeds, and terminates in the destruction of the gums, lips, cheeks, &c.

In addition to these dreadful local affections, mercury often produces a more general effect, which is termed the mercurial disease.

"It is characterized by great depression of strength; a sense of anxiety about the præcordia; irregular action about the heart; frequent sighing; trembling, partial or universal; a small, quick, and sometimes intermitting pulse; occasional vomiting; a pale, contracted countenance; a sense of coldness; but the tongue

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* Preface to the American edition of Dr. HAMILTON's Observations on the Use and Abuse of Mercurial Medicines, by ANSEL W. IVES, M. D.

is seldom furred, and neither the natural nor vital functions are much disturbed." "In this state, a violent or sudden exertion of muscular power, will sometimes prove fatal."

It may possibly be thought that we are devoting too much time to the consideration of this single article; but when we take only a hasty survey of the general and immense extent of its horrible desolations, we are ready to think a volume too small for a faithful portraiture of the heart-sickening picture. The subject of intemperance has enlisted the energies of hundreds, nay, thousands, who have portrayed in glowing colors the disastrous effects of this voracious monster, preying upon the vitals of the human race; opposed too, as it is, by the moral sense of the people, the dogmas of physicians, and the precepts of the gospel. But the career of calomel, instead of being opposed by any of those barriers which resist the progress of immorality, is encouraged by a class of men whose authority is only equaled by the subserviency of the people to submit to their dictates.

The propriety of comparing the effects of mercury with those of intemperance, very probably may excite some emotions in the minds of many who have not given the subject a careful consideration; but we only request of these to reflect that calomel is prescribed in some form or other in almost every family which adheres to the poisonous practice of medicine; and although an individual may be subjected to its deadly effects but once in his life, he may never after be free from its morbid influence. Indeed we do not doubt that the protracted insupportable languor and indescribable feelings of despondency which often succeed a course of mercury, have driven many an individual to intemperance if not to suicide, for that relief which may be prized higher than life. We are not dealing in fables, nor fanciful tales of romance; our subject is one in which th whole civilized world has a deep interest; and we feel it to be a serious duty to do all in our power to eradicate those prejudices which, through ignorance, have been implanted in the human heart.

The depredations which mercury has committed upon health and life since its first introduction into practice, demand that it should be placed in its native garb before the eyes of the world. Too much suffering and misery, and waste of human life, have resulted from the use of calomel, for those who are acquainted with its real character to remain idle spectators of its mighty march; walking with gigantic strength through the world, and sweeping, with its baneful breath, thousands and tens of thousands from the stage of usefulness, and the great theatre of life!

"Among the numerous poisons," says Dr. Hamilton, "which have been used for the cure or alleviation of diseases, there are few which possess more active, and of course, more dangerous

powers, than mercury. Even the simplest and mildest forms of that mineral exert a most extensive influence over the human frame; and many of its chimical preparations are so deleterious, that in the smallest doses they speedily destroy life." "When the effects of mercury upon the human body are accurately investigated and duly considered, it cannot fail to appear, that infinite injury must accrue from its use in many cases."—[*Hamilton, pages* 1, 3.]

In treating of the effects of mercury, Dr. HAMILTON observes:—"Preparations of mercury, exhibited either internally or externally for any length of time, increase in general the action of the heart and arteries, and produce salivation, followed by emaciation and debility, with an extremely irritable state of the whole system.

"These effects of mercury are *expressly mentioned, or virtually admitted, by every author*, ancient or modern, who has directed its use; and it must appear very extraordinary, that their full influence should have been hitherto misunderstood, or at least not sufficiently regarded."

"The first effect enumerated, is an increased action of the heart and arteries," which "is attended with the most obvious of the circumstances which arise from inflammation. Blood drawn from the arm of the most delicate and debilitated individual, subjected to a course of mercurial medicines, exhibits the same buffy crust with blood drawn from a person laboring under pleurisy."—[*Hamilton, pages* 4, 5, 6.]

"There is reason to believe, that the inflammatory diathesis induced by mercury may continue for a very considerable length of time after the mercury has been laid aside, and without any manifest signs. When individuals in this state are subjected to accidental exposure to cold, or indulge in irregularity of living, a violent and anomalous indisposition takes place, which is apt to terminate fatally, or to occasion a broken state of health."

"Salivation, or an excessive and unusual flow of saliva, in general follows the increased action of the heart and arteries, and is preceded by a certain metallic taste in the mouth, and is attended with a peculiar odor of the breath different from what is ever perceived in any natural state of disease." "In some cases, besides the ordinary ulceration of the gums, and loosening and final separation of the teeth, the tongue, moveable palate, &c. swell and ulcerate to a frightful degree."—[*Hamilton, pages* 10, 11.]

"Delicate individuals, especially females, generally experience after a course of mercury, various modifications of disordered feelings, communicating the idea of imaginary diseases, which unfit them for the duties of life, and render existence a burden. Among the anomalous complaints arising from this

cause, may be enumerated, impaired or capricious appetite for food, with all the ordinary symptoms of indigestion, particularly retchings in the morning, and flatulency, disturbed sleep, with frightful dreams; impaired or depraved vision; frequent aches and pains in different parts of the body; occasionally such sudden failure of strength, as if just dying, and at other times violent palpitations of the heart, accompanied with difficulty of breathing. Along with all these complaints, there is such a wretchedness of look, with such a disposition to brood over their miserable feelings, that it is extremely difficult to persuade the relations or attendants of the patient that there is no serious indisposition."

Dr. FALCONER says, "that among other ill effects, [of mercury] it tends to produce tremors and paralysis, and not unfrequently incurable *mania*. I have myself seen repeatedly from this cause, a kind of approximation to these maladies, that embittered life to such a degree, with a shocking depression of spirits, and other nervous agitations with which it was accompanied, as to make it more than commonly probable, that many of the suicides which disgrace our country, were occasioned by the intolerable feelings that result from such a state of the nervous system." Dr. HAMILTON adds, "to the truth of these remarks every unprejudiced physician who has been in extensive practice must bear testimony."—[*Hamilton, pages* 13, 14, 15.]

It is also worthy of particular notice, that the disastrous effects of mercury do not depend upon the quantity taken; "it is notorious that the very smallest quantities of mercury have suddenly proved injurious. Thus, in a lady who had had such small doses of the blue pill, combined with opium, for three nights successively, that the whole quantity amounted to no more than five grains of the mass, salivation began on the fifth day, and notwithstanding every attention, the gums became swelled to an enormous degree, bleeding ulcers of the mouth and fauces took place, and such extensive irritability and debility followed, that for nearly a whole month her life was in the utmost jeopardy. Every practitioner must have met with similar cases.

"Another common consequence of a very small dose of mercury is an excessive bowel complaint. In many individuals, a permanent irritability of the stomach and intestinal canal has followed the accidental exhibition of a few grains of calomel."

"Dr. FALCONER mentions, that he once saw a dropsy of the breast produced by the use of a mercurial remedy for a redness in the face, which it effectually removed, but instantly produced a dropsy of the chest, terminating in death. Dr. BLACKALL has recorded similar cases."—[*Hamilton, pages* 20, 21.]

Dr. HAMILTON also records one case, and Dr. IVES another,

which "seem to prove, that mercury may remain inert for a considerable time in the habit, and afterwards by some inexplicable circumstance, may become active."—[*p.* 21.] We have also seen at least one similar case. And that it does remain in the systems of most or all persons whose constitutions have only been slightly affected by it, without breaking forth in its peculiar and virulent form, can be attested by almost every individual who has undergone the process of salivation. Such persons are commonly premonished of stormy weather, by the pains "like those of rheumatism," or as often expressed, "pains in the bones," and soreness of the flesh. In some, the glands of the mouth and the throat become swelled, upon every exposure to wet or cold.

It may be thought, perhaps, that enough evidence has been adduced from the writings of those whose profession it is to use the poisonous preparations of mercury, to satisfy the most partial, that its use ought not to be admitted as a medicine; but as the prejudice in its favor is so deep rooted and strong, and its destructive consequences so general and terrible, we cannot acquit ourselves without selecting something more from the great mass of testimony to be met with at every step of our inquiries upon this important subject.

Dr. Hamilton, in speaking of persons who appeal to their own experience as a direct proof of the great utility of calomel, in certain cases, remarks, "But if those persons could attend impartially to the effects of that medicine, they would find that its immediate operation is severe, and that it is followed for some time by uncomfortable feelings, and by an unusual susceptibility of derangement of the stomach and bowels."—[*Hamilton, p.* 79.]

Again; "It disorders the digestive powers of the stomach; and in debilitated persons, the frequent employment of it sinks the strength and provokes hemorrhoids.

"From what has been stated in the preceding pages, respecting the injurious effects of all the preparations of mercury, and especially of calomel, upon some constitutions, and the *impossibility of distinguishing those individuals to whom that mineral, in every form, is apt to prove noxious, it must be evident that no physician can calculate, with any degree of certainty, on the safe operation of mercurial purgatives; and no preparation of mercury can be administered without the risk of some consequences ensuing, which could neither be intended nor expected.*"—[*Hamilton, pages* 105, 106, 107.]

Were these facts less familiar to us than they are, we might pause, after quoting sentiments such as the foregoing, to indulge in those feelings of astonishment, which must involuntarily force themselves upon the mind of him who meets with them for the

first time. But we are so much accustomed to the most glaring inconsistencies in most matters relative to medicine, that we long since ceased to wonder at the contradictions of theory and practice. The reader must recollect that our quotations are from authors who themselves use the article they condemn.

But we are not done yet. We must beg a little longer indulgence, whilst we introduce a few more quotations, touching this important subject. In an Appendix to the work of Dr. HAMILTON, we find some remarks to our purpose, written by Dr. A. W. IVES, a respectable practitioner of New York.

"It is true," says Dr. IVES, "that those who have most zealously recommended this medicine, have not denied the danger and uncertainty of its operation; still they appear rather to have labored to give it the character of a specific, than to establish general principles which would reconcile the discrepancy of their theory and practice. 'Could a line be drawn,' says Dr. WARREN, 'between the diseases in which it is prejudicial, and those in which it is advantageous; and could the mode of administration be accurately prescribed, much of that mischief which has originated from this most active class of medicines might be avoided, and many a constitution saved from ruin.' But this is a knowledge which we can never hope to attain, and even if it were attainable, what would be the avail? There is a diversity in the character of the same diseases, arising from a difference in the circumstances or condition of the patients, which forbids the expectation that the science of medicine will be ever so perfected, and the labors of the physician so simplified, that a medicine can be safely prescribed for a name. It will continue to be the province of the physician to establish general principles from facts, and to mete out from these such particulars as may be suitable to the multifarious character and symptoms of disease; and until some general principles shall be settled for the better regulation of the mercurial practice in fevers, however extensive and popular it may be, it will continue to be empirical."—[*Hamilton, p.* 192.]

Dr. IVES remarks, that there is the closest analogy in the operation of animal poison and mercury: "Both," says he, "so far contaminate the circulating fluids as to keep up a permanent excitement for a considerable length of time; for as their properties can be destroyed by no antidote, their effects will continue till they are carried out of the system by its emunctories." —[*p.* 196.] "Nor does mercury, as has often been contended, possess the properties of a *tonic;* so far from increasing the tone of the muscular fiber, or the excitability of the nervous system, it diminishes both, in a direct ratio to the irritation which it excites."—[*p.* 204.] And "it is yet a question of dispute, whether more lives have been prolonged by a timely

salivation, than have been lost by the unsuccessful use of mercury, to the exclusion of other means.'—[*p.* 208.]

Dr. BARNWELL, after describing the effects of mercury exhibited in the first stages of inflammation of the liver, says, "these are the effects, which we have seen invariably take place, from the abuse of mercury, in the early stages of disease; so that we are not more certainly convinced of the poisonous effects of arsenic, than of those mercurials given in the acute stages of this disease."

The testimony of Dr. REECE is also very strong against the use of mercury. "We know not," says he, "whether we have most reason to hail the discovery of mercury as a blessing, or regard it as a curse; since the *diseases it entails are as numerous as those which it cures.* Our best informed dentists declare that they can clearly witness the progress of the use of mercury, in the increasing diseases and decay of the teeth. There are serious objections, also, to other articles of the metallic world; antimony, iron, and arsenic, are dangerous remedies in the hands of the ignorant; and mankind, perhaps, in the aggregate, would be benefited by their expulsion from medical practice."

If any should inquire why mercury is still used in medical practice, when its direful effects are so well known, the answer must be sought from several sources. "The facility," says Dr. HAMILTON, "with which calomel can be exhibited to patients who are reluctant to take whatever has the semblance of a drug, is probably the chief motive for this unfortunate prejudice in favor of so hazardous a remedy;" and this he very justly reprobates as a sacrifice of "conscience to convenience."—[*p.* 111.] And Dr. IVES observes, "there is no inconsistency so extravagant that it cannot be supported by precedent, and no hypothesis so absurd, that it cannot be defended by books." It may also be added, that as the study of books is more easy to most men than the investigation of nature, practitioners have generally been willing to practice under the protection of some great name, rather than attempt to reform the abuses of medicine.

"Had the injurious effects of calomel been hid from the rest of the profession, and known only to the author," says Dr. HAMILTON, "some apology might be offered for the pertinacity with which that medicine is still prescribed; but so far is this from being true, that it may be confidently asserted, that no medical man of competent knowledge and observation would administer calomel as a purgative, in a hundred instances, without being convinced of its injurious tendency. Of this, innumerable proofs could be cited."—[*p.* 109.] And "it cannot be a want of deference to the distinguished advocates of the mercurial practice, to distrust the soundness of their deductions, when they are not

only opposed by the acknowledged *principles* of *medical philosophy*, but by the judgment of such men as ROBERT JACKSON and Dr. LIND. To these might be added numbers of the most celebrated physicians of England, France, and America, all of whom from *clinical observation*, have decided against the practice of resting the issue of febrile diseases on the constitutional operations of mercury."—[*Hamilton, Appendix, p.* 191, 192.]

Those who have made themselves acquainted with the desolating consequences resulting from the use of mercury, will not wonder that so much space has been allotted to its consideration. Men of the greatest experience have devoted much time and attention to this subject; the chief of whom are PIERSON, MATHIAS, TROTTER, CARMICHAEL, and HAMILTON, whom we have so often quoted, and whose experience and observation have enabled him to make a correct estimate of the dangerous powers of mercury. He, however, supposes that "notwithstanding all the hazards resulting from the use of mercury, there can be no doubt that it has certain medicinal virtues, the most remarkable of which is the power of curing the diseases occasioned by the syphilitic virus."

In the venereal disease, he thinks this is the only remedy which can with certainty be depended upon; but this sentiment can only be tolerated on "the principle of necessity" growing out of the circumstances by which he was surrounded. He knew of "no other equally efficacious medicine." Fortunately, however, for the world, medicines are now known which are not only far more efficacious than mercury in venereal complaints, but in all others; besides being at the same time free from all risk and danger.

LEAD—*Plumbum*. This metal is found in almost all countries; and is particularly abundant in the western and northwestern parts of the United States. It is but seldom used as an internal remedy; but is often applied externally to inflamed surfaces, wounds, scrofulous sores, and inflamed eyes. Internally it is employed "in some extreme cases of hemorrhagy from the lungs and bowels, and uterus," as a styptic or astringent; but owing to its poisonous qualities, it is exhibited in very small doses, and that but seldom by prudent practitioners. All the preparations of lead are deadly poisons.

Lead is often used for sweetening cider or wines which have become sour; but this is a very reprehensible practice, and is only resorted to by unprincipled dealers in the article, from motives of pecuniary gain. The effect of drinking cider or wine, impregnated with any preparation of lead, is the same as those arising from the taking of it any other way.

"The colic of painters, and that formerly prevalent in certain counties of England, from the lead used in cider presses, show

the very deleterious operation of this metal, when habitually introduced into the system in the minutest quantities at a time. Contraction of the thumbs, paralysis of the hands, or even of the whole extremities, have not unfrequently supervened."

The symptoms of poisoning from lead are thus graphically described in the Book of Health: "Constriction in the throat, pain in the stomach, obstinate, painful, and frequently bloody vomiting." Dr. THACHER, in his Dispensatory, says, "its effects on the body are emaciation, violent colics, paralysis, tremors, and contractions of the limbs; as they generally come on gradually, the cause is sometimes overlooked until it be too late. Poisoning from lead is occasioned, either from liquors becoming impregnated with it, by being improperly kept in vessels lined with that metal, or to which lead has been criminally added to correct its acidity; or among manufacturers, who work much with lead, as painters and plumbers, and who are not sufficiently attentive to avoid swallowing it."

"A dreadful disease," says Dr. THOMAS, "of a similar nature with the colic under consideration, (*colica pictonum*, or dry bellyache,) and caused by the destructive fumes of melted lead, is known to be very prevalent among those who are employed in smelting or preparing this metal, and is said to attack even those who live near the furnaces."

Speaking of the *acetate*, or sugar of lead, Dr. THACHER says, "Like the other preparations of lead, this is a violent poison." "The internal use of it, notwithstanding the encomiums some have been rash enough to bestow upon it, is entirely to be rejected."

The *subcarbonate* of lead, or white lead, "is sometimes employed medicinally, in form of powder or ointment, to children whose skin is fretted. It should, however, be cautiously used, as there is great reason to believe that complaints of the bowels of children originate from this source."

NITER—*Nitrate of Potash*—*Salt Peter*. This article is pretty extensively used, "in numerous disorders. Its virtues are those of a refrigerant and diuretic." It also promotes insensible perspiration in fevers. "This powerful salt, when inadvertently taken in too large quantities, is one of the most fatal poisons. There are several attested cases on record, and some recent instances might be added, in which from half to a whole ounce of salt peter, has occasioned violent vomiting, convulsions, swelling, and other painful symptoms in persons, who by mistake had swallowed it in a dissolved state, instead of glauber or similar salts."—[*Thacher's Dispensatory.*] "In large doses, such as an ounce, taken at one time, it produces the most dreadful symptoms, constant vomiting, purging, mixed with blood, convulsions, and death."—[*Coxe's Dispensatory, p.* 445.] "I have

found from a series of practical experiments, for many years, that salt peter has the most certain and deadly effect upon the human system, of any drug that is used as medicine. Although the effects produced by it are not so immediately fatal as many others, yet its whole tendency is to counteract the principles of life and destroy the operation of nature. Experience has taught me that it is the most powerful enemy to health, and that it is the most difficult opponent to encounter, with any degree of success, that I have ever met with."—[*New Guide to Health, p.* 26, 27.]

Opium. This is the inspissated juice of the white poppy, or *papaver somniferum*. The best opium is brought from Turkey; and a very inferior kind from the East Indies. It may also be made from the common poppy of this country. The Turks have the same kind of fondness for it, that the people of this country have for tobacco and ardent spirits.

Opium is exhibited as a narcotic, to procure sleep, and as an anodyne to assuage pain. It is also used as an anti-spasmodic, and to restrain diarrhœa. Indeed, there are few diseases in which this powerful article is not employed, either in substance, as in pills, or in tincture, as in laudanum. A still weaker preparation of it is to be found in the paregoric elixir.

The specific action of opium on the living system, by which it produces its peculiar effects, has been the subject of the keenest controversy amongst medical men. Some affirm it to be a powerful stimulant, and others, that it is a direct sedative. To our view, it is very clear, that its most important effects are sedative. It appears to possess but very little, if any power, directly to remove the cause of any disease whatever. It produces sleep, removes pain, relieves spasm, and checks diarrhœa; but it does it by destroying sensibility. It renders the living fiber insensible to the stimulus of the causes which give rise to those peculiar states or conditions of disease; and its debilitating effects are well known to all who have taken large quantities to remove spasm, or cure the lock-jaw. But as this, like all other violent poisons, is fast running its popular career, and is disused in the new practice of medicine, it is unnecessary to dwell longer upon this controversy.

"Opium taken into the stomach in a large dose, gives rise to confusion of head and vertigo. The powers of all stimulating causes to make impressions on the body are diminished; and even at times, and in situations, when persons would naturally be awake, sleep is irresistibly induced. In still larger doses, it acts in the same manner as the narcotic poisons, giving rise to vertigo, headache, tremors, delirium, and convulsions; and these terminating in a state of stupor, from which the person cannot be roused. This stupor is accompanied with slowness of the

pulse, and with stertor in breathing, and the scene is terminated in death, attended with the same appearances as take place in an apoplexy."—[*Thacher's Dispensatory.*]

"It is a melancholy consideration, that opium is frequently resorted to for the horrid purpose of self-destruction. The alarming symptoms induced by it, are vomiting, delirium, stupor, deep and difficult breathing, convulsions, and death."—[*Ibid.*]

Digitalis Purpurea—*Foxglove.* This potent vegetable, when taken into the stomach, produces a most powerful sedative effect upon the circulation, decreasing the general irritability of the system, whilst the action of the absorbents is said to be accelerated. It has been highly recommended in consumptions, palpitations of the heart, asthma, dropsy, &c. for which cases it has been often employed.

"Of all the narcotics, digitalis is that which diminishes most powerfully the actions of the system; and it does so without occasioning any previous excitement. Even in a moderate dose, it diminishes the force and frequency of the pulse, and in a large dose, reduces it to a great extent, as from seventy beats to forty or thirty-five in a minute, occasioning at the same time vertigo, indistinct vision, violent and durable sickness, with vomiting. In still larger quantity, it induces convulsions, coldness of the body, and insensibility, symptoms which have sometimes terminated fatally."

"The administration of this remedy requires to be conducted with much caution. Its effects do not immediately appear; and when the doses are too frequent, or too quickly augmented, its action is concentrated so as to produce frequently the most violent symptoms."—[*Hooper's Dictionary.*]

Dr. Withering, who first employed the digitalis in the treatment of dropsy, lays down certain explicit rules for its administration; referring to these, Dr. Thacher, in his Dispensatory, says, "without the strictest attention to which, no practitioner should prescribe this powerful and singular medicine." Dr. Thacher further adds, "Such are the active and virulent qualities of this plant, that it ought not to be intrusted to the direction of the inexperienced practitioner; nor resorted to, without due attention to the state of the system; and when administered, its peculiar effects should be discriminated with the utmost vigilance and precision. Dr. Rand relates for admonition, one melancholy example of the fatal effects of digitalis, in a man, who having experienced relief from its use, adventurously exceeded the extent enjoined by his physician." And well may cautions and admonitions be given in regard to the use of an article possessing such influence over the sanguiferous system. What else could be rationally expected, than that if it possessed the power, in a moderate dose, of reducing the pulse from seventy to thirty-

five, a larger dose would check it altogether? It is also poisonous when applied to wounds or sores.*

Hemlock—*Cicuta.* "This is a large biennial umbelliferous plant, which grows very commonly about the sides of fields and hedges, and in moist places. The root is white, long, of the thickness of the finger, contains when young a milky juice, and resembles, both in size and form, the carrot. In spring it is very poisonous, in harvest less so. The stalk is three, four, and often six feet high, hollow, smooth, and marked with red or brown spots. The leaves are large, and of a dark green color, having a faint disagreeable smell, resembling the urine of a cat. The seeds are inferior in strength. The whole plant is a virulent poison, but varying much in strength according to circumstances. When taken in an over dose, it produces vertigo, dimness of sight, difficulty of speech, nausea, putrid eructations, anxiety, tremors, and paralysis of the limbs; to which may be added, dilatation of the pupils, delirium, stupor, and convulsions."—[*Thacher's Dispensatory.*]

Prussic Acid—*Hydrocyanic acid.* It was but lately that this substance became known in its simple separate state; and still later that it was introduced into medicine. Prussic acid is most readily obtained from the pigment called Prussian blue; but it is also made from some vegetable productions, such as the bitter kernels of the drupaceous fruits, particularly the peach. It is used in pulmonary complaints, especially whooping cough, consumption, asthma, &c.

The Prussic acid is said to be the most violent of all poisons. "Scharinger, a professor at Vienna, spread a certain quantity of it upon his naked arm, and died a little time thereafter." "When a rod dipped into this acid is put in contact with the tongue of an animal, death ensues before the rod can be withdrawn. If a bird be held a moment over the open mouth of a vial containing Prussic acid, it dies."—[*Hooper's Dictionary.*]

There are many other poisonous articles used as medicines by the medical Faculty; but we have perhaps dwelt sufficiently long upon this subject. In describing the nature and effects of medical poisons, we have preferred quoting the language of those whose avocation it is to use them, rather than condense the facts into a narrower compass in words of our own; as it must be admitted that they, to the exclusion of all others, are better acquainted with their destructive tendencies and fatal effects. Most individuals, however, can call to mind cases which they have either seen or experienced, confirming the statements which we have made respecting the violent and dangerous character of many articles in common use by the Faculty.

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* Orfila on Poison.

But our limits admonish us to leave a subject which calls up in imagination, the pale, emaciated, and frightful visage of some acquaintance, neighbor, tender child, or endeared companion, who has fallen a victim to the destructive powers of those poisonous articles, falsely gilded with the name of medicine; the fearful effects of which have been accumulating for the last fifty years with the most ruinous consequences; yea, we might truly say, with more fatal and appalling violence, in some portions of the globe, than pestilence, famine, or the sword.

SECTION 3.

OF THE MEDICINES EMPLOYED IN THE NEW PRACTICE

[THE most approved collection and arrangement of the articles of the New Materia Medica has been made by Prof. J. Kost, in his inestimable work on Materia Medica, which ought to be in the hands of every physician. The following is very nearly his arrangement:

Emetics,
- Lobelia Inflata.
- Ipecacuanha.
- Euphorbia I.
- Sanguinaria, &c.

Cathartics,
- Podophyllum.
- Rhei.
- Juglans C.
- Leptandra V.
- Jalap.
- Aloes.
- Castor Oil.
- Senna.
- Iris V.
- Apocynum A., &c.

Diaphoretics,
- Asclepias T.
- Xanthoxylum.
- Aralia S.
- Eupatorium P.
- Polemonium.
- Lobelia.
- Acetate of Ammonia.
- Pterospora A.
- Hedoma, &c.

Stimulants,	Capsicum Ginger. Pepper. Myrrh. Camphor. Cloves. Cinnamon. Wine, &c.
Expectorants,	Lobelia. Ictodes. Arum. Liquorice. Sanguinaria. B. Tolu, &c.
Alteratives,	Stillingia. Sarsaparilla. Guaiacum. Phytolacca. Rumex, &c.
Emmenagogues,	Botrophis (Macrotrys). Senega. Myrrh. Asarum. Leonurus. Actea, &c.
Anthelmintics,	Turpentine. Chenopodium. Male Fern. Pomegranate. Aloes, &c.
Tonics,	Quinine. Cornus. Hydrastis. Euonymus. Poplar Bark. Gentian. Columbo, &c.
Astringents,	Bayberry. Geranium. Kino. Tannin. Hamamelis, &c.

Nervines and Antispasmodics,	Valerian. Cypripedium. Scutellaria. Assafetida. Camphor. Lobelia, &c.
Diuretics,	Oil Juniper. Turpentine. Galium. Eupatorium Pu. Copaiba, &c.

As it is not pretended that this work contains, or that the present knowledge of medicine embraces, all the most valuable articles of medicine which a beneficent Creator has bestowed upon the world; but that many, very many, remain yet to be discovered, it may not be amiss to suggest some other general rules to be observed in the experiments and investigations relative to this important subject:

1. Every substance used as a medicine, ought to act in unison and harmony with the laws of nature, and not contrary to them. Medicines of this character are always safe, and universally applicable. 2. If they do this, they will, instead of pros trating the strength of the patient, have a tendency to restore it. All medicines and means whatever, which, in their effects upon the system, weaken the power of life and produce debility, ought to be rejected as improper. 3. Any article which produces unnatural actions in the system, either increasing or checking the secretions or excretions beyond what health requires, ought also to be rejected. It is generally variations of these actions from a healthy standard, which constitute, or rather attend, disease; the object of cure is to restore a healthy action. 4. By all means avoid articles known to be poisonous especially in small quantities. They always pervert the very order which we wish to restore —the harmony of nature. 5. Endeavor to ascertain to which class the adopted article belongs; and that, although it may be peculiary adapted to some particular disease, it is not deleterious in any. This is a desideratum, we think, attainable in medicine.

SECTION 4.

OF THE EFFECTS OF BOTANIC MEDICINES ON THE ANIMAL ECONOMY.

Capsicum Annuum—*Cayenne Pepper.* This article, if considered with reference to the extent of its powers and universal

applicability to the cure of disease, may be regarded as one of the most valuable articles of the materia medica. It is unquestionably the purest and strongest stimulant of which we have any knowledge, and is therefore the best article that we possess for increasing the vital energy of the system.

Cayenne possesses none of the narcotic properties of ardent spirits or opium, nor is its stimulant effect upon the system followed by that debility and prostration which always succeed the administration of brandy or opium. Its operation upon the tissues of the body, does not consist in affecting the irritability of the living fiber, but in imparting a sound and healthy stimulus to the vital organs. It strengthens substantially and durably the living power of the animal machine, and should therefore almost always be employed in practice.

Lobelia Inflata—*Emetic herb.* This simple herb, for the variety and extent of its curative powers, stands unrivalled amongst botanic remedies. It acts as an emetic, antidote to poisons, diffusible stimulant, and expectorant. Its stimulant powers, however, are of such a nature as to be soon exhausted; and hence it is necessary to support it by something of a more durable character. Cayenne is admirably adapted to this purpose, and should generally be administered with the lobelia, as well as before and after its operation.

As all the articles composing our materia medica must necessarily be treated upon more explicitly hereafter, we will therefore let the brief notice of the two articles just named suffice; and close this section with a few remarks upon the general effects of approved botanic remedies.

The reader will recollect, that in a preceding section, we took a view of the effects of what have emphatically been denominated the "heroic medicines"—effects so destructive and appalling, that one might rationally conclude they ought, long since, to have been consigned to that oblivion which their dangerous powers richly merit; and into which, in time, they no doubt will be plunged.

But in surveying the thousands of subjects upon which the Botanic practice has been tried, we find not one solitary case of that permanent loss of appetite—that mournful dejection of spirit—that sinking of the soul, and loathing of life, which often follows a course of the severe medicines of the old practice.

The new remedies, says Professor Robinson, in his excellent Lectures, "possess an energy which seems to communicate new life to the system, and renovate the feeble, fainting powers of nature." We have often remarked to persons whom we were instructing, that the botanic remedies upon which we are treating, acted in unison and harmony with the laws of animal life, as much so as our food. This may be considered by many, no

doubt, as the wild hallucination of an extravagant enthusiast. But we can cheerfully submit to those who have had the most ample experience of the effects of our botanic remedies, whether this assertion is not more consistent with truth than it is to regard calomel, and all the poisonous articles of the materia medica, as valuable medicines. "A remedy," says ROBINSON, "*worse* than the *disease*, is no remedy; it may hold the rank by prescription; but it is an authority as unhallowed as the tyranny of eastern despots." But calomel, arsenic, &c. have thus held their rank, and been prescribed for the sick, and their disastrous powers at the same time deplored, by the best men who have ever adorned the walks of medical science.

The objections of the advocates of poisonous medicines, to the proposition that our remedies act in harmony with the laws of life, have been mostly answered in a former chapter; but there is one of which no special notice has been taken. It is objected to our proposition, that *vomiting* is contrary to, or a reversion of, the laws of nature; because in a healthy state, vomiting never takes place. This objection, however, is more specious than solid; for, although it may be a fact, that vomiting does not take place in a healthy state, yet it often arises spontaneously, and thus affords relief, in a diseased state. Hence we may observe, that although vomiting may not occur spontaneously only in disease, it is in accordance with a law of nature, which only acts in certain conditions of the system; but always with a healthy intention. Now, is there any thing paradoxical in supposing that something not inimical to the laws of life might be discovered, which would assist nature in performing this operation; aid her in doing what she herself would do, were she capable?—We answer with confidence, no!

Vomiting then is perfectly consistent with the laws of nature or animal life; and a medicine has been discovered, entirely innocent and harmless, which exactly corresponds with that law, and may be administered with impunity to both sexes, and all ages and conditions of life. Indeed, it must follow, that if these medicines act in unison and harmony with the laws of life, there can be no disease of any name or nature, whether of young or old—male or female, but what it is proper to administer it; and, if it be done seasonably and perseveringly, it must have a good effect. Here no time need be lost in hesitating what remedy to prescribe—no anxiety about ambiguous symptoms—no objections to giving the best remedy because of peculiar circumstances, situations or habits of life of the patient. These medicines, acting in harmony with nature's laws, may be promptly administered in all cases; and the more violent and dangerous the symptoms—the more nature's laws are perverted or disturbed, the greater the necesity for applying the best and most powerful remedies.

An acquaintance of ours, formerly a surgeon in the United States' army, and who is enjoying at this time a highly respectable character in private life, observed to us, as a reason for abandoning the practice of medicine, that when he was called to the best friend he had in the world, and was exercising his best skill and judgment to relieve him of his maladies, with all his anxiety and solicitude, he was still involved in uncertainty whether he should kill or cure. What a most deplorable picture does this frank, honest, and disinterested confession exhibit of the old practice of medicine! But different, far different from this must be the feelings of him, who has become fully acquainted with the botanic practice. He goes forth in the noble work of healing the sick, with the fullest confidence in the power, the innocency, and the efficacy of his medicines; being confirmed beyond all doubt, that if he can do no good, he will at least do no hurt.

It is perfectly incredible to those unacquainted with the new practice, the facility with which a healthy action is often in the very worst cases restored to the exhausted organs of the system. Most persons have witnessed the secondary effect of opium administered in large quantities, as is often the case in spasms and convulsions; the extreme dullness, lassitude, headache, and debility, continuing for several days. And who has not become familiar with the morbid effects of calomel—the pale, contracted countenance; the intolerable languor; the great depression of strength; the insupportable anxiety, so often following through life, those who have unfortunately been made the subjects of experiment with this mischievous article? But nothing of this, says Dr. Robinson, is ever "witnessed in the exhibition of the botanic remedies; but, on the contrary, a degree of animation and desire for food, which, to myself was perfectly astonishing; and I presume must be to every one who perceives it for the first time. It was so contrary to what I had ever before witnessed, and especially in the same patient, who had taken medicine for years before, and always with the loss of appetite, that I could not, without sinning against my own soul, withhold my testimony and approbation."

How often have individuals, after a course of botanic medicines, reiterated the expression, "I feel like a new creature." The animating and invigorating power of medicines which display their remedial effects in restoring a healthy action to the system, must if persisted in, sooner or later, produce consequences well calculated to call forth from the poor dispirited valetudinarian such an impressive ejaculation. The happy consequences resulting from the use of these medicines, are frequently so sudden and unexpected to those unacquainted with their powers, that their expressions have often given evidence of the ecstasy

and transport of their feelings. Indeed, what can be more ravishing to the mind of any individual, than feeling his maladies yield to medicine; and especially, when he has for years, been on the verge of the tomb; weighed down by a wearisome depression of mind, and unceasing pain, perhaps without even the hope of relief; or of another, who has been violently seized with some acute and painful malady which is threatening him with certain and sudden dissolution? They only can know, who have been thus unexpectedly snatched from the confines of eternity.

We hope to be excused in once more introducing to the reader, a quotation from the learned and talented Dr. Robinson, whose glowing language, and excellent observations, we take a pleasure, on every suitable occasion, of borrowing: "Were I to recount," says he, "the incalculable advantages of this new system, it might astonish the ignorant, and admonish the wise; while both would be drawn into an extensive field of remark and meditation." "This botanic medicine purifies the blood, restores the tonic power of the fibers, and of the stomach and digestive organs; reanimates the whole frame; rouses the animal spirits, and acts, as it has been said to act, in harmony with life, in support of health, and in opposition to disease."

SECTION 5.

OF THE HEALING POWER OF NATURE.

Various terms have been adopted by different physicians, since the days of Hippocrates, to designate this power or principle, almost universally allowed by medical writers to exist. Some, however, whose lofty, aspiring minds disdained the idea of admitting that nature performed any part in the curing of disease, have denied its existence. Such an admission, they think, would be detracting too much from the high pretensions of the professors of medicine. The physician's skill must have more credit than the admission of such a power would accord to it: his study and learning, and profound knowledge of the human system and of medicine, must have more respect and deference paid to them than to suspect that nature has any thing to do with curing disease. Nature, to use the vulgar expression of a professor of medicine, "must be kicked out of doors," and the boasted controller of her laws, assume her place, and dictate her operations.

Hippocrates bestowed upon the healing power of nature, the name of *autocrateia*, but in modern times it has assumed the more comprehensive appellation of *vis medicatrix naturæ;* yet this has no advantages, even amongst the learned, over

the plain, simple, and intelligible terms adopted at the head of this section. The idea of such a principle or power, in the animal economy, whether true or false, has descended from the "Grecian luminary," and is not only found in the schools of medicine, but in the mind of the multitude, at the present hour. From the supposition of a healing power in nature, and perhaps other circumstances conjoined, it is probable has arisen an idea of the *efforts* of nature; a doctrine with which most modern writers have become entangled. A fever, for instance, is said to be an effort of nature to throw off morbific matter from the system, and thus restore the patient's health. This appears eminently to have been the idea of HIPPOCRATES and SYDENHAM.

"Dr. CULLEN," as ROBINSON observes, "says, the increased action of the heart and arteries, which takes place in the hot stage of fever, has long been considered as an effort of nature to repel disease, by physicians; and the cold stage, also, as an effort of the same power. In this sedative state, nature is concentrating her powers, to that formidable resistance against the enemy, which she displays in the strong paroxysm of fever; for it has been observed, that the paroxysm is always in proportion to the force of the chill."

Such ideas are these, are more becoming the age of fiction and romance, when every thing mysterious was attributed to the influence of its peculiar deity; when the gods were personified, and the passions deified, than they are of the enlightened age of Dr. CULLEN. This doctrine looks too much like the infancy of science, when the operations of life were attributed to a perceptive or sentient principle of which the mind was totally unconscious, to be adopted at this day, when it is admitted that the operations of nature are to be assigned to causes consistent with the effects produced.

But admitting that fever is an effort of nature to relieve herself of some noxious matter, a proposition pretty generally adopted by physicians, and how does the fashionable practice of treating fevers correspond with it? The common custom is to bleed, blister, physic, and starve the patient, and dose him with niter and other refrigerants, for the avowed purpose of *cooling* the fever. The new French practice is to bleed and starve the patient, when, as BROUSSAIS remarks, the disease will soon burn out of itself. If fever be an effort of nature to expel hurtful matter from the system, or if it be a violent action of the living power to repel the assault of disease, it would certainly be more consistent to promote this action, or assist this effort, than it is to retard or countervail it, by cold sedative medicines, whose sole effect consists in allaying the heat and excitement of fever without removing its cause.

It is very evident from the view which has been taken, that the theory and practice of physicians, in febrile complaints, are at variance with each other. If their theory be correct, their practice is inconsistent; and if their practice be right, their theory is erroneous. The fact is, that both are incorrect.

In order to prevent any misconceptions of what we have already written upon the subject, as well as to enable the reader to fully understand what follows, we will give what, from every consideration, we deem a correct definition of the term *nature*. There is scarcely any term in medicine, or any other science, the meaning of which is so vague, or illy understood in general, as this; notwithstanding its almost universal use, both by the learned and the ignorant.

We speak of the works of nature—the operations of nature—laws of nature—efforts of nature, as if nature were an animate, percipient, and rational being, capable of creating matter, of making laws for its government, and, if necessity require, to make extraordinary exertions or efforts to prevent those laws from being infringed or broken. But without taking up more time in multiplying remarks upon this subject, we will come directly to the explanation of the term as we use and understand it, and as we think it ought always to be understood in medicine, when applied to the human system.

[In the animal, as well as the vegetable, we see the display of a conservative or restorative power. Lacerations of the soft parts of a plant or animal, will readily heal up or become restored. This will all happen without the interference of art.

Now, it can not be conceived to be more difficult to believe that the organic tissues are endowed with such a conservative force or principle, than that they possess other peculiar endowments as *sensibility, irritability*, &c. Certain it is, that the organs of special sense, as *sight, hearing, taste*, &c., are much more remarkable in character than this conservative power possessed by the tissues generally.

Without extending remarks, it may be sufficient to say, that whenever or wherever the words "*healing power*," "*conservative power*," or "*nature*" are spoken of in connection with the idea of cure or of restoration from disease, this principle or endowment must be thereby understood.]

From this view of the subject, which we deem to be correct, nature must be passive, acting only as she is acted upon by other agents: And, effort, always implying activity in the

agent by which the effort is made, cannot, with any propriety be applied to passive nature.

But, although we thus deny the propriety of considering disease as an effort of nature, and from this denial may be also implied a denial of the healing power of nature, or *vis medicatrix naturæ* of the schools, yet we have an unwavering confidence in a power or principle equivalent to it, but susceptible of a different, and we conceive more correct explanation, in accordance with our doctrine of passive nature.

It is obvious that in disease, the natural healthy stimulant powers are measurably cut off, particularly the food, and the organs being impaired are not capable of properly applying those which remain; hence the body becomes emaciated, and the strength fails. In this situation there is, therefore, less power to act upon and stimulate nature to increased exertion or effort, to repel or throw off disease. Moreover, if it were by an effort of nature that diseases were cured, this event could happen only at the very onset, as it must be admitted that nature's power to make an effort is then at its zenith, and is growing weaker and weaker as disease progresses.

But instead of such a hypothesis as this, it appears much more rational to conclude that the system of man is so constituted by the Author of his existence, that every disease produces an effect which is calculated to remove the cause by which it was produced. And why should any be startled at this? The Creator of all things could as easily implant this quality or principle in the constitution of man, as to make him susceptible of being acted upon by stimulants: and most surely there is as much necessity for the one as the other.

Without this wise provision of the beneficent Creator, who in all things has an eye to the happiness and preservation of his creatures, every individual who becomes diseased, must, without the aid of medicine, undoubtedly die. It is from this constitution of the human system, that all the indications of curing disease can only with correctness be drawn; it is upon this only that the practice of medicine can be rationally founded; upon this alone can it securely stand and be sustained. It was correctly remarked by one of the fathers of the healing art, that it is only by watching nature, by what critical evacuations she cured disease, that we should be enabled to assist her in restoring health. This fundamental principle of the healing art was laid down by Hippocrates, followed by Sydenham, and more recently, by Fordyce in the treatment of fever.

Sydenham, observes of Hippocrates, "this sagacious observer found that nature alone terminates distempers, and works a cure with the assistance of a few simple medicines,

and sometimes even without any medicines at all." These observations are founded upon facts familiar with all; as every one must know that persons oftentimes recover from slight indispositions, and sometimes even from serious ones, without the aid of any kind of medicine whatever. And this arises not from the efforts of nature, but from the effects of the disease having a certain tendency to remove the cause which produced it. And thus it is that art steps in and assists in promoting those salutary operations which the powers of life are, from some cause or other, incapable of accomplishing; or, by art these effects may be accelerated, and brought about much sooner than they would be by the ordinary, unassisted operations of nature.

We may observe that nature's method of terminating a paroxysm of fever is by perspiration; and this is an effect produced by the disease, which may be accelerated by the use of suitable medicines acting in unison with the laws of life; for both the hot and the sweating stages of fever are the effects of those laws with which DEITY has endowed our constitutions for supplying the deficiency of living power, which is the cause of fever as of all other diseases, and for removing from our systems the worn out morbid matter retained in them in consequence of this deficiency. But we shall treat more particularly upon this subject, under the head of *Fever*.

What is technically termed a phlegmon, a name applied to boils and other common swellings inclined to suppuration, may be noticed in illustration of the theory which we have advanced. In cases of this kind, we are often able, at the commencement of them, by promoting the natural healthy actions of the system, to disperse, or scatter them as the common phrase is. But if this cannot be done, they will go on and suppurate, break, and discharge the matter, and heal up sound again. All this may, and often does take place, unassisted by art; but these effects may be accelerated by the use of such means as experience has proved to be efficacious in similar cases. Thus we apply poultices to promote suppuration; and when this has properly taken place, we employ the lancet, or some sharp instrument, to open the abscess to permit the matter or pus to make its escape. Yet all this, in most cases, would take place through the agency of that law of preservation implanted in the human system, without any aid from art. The suppuration would go on and the abscess open, and a cure be effected without human interposition; and, therefore to promote these effects is considered the true indication of cure which may be accelerated by suitable means. And it ought to be considered by all rational beings, as a blessing arising from the benignant provision of our

Creator, that he has not only constituted us so that our pains may be mitigated, but also provided the means of assuaging and shortening them.

We will mention one more complaint by way of illustration of the proposition that the indications of cure are, with the greatest certainty, to be drawn from nature. In comsumption, the most prominent symptoms are a cough and expectoration of matter from the lungs. This is nature's method of relieving the lungs, which is the principal organ affected in this most fatal complaint; and who would think of administering such medicines, or using such means, as would be calculated directly to check this necessary evacuation? On the contrary, it is the settled practice to promote the expectoration by all suitable means.

It is not, however, pretended that we are possessed of the knowledge of pointing out by what particular methods nature frees herself from all the maladies which she is subject to. Many of them are not terminated by any very marked or prominent symptom; and, in our inquiries upon this subject, we ought to use much judgment in discriminating those symptoms or effects which are really critical, from those that are merely the evidence of diseased action. Thus, the cold stage of fever, and the pain in the head and back, and the dryness of the skin attending both the cold and hot stages, are not to be regarded as critical symptoms or salutary effects; they are merely evidences of diseased action; and the indications of cure are to use means to produce a contrary state of the system. The hot and the sweating stages are to be considered as critical, because it is by these that we expect relief from the torpidity, coldness, and oppression of the first stages of fever. And thus we might go on and multiply the distinctions between the symptoms which we have termed critical, and those which are regarded merely as evidence of diseased action: but what we have given is sufficient.

Now it may appear from the foregoing remarks, that we disapprove of the terms, healing power of nature, and efforts of nature, because by using these expressions, we convey the idea of power and activity in a passive agent. Nevertheless, with the definition which we have given of the word *nature*, the terms, healing power of nature, will be in no danger of misleading the mind; and is moreover, perhaps as near being correct as any thing in the language. But the expression, efforts of nature, seems to us so far from the facts, that it ought to be expelled from books, and something more appropriate adopted in its stead. It should be a rule in all science, to adopt terms which express the precise idea we wish to convey; or, if no term in the language will fully and completely do this, adopt one which comes nighest, with such qualifications as will convey the exact sense. But we trust we have been actuated by higher motives,

than merely criticising upon language. The explanation of what we believe to be a correct theory, is very intimately blended with whatever there may be of criticism in our remarks. And this we conceive to be of importance no farther than it may be instrumental in preparing the mind to adopt a more rational practice; and to do this, especially with professional men, it became necessary to improve every means in our power; for as Dr. CULLEN says, "it is well known to have happened at all times, that of the persons who apply to science, the greatest part implicitly receive the doctrines delivered by their masters; which having once imbibed, adhere to them with a degree of bigotry that opposes every attempt towards innovation and improvement."—[*Professor Cullen's Treatise of the Materia Medica, vol. 1. page* 13.]

We will now take leave of this subject after remarking, that with regard to drawing the indications of cure from each particular disease, so little is known that not much reliance can be placed upon it in common, and perhaps but little ever can be, excepting in a few complaints. The grand indications of cure upon which our greatest dependence must be placed, are drawn from physiological and a few pathological facts; and upon these general indications, with a few more local ones, we rest the success of the new practice of medicine with the firmest convictions that in the common discretion of most families, it will be found a great blessing, and infinitely more beneficial than the old practice of mineral poisons, with all its splendid trappings of literature and science.

CHAPTER XXIII.

OF SOME OF THE INDICATIONS WHICH IT IS CONSIDERED NECESSARY TO ANSWER IN THE TREATMENT OF DISEASE.

In the first edition of this work we distributed the present subject into two chapters, each including several appropriate sections, the object of which was to exhibit a comparative view of indications regarded as necessary in both the old and the new practices of medicine. This arrangement also seemed to afford the best means of bestowing upon each subject, that attention which the merits of either appeared to require.

But as the arrangement in the first edition apparently involved a repetition, we determined to connect the consideration of similar subjects under the same heads; thus making the number of chapters one less than in the first edition.

For the benefit of those who may not have had the opportunity of learning from medical works, the sense in which the term *indication* is employed, we subjoin examples of its application:—In case of nausea, vomiting is the indication necessary to be answered, because nausea mostly arises in consequence of a foulness of the stomach, which indicates the propriety of an emetic to cleanse it. When a dryness of the skin prevails, diaphoretics and the vapor bath are indicated, to promote perspiration, &c. These examples we think are sufficient to enable any reader to understand the meaning of the term.

SECTION 1.

OF VOMITING.

Satisfactory indications of the propriety of vomiting patients, in the treatment of disease, must have presented themselves in the infancy of medicine. The sudden and sensible relief which must very early have been observed to follow spontaneous vomiting, could not have failed to arrest the attention of the primitive race of man, and induce him to seek the means of producing it artificially, so soon as the least attention whatever was paid to medicine.

With regard to the propriety of artificial vomiting, there is perhaps little difference of opinion amongst physicians; some, however, approving of recourse to it much more frequently than

others. But generally, medical writers are more united upon this point, than upon any other indication of cure whatever. And this correspondence of sentiment we regard as of much importance in strengthening our own views of this matter, however little we may respect their opinions on many other subjects. Vomiting, we are satisfied, is a true indication of cure in most if not all cases of disease ; but the emetics commonly employed by the Faculty we disapprove of for reasons which have been stated in a former chapter.

Dr. CULLEN remarks, that " when the contents of the stomach may be supposed to be in a morbid state, and noxious to the stomach itself, or to the whole system, there can be no question or doubt about the propriety of vomiting, except in a few cases," &c.

Now we are convinced both by reason and observation, that there can scarcely be any case of disease of a serious nature, in which the contents of the stomach do not become vitiated, and, therefore, " noxious" to the whole system. JOHN HUNTER established the proposition that the stomach was the center of sympathy, to which all physiologists since his time have uniformly assented. It is from this organ that the system receives its nourishment, which is derived from food and drink ; and from this obvious circumstance, an intimate connection and association of feeling might rationally be expected to exist between this organ and all other parts of the body. Now as any organ of the system is liable to become diseased or incapable of performing its healthy functions, whereby it also becomes disqualified for receiving and appropriating to legitimate use, its proper proportion of nourishment, it would hence seem necessary that the stomach should be, as it were, apprised of this state of the organ or organs, so that the diseased part may not be overburthened with an excess of nutriment which it could not dispose of.

Whether we have adopted the most happy mode of expressing our ideas, we cannot, of course, decide ; but that such a sympathy between distant parts and the stomach does exist, may be demonstrated by the most familiar occurrences. We may daily witness the loss of appetite from the slightest causes ; such as rheumatic pains or other diseases of the extremities, and upon trifling indispositions of various kinds ; and hence the origin, in all probability, of the popular disposition of ascribing the cause of all diseases to the stomach.

That such a connection and association of feeling as we have been endeavoring to describe, does exist, admits of no doubt ; and is rationally to be ascribed to the intimate sympathy which is acknowledged to subsist between the stomach and all other parts of the system. The celerity and the certainty with which

impressions are conveyed from the most distant parts of the stomach, is frequently illustrated by the familiar occurrence of severely wounding the finger or hand, which will often almost instantaneously produce sickness at the stomach, and sometimes vomiting. On the other hand, extreme nausea weakens the muscular powers; as a person suffering from this distressing symptom, though otherwise in the enjoyment of good health, is instantly rendered nearly unable to move or stand.

There is also another intimate association of sympathies, to which allusion has heretofore been made, (of which the stomach is the center,) in the organs and process of digestion. There is no function performed in the human system in which so many organs are concerned as in that of preparing our food for the accomplishment of its final purposes in the animal economy. Hence it would seem necessary that a common sympathy should exist between them; and the stomach and intestine next to it, being the focus in which the energies of all the others meet, it is hereby constituted the center of a functional sympathy, differing from the common sympathies which exist between other parts of the system.

Hence we infer from the general view which has been taken of the intimate connection of the digestive organs, and the astonishing sympathy which exists between each of these and the stomach, and between the stomach and every other part of the animal machine, that no serious case of disease could occur in any organ or part of the system, without producing a decided influence upon the stomach. And this necessarily being an unhealthy one, must injure the tone of this organ, and vitiate its contents, so as to become noxious to the whole system.

We may likewise further remark, that the animal fluids, notwithstanding the system may be diseased, are continually accumulating in the stomach; but not being appropriated to the purposes of health, are vitiated, and the noxious matter is thus increased in this important organ. From all these facts and arguments, we are constrained to the conclusion that vomiting is indicated in every disease of a violent or obstinate nature, to which the human frame is liable. And upon the same assumption of facts, the conclusion is irresistible that vomiting ought often to be repeated until a healthy action is so far restored that the stomach is capable of performing its healthy functions; because, until this state of the stomach occurs, its contents are liable, from the causes just stated, continually to become vitiated and injurious to the animal organs, as our own experience has repeatedly confirmed. And whoever has had occasion to vomit a patient six or eight times in the same number, or twice the number of days, and has observed foul vitiated matter of nearly the same appearance and quality discharged at each time, as we

have done; and repeated the same process on many different patients, with the same appearance and good effect, will, doubtless, with us conclude that vomiting is indicated in all violent cases, and may, with propriety and safety, be often repeated until a healthy action is restored to the system.

We are well aware that the sentiments of most medical writers, on this subject, are at variance with those which we have just advanced. They disapprove of the frequent exhibition of emetics because "it weakens the tone of the stomach." This is undoubtedly the effect of such unnatural emetics as are in fashionable use; but with such as act in harmony with the laws of animal life, as we believe the *lobelia inflata* does, no such effect is to be apprehended. This article may be administered for many days in succession to produce vomiting, with a continual improvement of the health, and of the stomach in particular, as we can testify both from personal experience and practical observation in a great many cases.

An opinion has obtained very extensive credence in the world, that vomiting is of but little utility if bile be not largely thrown off. This, however, like many other ideas connected with the healing art, is very erroneous. It is a common notion with people generally, as well as with physicians, from whom, of course, the people derive the idea, that the bile in most complaints accumulates in the stomach, and there acting as a cause of disease, must be removed as a preliminary step towards restoring health. Hence it is very naturally concluded, that unless an emetic throws out bile in large quantity, it will do little or no good. We are convinced, however, both by experience and observation, that the ejection of bile from the stomach, is not often necessary or even healthful.

Dr. Cullen says, that emetics not only evacuate the stomach, but that "the duodenum with a portion of the jejunum, may be, and commonly is, evacuated at the same time." He also goes further, and says it is probable that it is brought not only from the duodenum, but "even from the gall bladder and biliary ducts." A valve is placed at the pylorus or outlet of the stomach for the purpose of preventing the contents of the intestines from entering the stomach. The bile, therefore, cannot enter the stomach, unless some violent convulsion forces this valve open. The vomiting of bile must therefore be attributed in general to the violent convulsive action of the emetic by which the vomiting is produced; and its ejection from the stomach ought not to be regarded as a necessary object.

We are satisfied beyond all doubt, that an emetic which acts in harmony with the laws of nature, as all medicine ought to do, will rarely produce an evacuation of bile. Such circumstances will only occur when there is an increased morbid se

cretion of this fluid; which will be found to be far more seldom the case than at present is generally supposed; and when it is, it cannot, in our opinion, be considered so much the cause as the *effect* of disease. But whenever an increased secretion of bile does take place, and, as a necessary consequence, a large quantity of it is poured into the duodenum, spontaneous vomiting may produce an evacuation of it from or through the stomach. Under such circumstances as these, we should of course expect that the operation of the mildest emetic, with the unnatural quantity of bile pressing upon the valve, would force the bile into the stomach, from whence it must necessarily be thrown by the process of vomiting. There appears to be no reasonable probability, indeed scarcely a possibility, that bile ever enters the stomach only at the time of vomiting; and we think that when an evacuation of bile pretty uniformly attends the operation of an emetic, it should be regarded as conclusive evidence that such emetic acts contrary to the laws of life. No animal fluid ought ever to be ejected from the system until it has performed the office for which it was designed, unless it has become corrupt and unfit to perform its office; and then nature should be the judge and point to its removal by some unerring indication before an officious interference of art is attempted. And even then we must follow precisely the course of nature, removing the offensive matter by the same channels that she does; as man is so constituted that the natural operations of the system, in health or disease, can with no more propriety be turned from the proper channel than the regular operations of the nicest machinery.

The simple operation of vomiting, independent of any effect which the medicine may produce upon the system, some physicians have supposed to be useful to health, "by its exciting the activity of the stomach itself, and by agitating, as vomiting does, the whole body." But although vomiting may be in some degree useful in this way, yet its principal good effects must be regarded as arising from the cleansing of the stomach of its morbid contents, and from its universally stimulant effect over the whole system. This last is especially the case in vomiting with the *lobelia* and some other vegetable emetics. Even in hemorrhages, particularly bleeding at the lungs, vomiting has been recommended and resorted to with success.*

We consider the indications which require the exhibition of emetics, as much more frequently occurring, and far more readily distinguished, than those requiring the administration of cathartics; and, therefore, emetics ought more generally to be resorted to. We know full well that in this we are at variance with

* See Cullen's Materia Medica, Vol. II. pp. 328, 329. Phila. Ed. 1 2.

the established principles and usages of the Faculty. But we are in pursuit of truth, and care not whither we go, so that we are led by her unerring light. We are deeply and seriously sensible of the high responsibility which we have taken upon ourselves in attempting to revolutionize the whole practice of medicine; and nothing but what we believe to be truth shall be permitted to burden our pages. We also know that we may, with some color of truth, be charged with recommending a practice at variance with our theory; but if there be any thing of this character discoverable, we wish it to be imputed to the right cause—the want of medicines which act in unison with our theory. If our theory is correct, it will be a useful hint for those who may attempt to improve the practice. We shall endeavor, with suitable cautions, to guard the reader, wherever there may appear the slightest ground to apprehend danger. The result we must leave to be tested by the criticisms of the learned, or the experience of the multitude.

But to return to our subject. It may be remembered that the stomach, although the process of digestion is commenced and partly performed there, acts principally as a receptacle for our food; which, whilst it remains there, gives out none of its nutritious particles for the support of the body.* It is in the intestines that the finish is given to the digestive process; and in them the nutrient portions of our food are separated from the more gross particles which pass off by stool. It is true, that food, almost as soon as taken into the stomach, imparts an energy to the whole system; but this effect, it is conceived, arises in part from the immediate stimulus which the stomach receives from the food; and is instantly communicated to the other parts of the system by sympathy, as we have previously pointed out the intimate association of feeling which existed between the stomach and other parts of the body.

As just observed, the important process of digestion is finished in the intestines, when the food is immediately exposed to the action of the innumerable lacteal absorbents which take up the nutritious particles and pour them into the blood vessels which distribute them to all parts of the body. Now, it must be evident, with but little reflection, that if the stomach contains any foul or noxious matter, as it unquestionably does in most or all cases of severe illness, the evacuation of it downward must be attended with the hazard of being absorbed and contaminating the blood; thus creating a new source of irritation to the already disordered system. The morbid contents of the stomach pass-

* We allude to that portion of our food which passes through the lacteals. Majendie thinks that something is absorbed from the food whilst in the stomach, in another way.

ing through the intestines, as they undoubtedly must, if not thrown off by vomiting, and being taken into the blood, must certainly have a powerful tendency to poison the whole mass of fluids, and thus derange or destroy the peculiar organization which is necessary to continue life. For however the humoral pathology may at this day be regarded as being exploded, it is certainly a fact that the fluids hold an important influence over the solids; and those who look for the cause of disease solely in the derangement or organic lesion of the solids, may, as we think, expect disappointment.

Assuming it as granted, that the principal or most essential purpose of the stomach is a receptacle for the food; and that the nutritious parts are not absorbed by the stomach and conveyed directly to the blood; and further, that nature herself is often so operated upon by the noxious matter formed or received into the stomach as to eject it spontaneously, and thus prevent its passage through the intestines, where it would be absorbed and scattered like wildfire through the system; and when to all this we add the debilitating effects of the cathartics in most common use, the conclusion seems irresistible that emetics are more often indicated, and should more frequently be used than cathartics.

Vomiting when produced by proper emetics, especially with any of the preparations of lobelia, not only cleanses the stomach of whatever may be useless or noxious, and little if any thing more, but it also does it without inducing that permanent prostration of strength which so uniformly follows the employmen of active purgatives. And to husband the strength of the sick, not only by rejecting the use of such medicines as have a manifest and direct tendency to weaken the power of life, but by employing such as have the power of restoring the already lost energy of the system, should be a rule never to be lost sight of in the practice of medicine, and cannot therefore be too often repeated, nor too strongly enforced. We do not, however, pretend to claim that every article which we shall hereinafter recommend, acts upon those principles; but we know that the rule which we have laid down is founded upon correct data, and ought to be universally adopted. There are many articles of food that will satisfy hunger, which, notwithstanding, are unwholesome; and so there may be articles of medicine that will cure disease, which we know are not perfectly safe and salutary. We would, therefore, most strenuously and seriously recommend that every article of the materia medica be tried by the aforesaid rule, and every thing of a debilitating nature rejected.

SECTION 2.

OF PURGING

ALTHOUGH it is found useful to resort to purgative medicines n the treatment of disease, it is not so uniformly beneficial as vomiting, nor are its indications so readily to be distinguished as are those of the latter operation; and from this circumstance, as well as from their decidedly injurious effects when improperly employed, we cannot but recommend caution in their administration. The dangerous consequences of the indiscriminate use of cathartics has, within a few years, perhaps become more apparent, than at former periods; though their debilitating effects have always been known and acknowledged.

"The administration of cathartics is rendered improper by inflammation of the *stomach* or *intestines*, or tendency to it; and by much debility." Purging, next to letting blood, diminishes the living power more suddenly and permanently than does the fulfilment of any other indication which the fashionable practice of medicine imposes upon its patients. Instances have sometimes occurred in which the administration of an active purgative has produced such a prostration of the vital power that death soon ensued; evidently more in consequence of the debility thus induced, than from the effects of the disease. This has been the case in a high degree in the spotted fever or cold plague, which ravaged many parts of the United States with such frightful mortality, at different periods a few years since.

"Cathartics, especially the more powerful ones, require to be administered with discretion, even in diseases where they are indicated by peculiar circumstances, particularly any tendency to paralysis or extreme debility; also during pregnancy, immediately after delivery, during the flow of the menses, and in those liable to hæmorrhoidal affections." "The too frequent use of them induces wasting of the body, and sometimes renders the intestines morbidly irritable, so that purging is easily excited, while in other habits it renders them more torpid, and induces costiveness." *

We are satisfied from reasoning and observation, as it is also an acknowledged fact, that stimulating any of the organs or sets of organs of the animal system, beyond the ordinary bounds established by the original constitution of the animal machine, has a direct and invariable tendency to injure the healthy tone of the organ or organs thus subjected to the unnatural excitement, by which they become incapable of performing their

* THACHER'S Dispensatory, article "*Cathartics.*"

functions; and the whole system is rendered liable sooner or later to suffer in consequence thereof. Thus, when the intestines are repeatedly stimulated by active purgatives, they lose their tone, and become "either morbidly irritable," or "torpid;" and hence incapable of performing their healthy functions.

[It must be remembered that the *specific* impressions, as by cathartics, diuretics, emmenagogues, &c., bear a different relation to the general functions, or the laws of life, from those that are *general* in their effects—they are more liable to be contra-indicated, and if, under such circumstances, their use should be practiced, more or less mischief must necessarily follow. If, for example, when there is a tendency of the determining powers to the surface, and thus an indication of a critical point or state, and there should be a cathartic imprudently given, it is evident that the determining powers will be diverted from their natural course, and thus the critical character of the functions may be entirely subverted, and, indeed, another disease may follow, as diarrhea or some other local difficulty.]

It will be readily understood, we suppose, that our remarks on purging are general, and apply only to the cathartics in common use, and of these, more particularly to such as are active or drastic in their operation, because their certain effect upon the human system is to prostrate its power. Could any thing be discovered which would act as a purgative without weakening the power of life, or injuring the tone of the intestines, its exhibition would much more often be admissible than any of the purgatives now in common use. And considering the goodness of Deity in providing for all our wants in the most exuberant manner whilst in a state of health, how can we but believe that he has been as provident for us in sickness; and in the rich stores of nature furnished something to relieve every ill to which human nature is liable. We have the authority of the eminent Dr. Rush for this sentiment, and we are firmly convinced of its truth.

"After bewailing the defects and disasters of medical science, Dr. Rush consoled himself with the animating prospects of that hope which he often proclaimed from his deck, that the day would arrive, when medical knowledge should have attained to that apex of perfection, that it would be able to remove all the diseases of man, and leave not for life a single outlet, a single door of retreat, but old age; for such is my confidence, said he, in the benevolence of Deity, that he has placed on earth remedies for all the maladies of man. I remember still, with a thrill of love and gratitude, to that admired and venerable professor, with what enthusiasm and transport, and prophetic vehemence, he used to pronounce that sentiment at the close of his lectures."*

The new French schools of medicine seem to have fully es-

* Robinson—Lecture 1.

poused the doctrine that purgatives ought to be expunged from medical practice. "None but blind humorists could have established those barbarous indications consisting in the expulsion of bile, mucus, saburrhal obstructions, and other matter by which they thought the body infected, without examining the condition of the viscera, or considering that the tissues, whose action is impaired, should alone be attended to. Let candid physicians compare the results of this [the new French] method in the various kinds of *gastroenteritis*,* with those obtained by that perturbating, incendiary, or evacuating treatment so generally employed in fevers, and let them decide. It is at the bed-side that the physiological doctrine is most constantly triumphant."† In another place, the same author, in apparent reference to the use of purges in fever, calls them "sanguinary remedies," "keeping up or exasperating the disease, at the same time that" the physician "was attempting to supply nature with the means of returning victorious from a conflict in which she experienced a greater resistance from the treatment than from the disease."‡

We are of the opinion, however, after all that has been or can be said with regard to the injurious consequences resulting from the use of purgatives, that a large portion of the evils have arisen from the use of improper medicines; and we are not aware that any discovery has yet been made of a carthartic which is certainly known to act in harmony with the laws of life. Should any one be fortunate enough to detect such a remedy, and communicate it to the world, he will deserve the lasting gratitude of the human family.

The common practice of exhibiting purgative medicines as a remedy for costiveness is highly reprehensible. The cause of this complaint is a loss of tone in the intestines; and, as has previously been shown, the frequently repeated use of such medicines increases the difficulty, or it may eventually produce the opposite state, morbid irritability. The true indication in constipation of the bowels is the use of stimulating bitter and laxative tonics.

[The indications for the proper use of cathartics, are, however, of such a character, as to warrant the conclusion, that they are by no means an unimportant class of remedies; but that in their place—that is, when truly indicated, they are of very great utility, and are necessary to complete our medical resources in the cure of disease.]

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* The new French name for fever; or rather the local disease which they suppose is the cause of fever.

† Begin's Therapeutics, page 183. ‡ Ibid. p. 23, 24.

[A late author (Kost), in speaking of the application of cathartics, and the indications for their use, remarks, justly, in regard to their use in dropsy, as follows: "In their organization, the relation existing between the intestines and the general vascular system, is of the most intimate character. When the bowels are full of nutritious matter, lymphatic absorption is active, and the arteries are rapidly supplied; but when food is sparingly taken, and the lacteals consequently inactive, we find that cutaneous absorption is much enhanced. Cathartics being equivalent to an absence of food, cause absorption from serous surfaces to take place, and thus prove their utility in dropsies." This author mentions, among the most common indications for the use of cathartics, the following: "When there are morbid accumulations in the bowels, as in some forms of constipation, and when there are symptoms of worms; in bilious derangements; in fevers; in dysentery, diarrhea and cholera infantum; in dropsy; in certain inflammatory diseases; some forms of colic; certain forms of congestion, as a derivative," &c.

In all cases where blood-letting is supposed, by the old school practitioners to be necessary, catharsis, if judiciously employed, will most happily supply its place. It will fulfill the indication without producing the debility caused by the loss of blood. Entire relief may thus be afforded to the circulation, and a thorough relaxation may be instituted whenever necessary. Thus, in all those urgent cases in which the taking of blood has been thought indispensable, we find that after the antispasmodics or nauseants have been exhibited to purpose, these cases will only require a cathartic to effect all that is desired.]

The contents of the intestines are also hurried off in the same premature manner, not allowing time for the lacteals to absorb all the nutritious or stimulating particles from the chyle which is destined to be submitted to their action. The sudden abstraction of so much matter from the intestines as is often removed by powerful purges, produces much debility merely by the loss of so much bulk, the mere magnitude of which, by keeping the intestines properly distended, seems to be of much importance in the animal economy in some way or other. A modern writer, (EWELL,) advises persons laboring under severe diarrhœa to be careful not to encourage or allow of too great discharges at one time, as fatal consequences have resulted in such cases from the want of proper care.

Thus we may see that every effect produced immediately upon the intestinal canal by purges, is productive of injury; and, therefore, there too general use ought to be dis-

pensed with. A natural action of the intestines is what is wanted, which may generally be procured by the use of general stimulants and laxative tonics, and by the aid of injections or clysters, of which more will be said hereafter.

SECTION 3.

OF BLEEDING.

Blood letting is resorted to for the purpose of reducing the quantity of blood, and removing inflammation. It has also been supposed by the vulgar, and countenanced, if not believed in, by enlightened physicians, that blood letting was indicated by a vitiated state of the blood, and that the *bad* blood could be drawn out by bleeding, and the *good* left in the veins. We cannot attach importance enough to such an idea, however, to take the trouble to confute it.

The custom of blood letting has long been used in medical practice; and, although it has often been the means of removing the acute pain attending violent inflammation, as in pleurisy, yet it is sure to produce permanent debility, from which the patient slowly recovers; and many instances are known and recorded in which very alarming and even fatal consequences have ensued, either immediately or within a few hours or days. There are no means used for the cure or alleviation of disease, by which the vital power can be so suddenly or permanently reduced as by bleeding; and consequently, none by which so much mischief is likely to be done. It has been asserted by a late writer, that, during a certain period, more persons perished by the lancet, than by "war, pestilence, and famine." Even Dr. Rush, who might be considered an honor and an ornament to any country or age, has been accused, and no doubt justly, with destroying his patients by the pernicious practice of blood letting. His treatment of yellow fever, which was severe purging and copious bleeding, it was declared by Dr. Currie, could "not fail of causing death!" Indeed, the certain tendency of letting blood, according to the new physiological theory, is that of assisting disease to accelerate the fatal period, because it prostrates the living powers. The blood is the vital stream whence the whole animal system is nourished and sustained, in disease as well as health; and in proportion to the reduction of its quantity must be its morbid effects upon the system, and its debilitating influence over the vital functions.

The knowledge of these physiological facts must unhesitatingly lead us, *a priori*, to detest the "incendiary" custom, so

universally adopted, of wasting the vital fluid in all inflammations, and in many cases of fever. Such practice can only be tolerated in the absence of the knowledge of more rational and better means; but the ignorance which leads to such a suicidal course—a course so contrary to the best established principles of physiology, ought to receive no kind of countenance, respect, or toleration from enlightened men.

"The question of the morbid effects of the loss of blood," says Dr. HALL, "appears to me not to have sufficiently engaged the attention either of the physiologist or practical physician; yet to both they offer objects of inquiry of great interest and importance."* The work from which this quotation is made, is probably the first ever published principally devoted to this important part of medical practice; and the accurate details of a variety of cases, and the relation of many disastrous consequences resulting from blood letting, very clearly evinces the author's close attention to the subject upon which he treats. It is a work which could not fail to be interesting to every medical practitioner, and especially to such as are in the habit of indiscriminate repeated bleedings.

The same author, in speaking of the remote morbid effects of loss of blood, says, "of the more obvious and striking effects of loss of blood, or those of reaction, are such as to suggest the idea of increased power and energy of the system, and of increased action of its organs, and to lead to an erroneous and dangerous employment or repetition of the lancet, when a directly opposite mode of treatment is required; while the state of actual but protracted sinking frequently resembles a state of oppression of the brain, or of congestion of the lungs, so accurately, as to prompt the unwary practitioner to a still more suddenly fatal use of the lancet."—[*p.* 12.] Again he observes: "That the effects do not correspond with the measure, or even a comparative measure, of loss of blood in different subjects. Sometimes there is no reaction. At other times the reaction is excessive and even violent. In a third instance we may be surprised by the sudden accession of a sinking state, or even of the symptoms of immediate dissolution."—[*p.* 13.]

The observations of Dr. HALL are but fatal premonitions of the disastrous effects of the lancet in the most experienced hands; whilst the aggregate amount of mischief which has arisen from this pernicious practice in the hands of all who have been dabbling with it, is, and must for ever remain, beyond the reach of human calculation.

The immediate effects of the loss of blood, as stated by Dr.

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* Researches principally relative to the morbid and curative effects of loss of blood: by Marshall Hall, M. D. page 11

Hall, are, syncope, convulsions, delirium, coma, and sudden dissolution.

Cases of syncope or fainting from the loss of blood, are familiar to every one who has often witnessed the operation of blood letting. "From this state the system usually recovers itself spontaneously, if the cause by which the syncope was induced be discontinued. The principle by means of which this recovery is effected, may, without involving any hypothesis, be denominated reaction."*

Convulsions stand next after fainting in frequency of recurrence, "and are most apt to occur in children, and in case of the slow and excessive detraction of blood."† "A physician aged thirty-four, became affected with inflammation of the larynx. He was bled freely on two successive mornings at his own instance. In the afternoon of the second day, the disease being unsubdued, he was bled a third time, and placed in a rather inclined position upon a sofa. The blood was allowed to flow until thirty-four ounces were taken. He then suddenly fell upon the floor violently convulsed; and he remained for some time afterwards in such a state of syncope as to render his recovery very doubtful; being carried to bed, however, and cordials being administered, he slowly recovered." "A very intelligent surgeon in the neighborhood of London, in bleeding a clergyman to the extent of twenty ounces, whose idiosyncrasy in this respect was not known, was compelled to remain with him during the whole of that day; and notwithstanding frequent recourse to brandy, continued long apprehensive for the patient's life."‡

"Delirium occurs as an immediate, as mania occurs as a more remote, effect of loss of blood."

"A young man, aged thirty, had lost much blood from the arm and by leeches, and under the influence of a brisk purgative, fell into complete syncope; instead of laying him recumbent, his ignorant friends kept him in the erect position during an hour and a half, and thus protracted the state of deliquium during the whole of this period.‖ He was found perfectly colorless and senseless, and affected with rattling in the breathing. Being laid down, he made a convulsive effort to expectorate, and the blood rushed into his cheeks; in half an hour he began to recover, opened his eyes, and complained of deafness; the pulse was frequent. The rattling gradually subsided, and he gained a degree of warmth under the influence of brandy and fomentations.

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* Loss of Blood, page 17. †Ibid. ‡Loss of Blood, page 18.

‖ It ought to be borne in mind in all cases where loss of blood produces any unpleasant or alarming symptom, that the patient should be laid immediately in a horizontal position.

"To these phenomena succeeded severe rigor, followed by great heat of skin, constant delirium, with continued though diminished deafness. The delirium did not cease during the night. On the following morning it was only occasional, and the deafness slight. This state was followed by numbness of the feet and legs, and great fear of choking on going to sleep. The patient gradually recovered.

"Another patient fell and hurt his back. On three successive days he was freely bled from the arm and by cupping, and purged. On the evening of the third day he was again bled. This was followed by faintness, sickness and retching, and much affection of the head.

"I saw this patient very early on the following morning. There was great pallor, tinnitus aurium, with intolerance of noises, and of light, and sighing breathing. To these symptoms succeeded great hurry and alarm of mind, with extraordinary noises and visions, delirium, weeping, and sighing. At length, continued delirium supervened, and finally wore out the patient."*

"It is important to remark, that delirium may occur even from the loss of a very small quantity of blood, in those cases in which there is what I have ventured to term an intolerance of loss of blood; or, in other words, great susceptibility to its effects."†

With regard to a state of coma or lethargic drowsiness, Dr. HALL remarks: "We may be called to patients so perfectly comatose, immediately after blood letting or hæmorrhage, tha we may be in doubt for a time whether the case be not apoplexy."‡

A state of coma or sleepiness is peculiar to children; and, according to Dr. HALL, may arise not only from the exhaustion attendant on blood letting, but from exhaustion occasioned by other means, and particularly purging, and often from spontaneous diarrhœa. In his remarks upon the use of blood letting in the treatment of the diseases of infancy and childhood, he says: "This tender age is far more liable than later years, both to the insidious, and the sudden, fatal effects of loss of blood; it therefore requires to be viewed with still greater care and watchfulness."‖

Of cases of sudden dissolution from the loss of blood, Dr. HALL gives a number of instances, in different parts of his interesting work. He copies from the London Lancet, vol. xi p. 94, the case of a man who had fallen from a scaffold, and received an injury about the thorax. As this case is too lengthy

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* Loss of Blood, pages 19, 20.
† Loss of Blood, pages 20, 21
‡ Ibid, page 22.
‖ Ibid, page 166

for insertion verbatim, we will abridge it by confining ourselves to the most important particulars, and the final result.

This patient, immediately on entering the hospital, was bled to eighteen ounces, and at noon of the same day lost twenty ounces more, which gave him relief; the blood exhibiting a decidedly inflammatory character. Next morning, having passed an indifferent night, and the pulse quick, he again lost eighteen ounces of blood, which was again repeated, in similar quantities, at noon and night. The blood drawn this day had not the slightest appearance of inflammation.

The following morning he appeared much better; talked cheerfully with a friend, and expressed himself free from pain. The pulse was small and jerking, but very compressible. In this situation, the patient was ordered to lose eighteen ounces more of the vital fluid, from the supposition that the state of the pulse indicated inflammation, instead of resulting from the exhaustion of repeated bleedings. "The dresser, however perceiving what effect even the loss of a few ounces had, desisted from drawing any more. About two hours subsequently, Mr. LAWRENCE saw the patient, and concurred with Mr. LLOYD, as to the propriety of the further abstraction of blood; they therefore directed twenty ounces more to be drawn.—The pulse after this time became a mere flutter, and the man only survived a few hours!"*

Dr. HALL gives many other cases of dissolution, evidently from exhaustion by blood letting; but this one will suffice to close the dark catalogue of the work of death from this incendiary practice. Similar cases might be added from other sources, and there is no doubt that most physicians of extensive business who have addicted themselves to this fatal practice, might, after reading Dr. HALL, call to mind instances in which they had evidently contributed to the work of devastation and death; though at the time, they might have been perfectly unconscious of contributing to such fatal result.

When we take a physiological and pathological view of the blood, we shall certainly be astonished that more lives than is apparent, have not been lost by blood letting.

We have elsewhere noticed the fact, familiar to every physiological student, that the blood is the medium through which the system receives all its nourishment; and, indeed, the whole vital power is undoubtedly concentrated in this fluid. After it has received the nutritious parts of our food from the intestines, and the stimulant principle from the air in the lungs, it traverses the whole body, for the purpose of supplying to all parts the portion of nourishment and stimulus necessary for

* Loss of Blood, page 24.

promoting the functions of life. This distribution of nutriment and stimulus is more necessary in disease than in health; because disease is the result of a deficiency of the vital power, and which when uninterrupted, keeps all the organs in vigorous action and healthy tone. Moreover, it yet remains to be proved, that nature produces an exuberance of the purple flood any more than of flesh or muscle, even in the best state of health; and in disease, there are certainly fewer materials from which to form an exuberance of blood, or even to furnish a requisite supply for the ordinary purposes of life.

How injurious then must it be to the system, already suffering from the abstraction of vital stimulus, to abridge the very means which are provided to replenish and sustain its wants, by wantonly wasting the vital fluid! By diminishing the quantity of blood, the whole system, even the minutest fiber, suffers a diminution of nutrition and vital power. Even the mental energies must suffer, because the organs of the mind, in common with all others, are sustained by the same means and from the same source. Thus it may be seen, that although the sick patient may possess the same capacity for comprehending ordinary matters, he is incapable of abstruse reasoning or profound thought. Indulging in any thing of this nature is sure to injure his health, and should therefore be avoided.

It may be said that plethora and inflammation furnish pathological facts capable of overturning all the theoretical reasoning which has been, or can be advanced. We are well aware that theory must always yield when it comes in conflict with experimental facts. But we are equally well aware, that even experience, under the influence of a false theory, has often produced wrong conclusions, and led to a corresponding error in practice. Thus we see in cases of plethora or apparent fullness of blood, that the abstraction of a part of it appears to afford relief; but at the same time it produces a degree of permanent debility, and in some instances has occasioned death. In inflammation too, bleeding often affords relief to the most urgent symptoms of pain; but in this, as in plethora, permanent debility is induced; and in some cases repeated bleedings which appear necessary to subdue the violent symptoms, terminate in death. Instances of this kind might be multiplied.

Both these states of the system may be relieved and cured by a simple process, with perfect safety and far more certainty than by letting blood. The means employed will possess the advantage of acting in harmony with the laws of life. Of these means we shall speak more particularly hereafter.

It has been urged in favor of blood letting, that it is indicated by the natural operations of the system. But admitting this reasoning with all the force that can consistently be attached to

it, and it argues nothing in favor of using the lancet. We allude to bleeding at the nose, which often relieves the headache. Epistaxis, or bleeding at the nose, is principally, if not wholly, caused by an over determination of blood to the head, and is produced mechanically, by inordinate pressure upon the tender fibers of the vessels, causing them to burst. But this mechanical force rupturing the vessels and giving vent to the restrained fluids, cannot be considered as harmonizing with the laws of nature, because these never exert mechanical violence sufficient to injure the most delicate fiber or excite the most susceptible nerve. If the practice of blood letting received any countenance from spontaneous hemorrhage from the nose, bleeding ought only to be encouraged from that organ, and in such complaints as bleeding from the nose relieves. But even spontaneous bleeding from this organ, if of frequent recurrence in the same subject, ultimately induces a weakly state of the body.

SECTION 4.

OF BLISTERING.

The application of epispastics or blistering plasters, is considered to be indicated in many cases of pain and inflamination, and in fevers of the typhoid type, to "communicate a stimulus to the whole system, and raise the vigor of the circulation."*

The most common article in use for producing a blistered surface, is the powder of the *cantharis*, or blistering fly. There is no doubt that the application of blistering plasters often removes pain and inflammation, and may also affect the general circulation; but this may be done as well without producing a blister as with, and save all the painful and disagreeable consequences of the ulcer which succeeds a blister. The principle upon which this relief is obtained seems not to be well understood, it being attributed to the pain it excites in one case, and the inducing a different kind of action in the other; in the one case removing pain, and in the other, morbid action or inflammation.

The facts are, that in all cases of pain and inflammation, or in any other case in which blisters afford relief, there is want of sufficient action in the vessels of the affected part. Pain, we consider in all cases, an evidence of obstruction, and is always an attendant upon active inflammation. The obstruction to the free passage of the fluids through the vessels, is what causes the pain. Now, how the "exciting one pain" or

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* Hooper's Dictionary.

obstruction can "relieve another,"* seems to be beyond the reach of philosophy to comprehend or account for satisfactorily. The only thing that approximates towards satisfying our mind, is to suppose the flies to act as a stimulus which removes the obstruction that causes the pain and inflammation; whilst the pain and inflammation caused by the flies is to be considered as arising from the too great stimulant power of the flies, or their stimulating in an unnatural manner. Because whatever stimulates the system, either generally or partially, in unison with the laws of nature, will not produce blisters.

Moreover, it is agreed upon all hands that the evacuation of fluid which takes place from a blister, is too inconsiderable to have any influence in removing disease. It must, therefore, do it by opening the obstruction which causes the pain and inflammation. Pain, according to our theory, is principally caused by an obstruction to the passage of the fluids through the painful part; and hence we infer that the Spanish flies afford relief by stimulating the diseased vessels into higher action, whilst the vesicatory or blistering process produces no good effect whatever.

All the good consequences resulting from the application of a blister plaster may be obtained from a strong preparation of either vinegar or brandy and cayenne pepper, without the protracted painful suffering consequent on the ulceration of blisters. The cayenne is a powerful stimulant, producing a very sensible pungent effect wherever applied to the skin; and so far as our own experience goes, always affords relief in cases where we had reason to expect blisters could have been useful.

Thus we think it manifest that it is not by "inducing an action of a different kind in the same or a neighboring part," that a morbid operation is corrected; nor does the "exciting one pain" ever "relieve another;" but it is, we confidently affirm, by removing the obstruction and restoring a healthy action, that pain and inflammation are removed. It is true, that where a morbid action exists, the inducing of a different action, providing that be a healthy one, is correct physiological doctrine; but this does not appear to be the principle upon which the Spanish flies have heretofore been supposed to operate. Indeed it would seem that it had never entered the minds of physicians that a diseased action could, by salutary medicines, be changed at once into a healthy one; but must first be altered to some other unhealthy action, and then, by the powers of nature, be restored to proper order. We must confess that we have little partiality for, or confidence in, remedies that act upon this principle. We want medicines and means which exercise a direct influence

* Thacher's Dispensatory, page 109.

upon the diseased organ, and without any circumvolutions restore a healthy action in the unsound part.

The practice of exciting blisters with the Spanish flies is objectionable on other accounts besides the protracted soreness which they produce. Their use "is often followed by a stranguary, accompanied with thirst and feverish heat."*

Dr. HILLARY, an English physician, is not so modest as Dr. THACHER, in his remarks on the effects of cantharides, or Spanish flies as they are more commonly denominated. He says, "I have long observed that blisters are too frequently, and too often improperly used, as they are now so much in fashion." "It is very probable, that we have no one remedy in all the materia medica, that is so frequently abused, and so often improperly applied," "not only in too many cases, where they cannot possibly give any relief, but too often where they must unavoidably increase the very evil which they are intended to remove or relieve. How often do we see them applied, and sometimes several of them, by pretended dabblers in physic, not only where there are no indications for applying them, but where the true indications are against their application; as, in the beginning of most fevers, and especially those of the inflammatory and of the putrid kind, where, in the first, the stimulus of the acrid salts of the cantharides, which pass into the blood, must unavoidably increase both the stimulus and the momentum of the blood, which were too great before, and so render the fever inflammatory, and all its symptoms worse.

"And it is well known that the cantharides contain a great quantity of alkaline, semi-volatile salts, which pass into the blood, though they are applied externally; and attenuate, dissolve, and hasten and increase its putrefaction, which is also confirmed by the putrid alkaline acrimony which they produce in the urine, with the heat and stranguary, which it gives to the urinary passages."

SECTION 5.

OF STARVING.

THE practice of starving is very common to nearly all classes of physicians, but it is most peculiar to the new French schools of medicine. In some severe cases they push the fulfilment of this indication to its utmost limit; stopping only at the confines of starvation. "The first indication," says BEGIN, "in acute

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* Thacher's Dispensatory, page 284.

or chronic gastritis, [which term he appears to use as he does gastro-enteritis, as synonymous with fever] is abstinence." And, "in many cases, the physician is placed between the fear of exasperating the disease by allowing food, and the danger of causing, by a longer abstinence, the stomach to become irritated by a continued absence of the materials it requires." "The call of the patient cannot be a safe guide for the physician."*

The fashionable mode of treating disease by the administration of such remedies as are inimical to the laws of animal life, as we have shown that the greater number upon which physicians of the old school place their principal dependence are, no doubt renders it improper to take food; although the appetite of the famishing patient might even require it. The hostile remedies, perverting the very order which they are intended to restore, make it improper to gratify the calls of nature, because, in this perverted order of the vital laws, the organs are not in a state or capacity to properly manufacture and appropriate to their legitimate purpose the materials which exhausted nature craves.

But when the system is under the influence of remedies which act in harmony with the laws of animal life—remedies which are hostile to disease and death, and which are calculated to restore to harmony that discord of the animal functions which is the effect of all disease; we say, when the human system is under the influence of such remedies as these, the calls of nature for food and drink ought always to be gratified. True, a factitious appetite may occur, which may need restraining; and the same precautions may be necessary during the convalescence from fever and other acute diseases, when the appetite becomes too strong for the impaired tone of the organs; but who is there so deficient in judgment that cannot, with a little reflection, regulate the quantity to suit the state of the stomach?

The desire for food and drink, being the result of that instinctive feeling, common to the whole animal creation, by which the individual is preserved, ought always to be gratified; taking special care, however, to distinguish between the morbidly insatiable appetite which is sometimes met with in some complaints, or the too greedy one of convalescents, and the natural calls of the living power for something to sustain its operations.

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* Begin's Therapeutics, vol. I. pages 172, 173.

SECTION 6.

OF INJECTIONS.

The employment of injections or clysters appears to be of very ancient origin; having been learned, as is said, from the Ibis, a bird worshiped by the Egyptians "from the services it did in devouring great numbers of serpents, which they observed injured by their stench when dead, as much as by their bite when alive."* This bird is said to be similar to our kingfisher, and when sick was perceived to inject with its long bill the water of the Nile into its fundament, whence the people of Egypt are said to have learned the use of clysters in curing disease.†

The great value of injections, however, seems in general but imperfectly appreciated even by the medical Faculty, excepting in a very few diseases. And in these they are comparatively of little use, from their being usually composed of inert materials. The most predominant idea is that clysters are only indicated by an obstinately costive state of the intestines; and in ordinary cases of this kind, it matters little what enters into their composition. But in diarrhœa, dysentery, fevers, and all general and violent complaints, and in all diseases of the bowels, medicines highly useful in removing the disease may and ought to be introduced into the system in this manner. The employment of medicated injections stimulates the intestines and muscles concerned in the expulsion of the fæces; whereby, in costive habits, the necessary daily evacuation of excrementitious matter from the intestines is accomplished without the aid of injurious laxatives or more debilitating purgatives.

The great importance of injections to promote the regular daily dejection of the fæces, particularly in fevers, and especially those of the typhoid type, ought to be indelibly impressed upon the mind of every individual, and particularly those who have the care of the sick. None, perhaps, but those who have made a profession of medicine, or who are well experienced in nursing, can be aware of the high importance to the sick of having regular stools. And in no way can they be so cheaply, expeditiously, and advantageously procured as by the use of clysters. The great relief which is frequently and readily obtained in this way, will far more than compensate the sufferer and his or her sympathizing friends who may have to administer them, for all the seeming indelicacy attending this invaluable mode of exhibiting medicine.

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* Smith's Treatise on Fever, page 375. † Laxgius, lib. 11, ep. 11.

In cases of drowning, or of suspended animation from any other cause, we have no doubt that injections of warm stimulating medicines would be of more consequence in restoring animation than any thing else that could be advised. The intestines are known to be the most susceptible of any organ within the immediate reach of medicine. Moreover, it is said, that in drowning, the intestines exhibit traces of vitality after life has disappeared from every other part of the system. If these propositions are correct, and physiology and pathology we think will confirm them, it must be evident that stimulating injections, by warming and exciting the intestines, are admirably adapted to resuscitate persons apparently dead from drowning.

It was the remark of Dr. Thomson, who has the chief merit of introducing clysters into extensive use, that "they are perfectly safe in all cases, and better that they be used ten times when not needed, than once neglected when they are. In many violent cases, particularly where there is danger of mortification [of the intestines,] patients may be relieved by administering medicine in this way, when there would be no chance in any other. I do, therefore, most seriously advise that these considerations be always borne in mind; and that this important way of giving relief be never neglected."*

In the complaints peculiar to infants and children, injections are peculiarly serviceable. From the nature of the food of infants, and the too common indulgence of children in unripe fruit and other unwholesome trash, their complaints mostly arise from derangements of the intestinal canal. The irritation of teething is also another fruitful source of derangement of the intestinal functions. In all these cases, injections are found to be peculiarly serviceable.

A modern author† speaking of the use of medicines in this way, says, "Clysters are of the highest importance in the practice of medicine; and many are lost by the neglect of this invaluable mode of administering remedies. Were I confined to one remedy for the cure of disease, I should choose clysters. They are not only safe, but highly useful in every disease in its forming stage. In dysentery, and many other diseases, no physician can acquit his conscience for an omission of this remedy. Every family should have an apparatus for this purpose, and view it as a matter of the highest importance to keep it in clean, complete order." It is, perhaps, unnecessary to add, that we fully concur in the sentiments contained in this quotation. We would, however go further than Dr. Jameson, and say, not only in the forming, but in every stage of disease,

* New Guide to Health. † Dr. Jameson.

clysters are of the highest utility. And with him we feel it our duty to enforce the propriety, nay, the necessity of every family's having a syringe, that they may be provided for all occasions of emergency. In cases where medicine or food cannot be swallowed, either from a diseased state of the œsophagus, from spasm, as in hydrophobia, or in case of suspended animation, both food and medicine may be introduced into the system by injection, by which means life may often be prolonged, and the chances of cure multiplied.

Dr. JAMESON further remarks, "if they, (clysters) are so beneficial, why so childishly neglect their use because, to those unaccustomed to them, they seem indelicate; but what has delicacy to do with matters which jeopardize human life? Much of the indelicacy, however, attending the former method of administering injections with a bladder and pipe, may be avoided by the use of a pewter syringe. This convenient and useful instrument, after being charged, must be placed under the bed clothes, and the patient can introduce the pipe, when the attendant can throw up the contents of the syringe and withdraw it from the bed, without any exposure of the patient whatever.

SECTION 7.

OF VAPORIZING, OR THE USING OF THE VAPOR BATH.

THE importance to health, of the vapor bath, although very early known and often recommended, has been much neglected in most civilized communities, until within a few years Dr. THOMSON and his agents have given such an impulse to public feeling in the United States that it appears likely once more to be extensively adopted in medical practice. It seems astonishing indeed that this available and ever useful means of mitigating disease, should have been so nearly abandoned. It is attributable, however, to the same cause which ever has and perhaps ever will prevail in the walks of refinement, by which society is driven from the paths of nature into the vain pursuit of some artificial phantom, as a substitute for the more substantial and less expensive gifts of Nature's GOD.

It has heretofore been shown that disease is a failure of the vital power of the system; and hence when this takes place, a degree of languor or sluggishness of the animal functions ensues; the secretions and excretions do not progress with suitable activity; perspiration especially is retarded, which adds an additional source of irritation to the diseased organs. As a necessary consequence, the animal fluids become thick and viscid, and of

course cease to circulate with the requisite facility through the minute capillary vessels, which increases the load and oppression of the already weakened struggling energies of life.

Hence the surface of the muscles, and of all the internal viscera, are insufficiently moistened with the fluids which soften and lubricate their surfaces that they may glide over each other easily and smoothly without too much friction; and, furthermore, the thickened juices, although they continue to flow sluggishly on, do not pass through the vessels in that agreeable manner that they do in health. The pain and soreness of the flesh; the headache; the lassitude; the debility; and the often extreme aversion to muscular exertion or motion, some part, or the whole of which symptoms so uniformly usher in an attack of fever, the most universal complaint of the human family, may readily be traced to such a state of the system as we have described.

Now the application of heat, in any form, to the human system, it is well known, acts as a powerful stimulus; but applied in vapor or steam, is admitted to be far more penetrating and efficient than it is in any other manner. It adds vigor to the living power, and penetrates and relaxes the constricted vessels; stimulates the organs; attenuates or thins the various fluids, and thus promotes the secretions and excretions; whence the muscles and viscera are again properly lubricated; perspiration returns; the worn-out morbid matter is removed, and all the functions of life are again performed with healthy activity, and health and vigor assume their empire over the frail and complicated tabernacle of man.

Heat and moisture, that is, vapor or steam, applied to the surface of the body, is both emollient and anodyne. It relaxes the rigidity of the skin and external parts, in all cases of fever and inflammation; and, in cases of broken or dislocated bones, cloths wrung out of hot water and applied as hot as can be borne, will relax the muscles so that the bones may be replaced, if done soon after the accident, almost without pain. And in cases of the most excruciating pain, indicating, as the old practitioners would judge, the use of opium or the lancet, the proper use of the vapor bath will afford the most sudden, efficient, and permanent relief. It procures this kind of relief because it acts upon physiological principles; removing the cause, and restoring a healthy action. The cause of pain, as we have before observed, is generally an obstruction in the painful part, excepting cases where pain is produced by sympathy. The application of heat and moisture, as we just remarked, penetrates the system; relaxes the constricted vessels; attenuates the fluids, and enables the living power to perform its office, and thus relieves in a mode which opium nor bleeding can never do. Hence too, the pain and soreness; the headache and stupor; the lassitude and

debility; and the sluggishness of the fluids, which characterize the first onset of fever, are removed on the same principles.

The usefulness of vapor or steam is not confined in its application to the skin. In painful inflammatory affections of the lungs, attended with internal soreness and difficulty of breathing, inhaling the warm vapor of vinegar and water, affords the most grateful relief. The same thing is also useful in bad cases of sore throat of every description.

To the foregoing, we also beg leave to introduce the testimony of others in favor of the vapor bath. The Domestic Encyclopedia, on the subject of baths, says, "We allude to the sweating or vapor baths, which," in Russia, "are used by persons of every rank and age; in almost every disorder, before and after a journey, hard work, &c. These are frequented at least once a week, or as often as possible, whether in a state of health or sickness. The extraordinary degree of heat produced by the evaporation of water thrown upon red hot stones in a close room, raises the thermometer to 146 or 168 degrees; the latter of which numbers is a degree of heat considerably above that which melts wax, and only twelve degrees below that for boiling spirits of wine. In such a bath, the Russians lie naked on a bench, and continue there, notwithstanding a perfuse perspiration, sometimes for two hours, occasionally pouring hot water over their bodies; thus, some, with a view to promote perspiration, and completely open the pores, are first rubbed, and then gently flagellated with leafy branches of birch, while others wash their bodies with warm or cold water, and all of them at length plunge over head in a large tub of water. Many, however, rush out almost dissolved in sweat, and either throw themselves immediately from the bath room into the adjoining river, or in winter roll themselves in snow during the most piercing cold, without suffering any inconveniences and probably with advantage; for we understand that rheumatisms are scarcely known in Russia; and there is great reason to attribute this exemption to the use of the vapor bath." By exciting an unusual degree of perspiration, they (vapor baths) promote cleanliness, while they render the skin soft and smooth, circumstances essential to health and longevity.

Dr. Thomas, in treating of the means of curing rheumatism, recommends a warm, or a tepid bath, according to circumstances. "Both remedies, however, may," he thinks, "be considered of inferior value in the cure of rheumatism, when compared with the topical, and sometimes general use of hot water in the form of vapor. Whenever the joints are very rigid, and the pain upon motion exquisitely severe, or where the muscles have become contracted and almost paralytic; and indeed, in all protracted cases of the disease of the hip joint, lumbago, or scia-

tica, the vapor of hot water, locally and properly applied, will seldom fail, in conjunction with other proper topical applications, to prove a safe and successful remedy." "A vapor bath, constructed agreeable to the plan advised by the honorable BASIL COCHRANE, or in the Russian manner, would be a great acquisition in all infirmaries and hospitals."*

Speaking of the mode of applying hot water in the obstinate complaints just named, Dr. THOMAS observes, "A large boiler, with a pipe affixed to it forms a simple apparatus. With this, the parts affected may be *steamed* for about half an hour at a time, repeating the process two or three times a day."† Yes, kind reader, credulous or incredulous, Dr. THOMAS, an eminent medical practitioner of the old school of medicine, who has practised in both hemispheres, and in different climates, having, as he says, "obtained an insight into the practice of physicians of both Russia and Sweden, during a residence in the capitals of those empires," and an "experience of upwards of forty years," unhesitatingly recommends what, in the Botanic practice, is considered by its enemies as an empirical and dangerous custom. And Dr. THOMAS recommends this *terrible* operation of steaming, not only topically but generally, and considers it preferable to the warm bath, which "frequently renders the patient hot and restless." "Now the advantage," says Dr. THOMAS, "of the vapor bath, (steaming) is, that perspiration takes place at a much lower temperature in it than the other." In the warm bath, "when the exhalents are ready to yield their contents, the surrounding medium, (water) presses upon the cuticle, and in some measure prevents the flow of perspiration which it had brought upon the surface: on the contrary, in the vapor bath the heat being applied to the body in an æriform state, unites with the insensible perspiration as it arises by the exhalents, condenses upon the surface, and drops from the body by its own weight, meeting with no resistance from the elastic vapor."‡

We deem it unnecessary to say more with regard to the superiority of vapor bathing over immersion in warm water, as but little reflection will, we think, convince any philosophical mind of the fact. But we will take the liberty of introducing a few remarks from the writings of W. TOOKE, which were the result of several years observation of the good effects of vapor bathing amongst the Russians.

"It is not to be doubted," says TOOKE, "that the Russians owe their longevity, their robust state of health, their little disposition to certain mortal diseases, and their happy and cheer-

* Modern Practice of Physic: article, "*Rheumatism.*"
† Ibid. ‡ Ibid.

ful temper mostly to these baths, though climate, aliment, and habits of living, likewise contribute their share. The great Lord Chancellor Bacon, and other sagacious observers of nature, and of mankind, have lamented and certainly not without cause, that this bathing has fallen into disuse among the modern nations of Europe, and justly wish the practice back again, in all our towns and villages. In fact, when we consider that the old physicians so early introduced into their practice this remedy of nature's own invention, and employed it with such great success; when we recollect that Rome for five hundred years together, had no physicians but only their baths, and that to this day a multitude of nations cure almost all their maladies merely by baths; we cannot avoid regarding the dismission of them as the epocha of a grand revolution, which has been wrought in the physical state of the human race, in our quarter of the world. The natural perspiration, the most important of all excretions, must naturally go on better in a body constantly kept soft by bathing. A great number of impurities which privily lay in us the train to tedious and dangerous distempers, are timely removed ere they poison the blood and juices. All exanthematic diseases are abated by bathing, consequently then the small pox; and if this dreadful disorder be actually less fatal in Russia than in other countries, this phenomenon need not be attributed to any other cause than the vapor baths."

Nor is the employment of the vapor bath confined exclusively to the Russians. It is used by other nations of Europe, and particularly in the vicinity of Naples, where they have natural vapor baths, the vapor being supplied from hot springs produced by the volcanoes with which that country abounds. Other parts of Europe, likewise, abound with baths, the vapor of which is supplied by hot springs.

Artificial vapor bathing has also been used in most, if not all, nations of the European continent as well as in England; and the aborigines of America have been in the habit, from time immemorial, of employing the vapor bath to assist in curing their maladies; and they continue it to the present time.

Carver, in the history of his travels among the Indians during the years 1766, '67, and '68, in treating of their diseases, says—"The disorder to which they are most subject is the pleurisy; for the removal of which, they apply their grand remedy and preservative against the generality of their complaints, sweating. The manner in which they construct their stoves for this purpose is as follows:—They fix several small poles in the ground, the tops of which they twist together, so as to form a rotunda: this frame they cover with skins or blankets, and lay them on with so much nicety that the air is kept from entering through any crevice; a small place being only left just

sufficient to creep in at, which is immediately after closed. In the middle of this confined building they place red hot stones, on which they pour water till a steam arises that produces a great degree of heat. This causes an instantaneous perspiration, which they increase as they please. Having continued in it for some time, they immediately hasten to the nearest stream and plunge into the water; and after bathing therein for about half a minute, they put on their clothes, sit down and smoke with great composure, thoroughly persuaded that the remedy will prove efficacious." "They often," continues CARVER, "make use of this sudorific method to refresh themselves, or to prepare their minds for the management of any business that requires uncommon deliberation and sagacity."

We have also before us a letter from CALEB ATWATER, Esq. whose opportunities for making observations amongst the Indians have been very extensive, in which he gives a somewhat more particular account of the Indian method of steaming, which he learned amongst them during the years 1796, '97, and '98. It may also be proper to state that this letter is in reply to one addressed by ourselves to him, requesting any information in his power to give, respecting the treatment of disease and the remedies peculiar to the Indian natives.

His account coincides with that of CARVER, respecting their method of steaming, and further adds, that the bath-room is constructed inside of the wigwam previously made tight and warm. In the center of the bath-room a small hole is dug in the earth, into which water is poured and a red hot stone is put into it; the patient in the mean time being placed in the room and drinking of a warm tea prepared from the Seneca snake-root, including both the roots and tops.—"One stone after another is thrown into the water, and a copious steam produced around the sick person," and "after steaming some time in this way, the patient is taken from his bath-house and plunged into a stream of running water, always near the wigwam. This bathing in cold water occupies but a minute or two at most, after which the patient drinks some of his warm tea, and sits a short time in the bath-room again in which the steam is renewed. Then he is placed in a warm bed, prepared for him, where he lays in a state of gentle perspiration for some time." "So far as I now remember," continues he, "in every case where these remedies were thus applied, during the first three days of a fever, it was cured." "Instead of the hole in the earth, a sap-trough was sometimes used for the water and heated stones." LEWIS and CLARK also give a similar account of the Indian mode of vapor bathing.

This mode of steaming is precisely similar, in principle at least, and very nearly so in practice, with that employed in

Russia; it is the same as is practised by the greater part of the American Indians, and adopted by Dr. Samuel Thomson, and approved, used, and recommended by ourselves.

SECTION 8.

OF COLD BATHING.

The usefulness of the cold bath, both in preventing and curing disease, has been known and acknowledged from time immemorial. The employment of it was so highly esteemed in ancient times, that amongst the oriental nations, and particularly the Jews, bathing was a part of their ritual ordinances.

The custom of cold bathing, however, like that of vapor bathing, has very much fallen into disuse; though it has retained its sway in the United States, far beyond that of vapor bathing. The cold, like the vapor bath, may be advantageously used either topically or generally. As a topical application it is useful in some cases of headache and rheumatism; in all cases of sprains and local inflammation; in wounds, and particularly in cases of burns and scalds. In the last cases it is one of the most grateful and efficient applications which can be applied. It immediately allays the most intense pain; and by renewing the application as often as the pain recurs, the inflammation attendant upon such accidents may be entirely removed, and very frequently, when applied seasonably, blistering will be completely prevented.

Cold bathing is resorted to as a general application in ardent fevers; in some kinds of rheumatism; in relaxation of the cutaneous vessels; in nervous debility, and a great variety of complaints, for which purpose thousands of persons annually, both in Europe and America, resort to the mineral springs and to the sea, according to the nature of the disease or the fancy of the patient. Cold bathing is a powerful tonic and bracer of the system, and may be advantageously resorted to in a great many cases; but as an indication of cure peculiar to the new physiological practice of medicine, it is very highly beneficial, and extensively used. It is employed in all cases, after the vapor bath, in the simplest form, by pouring upon the patient in a high state of perspiration, a quantity of water proportioned to his age, size, strength, or other circumstances.

This practice is viewed by most individuals unacquainted with the new system of medicine, with astonishment, and even terror. This, however, is what might be readily expected; it being so directly opposed to the popular ideas, in this country,

respecting the means of promoting health. But in Russia, as well as amongst the American Indians, (as has already been noticed,) the practice of cold bathing, or washing with cold water, after producing a high decree of perspiration in the vapor bath, is a common thing; being resorted to on many important occasions, and in Russia by all classes of society. In the quotation from the Domestic Encyclopedia, which we gave, in treating of vapor bathing, the reader may have observed, that it is there stated, that the Russians rush out of the bath-room, almost dissolved in sweat, and either throw themselves into an adjoining river, or, in winter, roll themselves in snow, during the most piercing cold, without suffering any inconvenience, and probably with advantage. We will only add, that the advantage is more than probable; as it is very improbable that such an apparently daring practice would be continued unless the beneficial effects of it were appreciable and incontrovertible.

The testimony of Dr. Thomas also confirms the statement in the Encyclopedia as to the practice of cold bathing whilst in a high state of perspiration. "During my stay," says he, "at Petersburgh, I observed that many of the Russians threw themselves immediately from the bath-room into the adjoining river. In the winter they roll themselves in snow, in a frost of ten or more degrees of Reaumur's thermometer." Dr. Thomas says nothing as to the good or bad effects of this intrepid practice; but it is fair to presume that he observed no bad consequences to follow it. But, for the proof of its innocency, we need not refer the reader to the Encyclopedia, to Dr. Thomas, nor to the Russians. The same practice has been very successfully and extensively brought into notice by Dr. Thomson; and by his agents and other Botanic practitioners introduced into every state in the union.

After the patient has passed through the operation of vapor bathing and perspired profusely, as is generally necessary in all bad cases in order to throw out from the system the morbid accumulation which has taken place in consequence of the want of vital energy to carry off the worn-out, superfluous matter through the proper emunctories, and more especially when, in addition to vapor bathing, an emetic has been prescribed, the skin, and even the whole body, is relaxed; and the patient sometimes feels weak, faint, or languid. The application of cold water always removes these symptoms wholly or in part, and leaves the patient in the enjoyment of a warm, pleasant, glowing sensation over the whole body, as delightsome as unexpected to those unacquainted with this healthful practice. And in all cases of immoderate sweating, whether caused by artificial means, or arising from a laxity of the cu-

taneous vessels, cold affusion produces the happiest effects. The tonic and contractile powers of cold water, brace and strengthen the perspiratory vessels, as well as every other part of the system. The nervous and sanguiferous systems, upon the equable action of which health so much depends, particularly receive a powerful impulse; and nature, always ready to profit by every favorable circumstance, assisted by the strength which she derives from this new impulse, secures, so far as she is able, what has thus been gained.

GLOSSARY,

OR EXPLANATION OF THE PRINCIPAL TECHNICAL TERMS USED IN THIS VOLUME.

Abdomen, The belly.
Abscess, A tumor containing pus, as a boil, or other swelling.
Absorbents, 1. The small, delicate vessels which suck up substances from the surface, or from any cavity of the body, and carry them to the blood. 2. Medicines which destroy acidities in the stomach &c. 3. Substances which have the faculty of withdrawing moisture from the atmosphere.
Absorption, The taking up of substances by means of the absorbents
Acid, That which imparts to the taste a sharp or sour sensation.
Acrid, Sharp, pungent, corrosive, or heating.
Albumen, Coagulable lymph, similar to the white of eggs.
Aliment, Food and drink.
Alvine, Relating to the belly, or intestines; hence the stools are termed the Alvine discharges.
Anatomy, The dissection or dividing of organized bodies, to expose the structure, uses, &c. of the parts.
Anodyne, Any medicine which eases pain.
Antacid, That which destroys acidity.
Anthelmintic, That which procures the evacuation of worms from the stomach and intestines.
Antispasmodic, That which removes, or tends to prevent spasms.
Antidote, A preservative against, or a remedy for, disease, and particularly for poison.
Aorta, The great artery of the body, which arises from the left ventricle of the heart.
Artery, A membranous pulsating canal, through which the blood passes from the heart to every part of the body.
Asthenic, Diseases arising from debility are thus termed by Dr. Brown.
Astringent, That which corrects looseness and debility, by rendering the solids denser and firmer, known by its puckering effect upon the mouth.
Atmosphere. The elastic invisible fluid which surrounds the earth, commonly called the air.
Auricle, A name given to those parts of the heart which resemble small ears, and commonly called deaf ears.
Autocrateia, The healing power of nature.
Bile, (or *Gall*,) A bitter fluid, generally of a yellowish brown color, secreted in the glandular substance of the liver.
Botany, That part of natural history which relates to the vegetable kingdom.
Caloric, The matter of heat, that which produces the sensation of heat.
Canker, Small eroding ulcers, generally covered with a whitish slough.

Capillary vessels, The very small blood vessels, that terminate either in the skin, or on the surface of the internal cavities.

Carbon, The chimical name for charcoal.

Carbonic acid, Fixed air, compounded of carbon and oxygen.

Cartilage, A white elastic substance, which serves to facilitate the motions of the bones, and to connect them together—often called gristle.

Cathartic, That which produces purging of the intestines.

Caustic, A burning application that destroys the part to which it is applied.

Cellular, Consisting of cells or reservoirs.

Cerebral, Appertaining to the brain.

Cerebrum, *Cerebellum*, } The brain.

Chimistry, Is that science which teaches how to ascertain the nature of material substances, and the different parts of which they are composed, as well as the various effects, &c. which the union of different substances produces.

Chronic, A term applied to diseases of long continuance, and mostly without fever.

Chyle, A white milky fluid, separated from the chyme after the latter has passed from the stomach into the small intestines.

Chyme, Food partially digested in the stomach.

Clinical, Appertaining to observations or practice at the bed-side of the patient.

Clyster, (or *Glyster*,) A liquid substance injected into the lower intestines.

Coma, *Comatose*, } A strong propensity to sleep.

Congestion, A collection of any fluid whatever, but usually applied to the blood: thus we say congestion of the brain when there is an unusual collection of blood in that organ, without inflammation.

Constipation, *Costiveness*, } An obstruction, or preternatural slowness of evacuations from the bowels.

Constriction, A drawing together, or contraction.

Contagious, Diseases that may be communicated from one person to another, as small pox, measles, &c., are so called.

Convalescence, The state of returning health after sickness.

Convulsion, A violent contraction of the muscular parts, by spasms.

Corrosive, Substances that have the quality of destroying or eating away the part to which they are applied, are so called.

Cupping, Drawing blood by means of scarification and a cupping glass.

Cutaneous, (From *cutis*, the skin.) Belonging to the skin.

Cuticle, The thin membranous covering of the true skin, often called scarf-skin.

Cutis vera, The true skin, which is covered by the cuticle or outward skin.

Decarbonizing, Depriving of carbon.

Deliquium, A medical term for swooning or fainting.

Delirium, An alienation of mind, or wandering of the senses, caused by the violence of fever.

Demulcent, Any medicine which lessens acrimony, or blunts the effect of sharp medicines.

Diaphoretic, That which, from being taken internally, promotes perspiration, or discharges by the skin.
Diaphragm, A muscle separating the chest, or thorax, from the abdomen, or lower belly: the midriff.
Diarrhœa, Purging or flux. A frequent or copious evacuation of excrement by stool.
Diathesis, Any particular disposition to disease; as in putrid fever there is a putrid diathesis, in inflammatory fever, an inflammatory diathesis, &c.
Diffusible, In medicine, applied to stimulants the effects of which are quickly diffused through the system.
Digestion, The process of dissolving aliment in the stomach, &c.
Diluent, Substances which increase the proportion of fluid in the blood.
Discutient, That which possesses the power of repelling or dissolving tumors, or swellings.
Diuretic, That which, by its internal application, augments the flow of urine from the kidneys.
Drastic, Powerful; acting with strength and violence, as drastic purges.
Drupaceous, A term applied to any pulpy fruit, having a nut or stone, with a kernel, as the peach, cherry, &c.
Duct, A small tube or vessel, by which fluids are carried from one part of the body to another.
Duodenum, The first portion of the small intestines next the stomach.
Dyspepsia, Indigestion.
Element, First principle; a substance which can be no further divided or decomposed by chimical analysis.
Emetic, A medicine which provokes vomiting.
Emmenagogue, That which tends to promote menstrual discharges.
Emollient, That which softens and relaxes the solids.
Empirical, Pertaining to experiments; using without science; quackery.
Emunctory, Any organ of the body which serves to carry off excrementitious matter.
Endemic, A disease that is peculiar to a certain class of persons or country.
Enema, (see *Clyster*.)
Ephemera, A fever consisting of but one paroxysm.
Epidemic, A contagious or other disease that attacks many people at the same season, and in the same place.
Epidermis, A thin membrane covering the true skin. The scarf-skin.
Epigastric region, That part of the abdomen that lies immediately over the stomach.
Epispastics, Applications which produce blisters.
Epistaxis, Bleeding at the nose.
Errhines, Medicines which, when applied to the membranes of the nose, excite sneezing, and increase the secretion of mucus.
Eructation, The act of belching wind from the stomach.
Escharotic, Caustic; corrosive.
Exacerbation, An increase of febrile symptoms; a paroxysm.
Exanthematic, Pertaining to diseases of the skin, characterized by a redness and eruption, usually called a rash.
Excrement, The alvine fæces, or stools.
Excretions, This term is applied to all those matters which are ejected

from the body when no longer useful therein, such as the perspiration, urine, alvine discharges.

Excretory ducts, Little vessels in the fabric of the glands

Exhalents, small vessels which carry off the perspirable matter from the system.

Exhibition, The act of administering medicines.

Expectorants, Medicines which increase the discharge of mucus from the lungs.

Extravasation, A term applied to fluids when out of their proper vessels.

Fæces, Excrements discharged from the intestines.

Fauces, The back part of the mouth.

Febrile, Pertaining to, or indicating fever.

Flatulency, Windiness in the stomach and intestines.

Fluid, That which has the quality of flowing; a liquid.

Fomentation, A sort of partial bathing, by applying flannels dipped in hot water, or medicated decoctions, to any part.

Friction, The act of rubbing the surface of one body against that of another.

Fumigation, the application of fumes, or vapors, to destroy contagious effluvia in rooms, &c.

Gas, Any permanently elastic aeriform fluid, except the atmosphere, to which the term air is applied.

Gastric, Appertaining to the stomach.

Gastritis, Inflammation of the stomach.

Gland, In *anatomy*, means a distinct, soft body, composed of blood-vessels, nerves, and absorbents, and destined for the secretion or alteration of some peculiar fluid.

Hemorrhagy, A flux of blood proceeding from the rupture of a blood-vessel, or some other cause, other than external injury.

Hemorrhoids, The piles.

Humoral, Pertaining to, or proceeding from the fluids of the body.

Hypochondriac region, The spaces in the abdomen that are under the cartilages of the spurious ribs.

Hypogastric region, The lower part of the abdomen.

Idiopathic, This term is applied to such diseases as exist independent of all other complaints, in contra-distinction to those which are symptomatic.

Idiosyncrasy, A peculiarity of constitution in consequence of which the individual possessing it is affected by certain agents or medicines in a manner which almost all others are exempt from.

Integument, The covering which invests a body, or some particular part of a body, as the skin, nails, &c.

Intestines, The convoluted membranous tubes, situated in the cavity of the abdomen, vulgarly called guts.

Jejunum, The second portion of the small intestines, so called because commonly found empty after death.

Lachrymal, Of, or appertaining to, tears, or the glands by which they are secreted, &c.

Lacteals, The vessels which absorb the chyle from the intestines, and pour it into the thoracic duct.

Lesion, A hurt; wound; injury.

Ligament, An elastic strong membrane, connecting the extremities of the movable bones, or joints.

Lithontriptics, Substances which possess the power of dissolving gravel, or stone, in the urinary passages.
Lobe, A part or division of the lungs, liver, &c.
Local, Belonging to a part and not to the whole.
Loins, The small of the back.
Lumbago, A rheumatic affection of the muscles about the loins.
Lumbar region, The part about the loins.
Lungs, Two organs situated in the chest, by means of which we breathe.
Lymph, A colorless fluid, separated from the blood, and contained in certain small vessels, called *lymphatics*.
Mania, Raving or furious madness unaccompanied with fever.
Materia Medica, That branch of medical science which treats of the nature and properties of substances employed for the cure of diseases.
Mediastinum, A membranous partition which divides the cavity of the chest into two parts.
Membrane, A thin, flexible skin, serving to cover some part of the body.
Mataphysics, The science of the mind; relating to the mind or immaterial things.
Miliary, A disease accompanied by an eruption of the skin, resembling millet seeds.
Morbid, Diseased, sickly.
Mucus, A slimy, ropy fluid, secreted by the mucous membrane.
Muscles, The organs of motion consisting of fibers or bundles of fibers, inclosed in a thin cellular membrane.
Narcotic, A medicine which has the power of procuring sleep by stupefaction.
Nausea, An inclination to vomit, without effecting it; also, a disgust of food, approaching to vomiting.
Nerves, Long white cords, originating in the brain and spinal marrow, and extending throughout the whole body, serving as the organs of sensation, &c.
Nitrogen gas, An elementary gaseous fluid, incapable of supporting animal life; composing nearly four-fifths of the atmospheric air.
Nosology, The arrangement of diseases in classes, orders, genera, species, &c.
Œsophagus, The tube through which the food passes from the mouth into the stomach.
Organ, A part of the body capable of performing some perfect act or operation.
Oxide, A substance formed by the union of oxygen with some other material; thus, rust of iron is a *red* oxide of iron; the scales about the anvil of a blacksmith are a *black* oxide of iron, &c.
Oxygen—*Oxygen gas* composes about one-fifth of the atmospheric air. It was formerly called vital air, because it appeared to be the only part which exercised any stimulant effect upon the living power. It appears to be absorbed or consumed in the combustion or burning of fuel; and its absorption by cider, and other liquids, produces vinegar, and is hence called the principle of acidity, &c. &c.
Pallor, Paleness.
Pancreas, A soft, supple gland, situated in the lower part of the abdomen, which secretes a kind of saliva, and pours it into the duodenum.

Pancreatic, Pertaining to the pancreas.
Papillæ, 1. The fine termination of the nerves. 2. The small eminences on the tongue, are so called.
Paralysis, Palsy; the loss of the power of muscular motion.
Paroxysm, 1. An obvious increase of the symptoms of a disease which lasts a certain time and then declines. 2. A periodical attack or fit of a disease.
Pathology, The doctrine of diseases.
Pathological, Relating to disease or a diseased state.
Peristaltic, The vermicular (worm-like) motion of the intestines, by which they contract and propel their contents.
Perspiration, Evacuation of the fluids of the body, in the form of vapor, by the pores of the skin.
Pharynx, The muscular bag or chamber at the back part of the mouth, which receives the masticated food, and conveys it into the œsophagus, or gullet.
Philosophy, A system on which natural effects are explained; an inquiry into the causes of effects. [It has various other definitions.]
Physical, (In the sense in which this word is used in the foregoing work, means) Pertaining to *material* things, as opposed to things *imaginary*. or *immaterial*.
Physiology, That science which treats of the phenomena proper to *living* bodies.
Physiological, Relating to the living state, or more especially to the laws and actions or operations of living bodies in a state of health; and in this sense is opposed to a pathological or diseased state.
Phytotomy, (or *Phytology*,) A discourse or treatise of plants, or the science of plants; vegetable anatomy.
Plethora, 1. An excessive fulness of vessels, or a redundance of blood. 2. A fulness of habit or body.
Pleura, A membrane which lines the internal surface of the thorax or chest, the inflammation of which is termed pleurisy.
Præcordia, The forepart of the region of the thorax.
Predisposition, That state of the body which renders it more than usually susceptible to the causes of any particular disease.
Priapism, Continual erection of the penis.
Primæ viæ, The first passages; the stomach and the intestinal tube.
Proximate, Nearest; next. A *proximate cause* is that which immediately precedes and produces any particular effect.
Ptyalism, An increased secretion of saliva from the mouth.
Pulmonary, Appertaining to the lungs.
Purgative, That which increases the intestinal discharges by stool.
Pus, Matter; a whitish cream-like fluid, found in inflamed abscesses, or on the surface of sores.
Pustule, A small pimple or eruption on the skin, containing pus.
Putrefaction, The spontaneous decomposition of such animal and vegetable matters as exhale a fœtid smell.
Refrigerant, A medicine which allays the heat of the body or of the blood.
Respiration, The act of breathing.
Retching, Vomiting, straining to vomit.
Rubefacient, A substance which, when applied a certain time to the skin, induces a redness without blistering.

Saburrhal, Relating to foulness of the stomach.
Saliva, The fluid secreted by the salival glands and poured into the mouth; spittle.
Salivation, An unusual secretion and discharge of saliva, usually produced by mercury, for the cure of disease.
Salient, Springing; starting; darting.
Salt, In *chimistry*, this term is used to denote a compound, in definite proportions, of acid matter with an alkali, earth, or metallic oxide.
Sanguiferous, Conveying blood; as, for example, the blood-vessels are termed the sanguiferous system.
Sciatica, A rheumatic affection of the hip-joint.
Scirrhus, A hard tumor commonly situated in a glandular part, and often terminating in a cancer.
Sebaceous, Made of fat; applied to glands which separate from the blood a fat or suety humor.
Secretion, The act of producing or separating from the blood, substances different from the blood itself, or of any of its constituents, as bile, saliva, &c. &c.
Sedative, A medicine that moderates muscular action, or animal energy, particularly checking the circulation of the blood.
Sensorium, The brain is so called because it is the organ of all the senses.
Serum, 1. Whey. 2. The fluid which separates from the blood when cold and at rest.
Sesamoid, This term is applied to the small bones sometimes found at the joints of the great toes and thumbs.
Sialagogues, Medicines which excite an uncommon flow of saliva.
Spasm, Cramp or convulsion.
Spinal, Pertaining to the back-bone.
Stertor, Loud and difficult breathing; snoring.
Sthenic, A term used by Dr. Brown, to denote an inflammatory state of the body, arising from an excess of vigor.
Stimulants, } Medicines which excite the action or energy of the sys-
Stimuli, } tem.
Strangury, A difficulty in voiding urine, attended with pain.
Subclavian, Situated under the clavicle or collar bone.
Subcutaneous, Under the skin; a name given to some nerves, vessels, glands, &c. which are very near the surface of the body.
Suppuration, The process by which pus, or matter, is deposited in inflammatory tumors.
Syncope, Fainting or swooning.
Synocha, Inflammatory fever.
Syphilitic, pertaining to the venereal disease.
Tendon, The white and glistening extremity of a muscle, by which it is attached to the bones.
Tepid, Lukewarm; warm in a small degree.
Tetanus, The cramp; fits; locked jaw.
Thorax. The chest.
Tinnitus aurium, A noise, or ringing in the ears.
Tissues, The textures which compose the different organs.
Tonics, Medicines that increase the strength or tone of the animal system.
Topical, Local; confined to some particular part.

Torpid, Numb; stupid; inactive.
Trachea, The wind-pipe.
Transpiration, The exhalation of fluids from the pores of the skin, or lungs; perspiration.
Trunk, The main body of any thing.
Tube, A pipe; a cylindrical vessel which conveys a fluid, or other substance.
Typhoid, Resembling typhus; weak, low.
Umbelliferous, Bearing umbels; that is, flowers resembling in their form an umbrella, such as the parsnip, fennel, &c.
Umbilical, Pertaining to the navel.
Vapor, Steam; an elastic moist fluid which is thrown off from wet substances, by the application of heat, and which may be brought back to a liquid or solid state by cold.
Vapor bath, A place or apparatus for applying vapor to the body.
Veins, Vessels which return the blood to the heart.
Vena cava, This term is applied to the two large veins through which the blood is poured into the heart—the one from the head and the other from the lower extremities.
Venous, Pertaining to the veins.
Ventricles, The two cavities of the heart, which propel the blood into the arteries.
Vertigo, Dizziness; giddiness of the head.
Vessels, In anatomy, are the tubes or canals which contain or convey the fluids from one part to another.
Virus, Poison; the foul and contagious matter of an ulcer, &c. &c.
Viscera, The plural of viscus, a name commonly applied to the organs contained in the thorax or abdomen, as the lungs, liver &c.
Viscid, Glutinous; sticky.
Vis medicatrix naturæ, The healing power of nature in animal bodies.
Zootomy, That branch of Natural History which treats of the forms, classification, habits, &c. of animals, particularly brutes.

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END OF VOL. I.

A TREATISE

ON

MIDWIFERY,

AND THE

DISEASES OF WOMEN AND CHILDREN;

ADAPTED TO THE USE OF

HEADS OF FAMILIES, AND FEMALES PARTICULARLY.

Illustrated with Numerous Engravings

BY HORTON HOWARD.

TO WHICH IS ADDED,

A BRIEF COLLECTION OF MEDICAL PLANTS, ILLUSTRATED WITH PLATES, DESCRIBING SUCH REMEDIES AS ARE RECOMMENDED IN THE WORK.

VOL. II.

FOURTH EDITION.

CINCINNATI:
H. M. RULISON, QUEEN CITY PUBLISHING HOUSE, 115½ MAIN ST.
PHILADELPHIA:
QUAKER CITY PUBLISHING HOUSE, 32 SOUTH THIRD ST.
1856.

ENTERED according to act of Congress, in the year 1852, by
J. KOST,
in the Clerk's Office of the District Court of the United States for the District of Ohio.

OF FEMALE COMPLAINTS.

INTRODUCTION.

In the following pages, we expect to do as most modern writers who have written upon this subject before us have done, borrow from others either their ideas or language, or both, whenever it suits our convenience. There is one important point of difference, however, between the short treatise here offered to the public, and all others of the same kind; which is, that our mode of treatment is entirely of another character. This difference of character extends to all diseases peculiar to the female system, under all circumstances, whether pregnant or not, or even in the trying hour of labor.

Those who have perused the two preceding volumes of this work, are aware of the vast difference between our practice and that of the fashionable doctors; they must also be equally well aware of the grand fundamental principle upon which we conceive the curative art to be based, and that medicine must act in unison and harmony with the laws of life, or be inadmissible in practice. These propositions being admitted, there can be no difficulty then in seeing that the same general course of treatment which will cure in one case, will also be applicable in another. The same food, drink, and air, which support and preserve one sex, do the same for the other—the same power which operates a whole machine, also operates each particular part—and that medicine which acts in harmony with the laws of life, is universally applicable in all cases of disease, whether of male or female. The same general mode of treatment is, therefore, proper for all the diseases peculiar to females that, under like circumstances of severity, would be proper for those diseases to which males and females are alike liable. This, indeed, is one of the distinguishing characteristics of the new Botanical and Physiological school of medicine, and is characteristic of no other.

The foregoing remarks are no less applicable to the often alarming circumstances attending pregnancy and child birth, than to all other cases and conditions. If the living power flags or fails, during the painful time of labor, the same principle which stimulates the animal machine at other times, will do it now; and the same kind of medicines are, therefore, proper to

be used. We know of no situation of females, when out of health, that renders it improper to give the best medicines or to use the best means, according to the urgency of the symptoms. And why should any be staggered at these ideas? Do not, as we observed before, the same food, the same drink, and the same air, that sustains the man, also sustain the woman, and keep all their various and diversified organs in the regular and proper performance of their different, and, we might also say, contradictory functions? and why may not the same medicines, when the functions of the organs concerned in pregnancy and child birth fail or become deranged, act upon the same principle, and produce the same happy effect?

We deem it important that these general principles should be known and well understood, especially by females themselves. They are the victims of many peculiar painful maladies, heretofore considered by medical writers, and hence by females themselves, as of a most dangerous if not incurable character. Hence, in almost all those complaints peculiar to women, and especially at the time of labor, they feel a solicitude and anxiety of which but few, perhaps, of the other sex, are sensible; and this anxiety has been rendered more painful and intense by the mysteries which professional ambiguity has thrown around the causes by which it is produced. All know, however, that death, from some cause or other, will take place, sooner or later; it is a consequence dependent upon our peculiar organization, as well as upon that law which proclaims an eternal mutation of matter. But we must confess that we have found the diseases of women quite as much under the control of medicine as those which are common to both sexes.

How grateful, then, must be this knowledge to females; and how necessary for their confirmation in, and assurance of it, as well as their properly understanding the important directions contained in this work, that they comprehend the general principles just laid down. This volume is calculated peculiarly for their use; and to them, and to their service, it is dedicated.

We wish them to study and understand it. By so doing, they will qualify themselves to minister to their own as well as each other's wants, and thereby avoid the necessity of consulting the other sex, with all its attendant indelicacy and mortification. Our intention, in short, is, that this volume shall be a work of private consultation and reference expressly for females. It was on this account that we deemed it proper to print and bind it by itself, detached from the others.*

---

* Since the publication of the first edition, many individuals have expressed a wish to have the three volumes bound in one: in future, therefore, they will be bound to suit purchasers.

After this exposition of our views, we trust no apology will be necessary for the plain manner in which we shall treat some subjects. Nothing less than "affectation of feeling can fancy there is indelicacy in understanding what may save from exposure, disease, and death."—"Strange perversion! those operations which male doctors are often called upon to perform for the sex, are not to be read of!—are not to be learned, to supersede actual exposure." Such is the language of Dr. EWELL, and our own sentiments fully correspond with his, on this important subject. We are fully satisfied that the more knowledge females possess of themselves and of their complaints, and particularly of the principles of true medical science, the less will they be under the influence of that painful solicitude and anxiety to which their peculiar situation, and the diseases consequent thereon, subject them.

The plan which we have adopted in this work may be somewhat new; but it is one which suggested itself to us as the most natural; and as every one has a right to select any arrangement which he may think will best answer his purpose, we have no apology to offer for our own.

CHAPTER I.

FEMALE PECULIARITIES.

In several particulars females have important peculiarities. Physologically they have peculiar functions, and, necessarily, peculiar organs. Hence from both of those causes they are liable to peculiar maladies. These circumstances have induced us to devote a short chapter to their general consideration.

SECTION 1.

OF THE LIABILITY OF WOMEN TO PECULIAR DISEASES.

Women are not only liable to all the ordinary diseases to which men are exposed, but they are also subject, in consequence of their sexual organization, to diseases peculiar to themselves. Many of these are either of a dangerous or an inveterate character, or both combined. They are also liable to still more severe diseases from derangements in the functions performed by their peculiar organs, than from the mere circumstance of a different structure. Upon them devolve conception, gestation, delivery, suckling, and all the contingent painful difficulties arising from these functions.

And to what evils do these processes subject them! Yet, before they arrive at maturity and can experience these, they are liable to all such as arise from their sexual organization; and before they can perform one of the ultimate objects of their creation, they are exposed from the same cause, to painful, and sometimes fatal diseases.

To woman, the period of puberty is oftentimes replete with serious ills; she is constantly liable to painful irregularities of her menstrual or monthly purgations, and menaced severely by their present as well as more remote consequences. These purgations may come upon her prematurely, and debilitate by their quantity or frequency; or they may fail so long as to involve her health in ruin. Or she may be either defective or exuberant in some of her organs, and be obliged to submit, if not to a dangerous, yet to an indelicate operation to free her from them. She is likewise liable to most of the diseases of the male, and thus are entailed upon her almost all the ills to which both sexes are subject. How much then is she entitled to the sympathy

of the other sex; and how much does it become their duty, by every necessary attention and kind office, to lighten her burthens and smooth her path through life.

SECTION 2.

PECULIARITIES OF THE FEMALE SYSTEM.

However extensive the influence of education and mode of life may be upon the human frame, they are not capable of effecting so great a change upon the female constitution, as to deprive it of its distinctive peculiarities. For, however much may have been effected by the influence of these great agents, in producing a physical and moral similarity in the sexes, yet no changes in the general character of the female have ever been produced by them, so as to leave the slightest doubt to which of the sexes the individual belonged, even independently of the peculiarity of sexual organization.

The anatomical and physiological peculiarities of the female, are both numerous and curious; but we shall in this place only notice, in a very brief manner, those which principally distinguish her from the male.

One of the most obvious differences between the female and male, is the general inferiority of her stature. Her whole frame, or bony fabric, is more delicate and less extended. The general features, and expression of the countenance, are more soft and delicate; and the face is without that almost universal appendage of the male, the beard.

In the organs of generation, the peculiarities of the female system are still more striking; and the influence which they exercise over the health of the body seems to be commensurate with the important offices which they are destined to perform. No organ of the female system is perhaps so liable to become diseased, or fail to perform its healthy functions, as the uterus; and hence arise some of the most obstinate and painful maladies to which the sex is liable.

The female organs of generation consist, in general terms, of the uterus or womb, the ovaries and their appendages, and the vagina, with the structure which surrounds its external orifice or opening. As we shall occasionally have to advert to those parts of the system, we will here, for the purpose of enabling the reader fully to understand all that we say, give a concise description of them: and as these parts must necessarily be distinguished by names which are not common, the reader should endeavor to impress them upon the memory.

In what is denominated the external parts of generation, are included the *Mons Veneris*, the *Labia Pudendi*, the *Clitoris*, the *Nymphæ*, and the *Hymen*. Intimately connected with the female organs of generation, is also included the *Pelvis*, by which is meant the cavity formed by the circle of bones which surrounds the body at the hips; the front of which bones is termed *Os Pubis*.—[*See plates III. and IV.*]

The mons veneris or *pubes*, is the fatty elevation immediately in front of the os pubis, which, at mature age, as in males, is covered with hair.

The external orifice of the generative organs, commences immediately below the pubes; on either side of which are the labia pudendi. The place of their junction below, is denominated the *fourchette;* and the space between their junction and the anus, is called the *perineum*.—[*See plates VIII. and IX. Letter I.*]

The clitoris is situated within the labia, and immediately below or back of the upper angle of the external orifice, upon the os pubis. This organ is a small elevation, bearing some re semblance, in appearance and more so in structure, to the male *penis*, and is the principal seat of sensual pleasure in the sexual intercourse.

The nymphæ are two semi-circular, oblong, thin bodies, situated within the labia, and running parallel with them, from the clitoris, nearly half their length backward. In some individuals these are so broad as to project beyond or without the labia.

The hymen is a membrane, placed at a short distance within the labia, and in general partly closing the entrance into the vagina. In some instances it is in the shape of a half moon; in others it fills the whole cavity, having a hole in its centre; and cases sometimes occur in which it is completely closed, producing, at mature age, the most disagreeable consequences. This membrane is always ruptured or torn during the first sexual intercourse, and hence has been regarded as the test of virginity. Instances, however, are not wanting in which the hymen never had an existence, or has been destroyed by disease or accident; indeed, some authors declare that they have never met with one in a single instance. The absence of the hymen cannot, therefore, be regarded as an infallible evidence of chastity.

Immediately below, or rather back of the clitoris, is the mouth of the *urethra* or pipe of the bladder, termed *meatus urinarius*, which forms somewhat of an elevation This position of the urethra ought to be well understood, as it often happens that a catheter has to be introduced through it into the bladder, to draw off the urine.

The vagina next presents itself to our notice, which is the passage from the external organs to the womb. This passage has the rectum adjoining it behind, and the urethra and bladder

before and above it. It passes backwards and upwards, terminating at the mouth of the womb. The vagina is narrower at its beginning than it is further inwards; and is much larger in women who have had children than in those who have not.—[*See plates VIII. and IX. Letters D and E.*]

At the posterior or upper extremity of the vagina, is the mouth of the womb, which is technically called the *Os Tincæ*, and projects or rather falls down, more or less, into the vagina.—[*See plate VIII. Letter L.*]

The uterus or womb in shape and size, is compared to a large pear, with the small end or neck downward, and its large part or body upward. It is, however, not perfectly round, but somewhat flattened. The womb, like the vagina, in women who have lately had children, is larger than in those who have never borne them. It is situated in the pelvis, between the bladder and the rectum. The reader must recollect, however, that we are speaking of the womb in its unimpregnated state.—[*See plates VIII. and IX. Letters G and L.*]

Connected with the womb are the *Ovaries* and *Fallopian tubes*, parts essential to generation. The ovaries produce the *seed* of the woman, as the testicles do that of the man, and are hence often called the female testicles. These are situated one on each side opposite the neck of the womb, and are small roundish shaped bodies, about the size of small nutmegs.—[*See plate II. Letters B and D.*]

The fallopian tubes have their origin at the upper or large part of the womb, from whence they extend to the right and left, nearly in a horizontal direction, for two or three inches, when they suddenly drop down with their ends nearly in contact with the ovaries. The ends of these tubes are terminated by a kind of fringe, which is called the *fimbriæ* of the fallopian tubes. They are hollow throughout; opening into the uterus or womb at one end, and into the abdomen at the other.

We will close this section by a few brief remarks upon the changes which take place in the womb in the progress of pregnancy. The most striking alteration that occurs in this organ, is the very great enlargement of its size. We have already remarked, that, when not impregnated, the womb in shape and size is compared to a large pear, with so small a cavity, that its internal surfaces are almost in contact with each other. But towards the conclusion of pregnancy, instead of the small and almost solid body which we have endeavored to describe, it forms an immense sac, which extends from the termination of the vagina in the pelvis, nearly up to the breast bone, and from one side of the abdomen to the other. This enlargement, however, is so slow at first, that before the third month, the womb does not extend above the cavity of the pelvis.

During the first six months the body of the uterus is the part principally enlarged; but after this the neck begins to expand, and gradually loses its distinctive shape, so as to form a portion of the uterine sac.

Considerable changes also take place in the appendages of the uterus. The ovaries appear rather larger and more spongy; the fallopian tubes are also enlarged; and instead of passing off horizontally, and making an angle, as the womb expands and mounts upwards, they assume a straight direction downward along its sides

CHAPTER II.

OF DISEASES PECULIAR TO THE UNIMPREGNATED STATE.

Almost every state and stage of female existence is liable to some disease peculiar to itself, as well as to others common to them all. These remarks, however, are more exclusively applicable to females after having arrived at mature age. Previous to this period, they are scarcely subject to any complaint not common to both sexes.

SECTION 1.

IMPERFORATION AND TOO GREAT DENSITY OF THE HYMEN.

We commence with remarks upon these states of this organ, because if they exist, they must have existed at birth; at least the imperforation must have then existed. By imperforation is to be understood, that there is no passage or communication through it into the vagina. By its too great density is to be understood, that although there may be a passage through it, yet the hymen is so dense and strong as not to be ruptured by the sexual intercourse. Instances are also recorded in which, although this state of the hymen existed, yet it did not so interfere with sexual intercourse as to prevent pregnancy from taking place; but at labor obstructed the birth of the child, until the hymen was divided with a knife. Instances of either of those cases, however, are extremely rare.

No inconvenience is experienced from an imperforated state of the hymen until mature age when menstruation or the monthly purgations have taken place. The menstrual fluid now being regularly secreted by the womb, but not finding an outlet through the hymen, its quantity accumulates until not only the vagina, but also the womb itself becomes distended, sometimes to a great size, before the real cause of the difficulty is discovered. Where the accumulation becomes so great as to distend the abdomen, the poor unfortunate female, in addition to her bodily sufferings, must be harassed by the uncharitable suspicions of her friends and those around her.

When the hymen is imperforate, the patient suffers considerable pain at each return of the menstrual period. The pain resembles that of labor, and, in cases attended with an enlargement of the abdomen, has often been, as it very naturally would be,

mistaken for it. After continuing for a while, the pain ceases, and does not recur until another menstrual period arrives.

It is highly probable that an imperforate state of the hymen exists in more instances than may be generally supposed. In those cases which have been relieved by an operation, the hymen has been found to be of different degrees of thickness and density; and it is fairly presumable that in many cases it may be so thin and weak, as to be ruptured by the accumulated weight of the menstrual fluid, or, if not by this, finally by the pressure occasioned by the pains which take place at each monthly period. In once instance recorded by Dr. M'Cauly, he actually mistook the protrusion of the hymen for the membranes forced down, as he supposed, by the pains of labor. In this case it appears from the account, that the hymen was very dense; had it been of a thin and weak texture, the presumption is that the contractions of the womb were sufficient to have ruptured it.

The only remedy for the imperforation of the hymen, is that of making an artificial perforation or opening through it. And considering the indelicacy of the operation, and the great, though by no means reprehensible aversion of females to the exposure consequent upon such operations, we cannot but strongly recommend its performance by some intimate confiding, but discreet, female friend. We have no doubt that the finger of the female sufferer herself would, in many instances, be sufficient to rupture the hymen; or if possessed of sufficient courage and discretion, she might even perforate it with some sharp instrument.*

Although these hints might be reprobated by the illiberal of the medical faculty, who wish to engross every thing by which they can make a gain, no matter at what expense of female delicacy, yet we are not conscious that by these remarks we shall in the least degree encourage a course calculated in any manner to aggravate the sufferings of the female sex. It does not appear from the operations of this kind which have been performed, that any particular danger is to be apprehended from their performance either immediately or remotely; and should inflammation even arise, it requires no more than the common treatment which is adapted to other cases of like character. The operation is one of the most simple kind; nothing more than passing a knife, lancet, or other sharp instrument, through a thin

* After the above was in type, in accidentally turning over the pages of Goon's Study of Medicine, we met with a case exactly to the point in a young married lady, by whom Dr. Goon was consulted. "He explained the nature of the operation to be performed, and added that he had no doubt of a successful issue. The lady was reluctant to submit herself to the hands of a surgeon, and hence with equal courage and judgement became her own operator. The impediment was completely removed, and she has since had several children." Vol. V. p. 85, New York edition, 1829.

membrane possessing but little sensibility or sense of feeling, and consequently producing but little pain.

In order to perform this operation to the best advantage, the external orifice or labia should be well opened and distended, when the knife may be carefully passed through the upper part of the hymen and an incision made down to the lower or back part of the same; being careful not to injure or wound any other part excepting the hymen. This is certainly a most simple process, and might be performed by any discreet female possessing a little resolution, and thus save a modest girl from the rude unblushing interference of some professional hand of the other sex.

When the menstrual fluid has been retained in consequence of the imperforate state of the hymen, it assumes a dark tarry appearance, but is immediately evacuated on opening a passage through the hymen. The quantity will vary, of course, with the length of time which has elapsed since menstruation commenced, as well as with the quantity of fluid secreted at each menstrual period.

The suggestion we believe has by no writer been made, yet we deem it proper to make it here, that infants be examined soon after birth, and if the hymen be found imperforate let an opening through it be immediately made when the child is young. A little lint or a small rag moistened with oil or salve should be introduced to prevent the parts from again uniting. By this trifling attention and simple process might always be saved, the painful exposure and indelicate operation, attendant upon an imperforate state of the hymen, when the person is grown up to mature age.

The too great density of the hymen, although it may be perforate, is also productive of serious ills; but is a difficulty, as appears from Dewees, easily removed. The evils arising from this state of the hymen, notwithstanding it may be an impediment to sexual intercourse, and even in most instances entirely prevent it, yet this is not always the case; for conception has been known to take place when the woman labored under this disadvantage. The great difficulty then occurs at child birth, as the strong hymen prevents the expansion or dilatation of the vagina, and of consequence, interrupts the passage of the child's head.

The method adopted by Dewees for overcoming a difficulty of this kind, is very simple, and was as follows:—He made a slight incision or cut in the hymen, by passing a probe-pointed *bistoury* between it and the child's head, and then introducing his finger and giving it a slight rotary motion, he ruptured or rather tore the hymen so as to allow the parts to expand, and freely permit the passage of the child. We will just remark, that the probe-pointed bistoury is nothing more than a crooked

knife with a blunt or dull point somewhat similar to a probe, which prevents the knife from injuring parts it is not intended to cut or wound. The same thing may be done with any other knife, by taking suitable care.

SECTION 2.

ADHESION OF THE LABIA PUDENDI OF CHILDREN.

The labia of young children are often found adherent; that is, grown together. This situation of the labia seldom occurs, says Dewees, in children under six months old. It is caused by an inflammation and suppuration of the internal surfaces of these parts, which, in healing, adhere or grow together. The cause of this inflammation is believed to be the want of a proper regard to cleanliness. Mothers and nurses ought to be careful often to examine the labia, paying strict attention to their cleanliness, and if inflammation, canker, or any kind of soreness, appear between them, take immediate measures to cleanse and heal them. They may be washed with warm milk and water, carefully and tenderly dried with a soft cloth, and dusted with finely powdered hemlock bark, witch hazle leaves, slippery elm, or the fine powder of any old woolen cloth burnt to a cinder. One or the other of these we never knew to fail of effecting a speedy cure in cases of this kind. The same application may be made to chafes in the groins, behind the ears, or any where else, and will always be found useful.

The adhesion of the labia is very readily discoverable from their being inseparable. If an attempt be made to part or oper them, they can only be separated a short distance, when a continuous line of adhesion will be observable from near the *meatus urinarius* or mouth of the urethra, down to the lower or back part of the passage.

There appears to be but one remedy for this complaint; and so soon as the difficulty is discovered, it should be attended to, and on no consideration allow the child to grow up in this situation to womanhood. The remedy is, to divide the parts; about the method of doing which there is some disagreement. Some direct the operation to be performed with a bistoury or knife; whilst Denman thinks such an operation neither requisite nor proper. His method of separating the adhering parts, is to make a firm pressure upon each side, and at the same time inclining them from each other, by which means they are *torn* asunder, and yet, as he says, scarcely making the child complain. But in whatever manner it is performed, the operation is very sim-

ple, and requires but little skill. After the separation is made, a small quantity of lint with oil or salve, should be introduced between the separated portions; and the wounds will heal without the smallest difficulty, in two or three days.

SECTION 3.

OF MENSTRUATION.

Menstruation is a periodical discharge from the womb of females of the human species alone. The term is derived from *Mensis*, a month; as, in temperate climates, the discharge occurs, with healthy women who are not pregnant nor giving suck, at intervals of a lunar month, that is 28 days.

We have deemed this notice of a *healthy* function proper, not only from the important influence which its regular and suitable performance holds over the system, but also from the certain destruction of health which follows its deviations.

The menstrual discharge, though formerly supposed to be blood, is now admitted to be a regular secretion from it in the internal surface of the womb; and instead of being blood, it is divested of a peculiar characteristic of this important fluid, that is, the power of coagulation or clotting. The cause of this evacuation has not been satisfactorily accounted for by physiologists.

Menstruation commences in hot climates, at the age of eight or ten years; in temperate ones, at fourteen or fifteen, though sometimes protracted to eighteen or twenty; whilst in very high or cold latitudes, it does not commence until the eighteenth or twentieth year of the female's age; and then oftentimes takes place only in the summer. But at whatever time of life this discharge commences, the woman is said to be at puberty, that is maturity; though it is the effect and not the cause of this state of the system. Before menstruation takes place, as well as after the period at which it ceases, the generative organs are incapable of performing their peculiar functions.

The period at which menstruation commences, is influenced by the constitution and mode of life, as well as by climate. Those who have a rapid development or growth of body, have an early appearance of the *menses;* and where this process is slower, the menses appear later. And those who live in cities menstruate earlier than those who dwell in the country in the same portion of the globe. The period during which women are liable to *menstruate*, varies in duration according to the time that has elapsed previous to its commencement; being generally about double this time. Thus, if a female commence menstruating at

fourteen or fifteen, she will leave off at about forty-five; those who commence at eighteen, will continue till upwards of fifty; whilst those who commence at the age of eight or nine, as in hot climates, leave off at twenty-five or six.

Although, as has been stated, menstruation announces the period of puberity, it is not the cause but the effect of the complete development of the organs of generation, and seems no otherwise connected with the generative process, than as being a periodical secretion from one of the instruments concerned in generation during the period which the organ is capable of performing its peculiar function, excepting, as before stated, the time of pregnancy and giving suck. It may, however, even take place, and still the woman be incapable of conceiving, probably from some imperfection in some other organ: But instances must be very rare, if any have ever occurred, in which conception took place either before or after the menstrual period of life.

Menstruation rarely fails to be preceded by a variety of symptoms of greater or less severity; especially in girls who have been delicately brought up, and thus have their nervous systems debilitated and made morbidly sensitive to those causes which produce symptoms of nervous irritation. Hence there is often ringing in the ears; a sense of suffocation, or hysterics; palpitations of the heart; variable appetite, with loathings and cravings; a disposition to be easily frightened; convulsions, &c. &c.; all of which are immediately relieved by only a trifling discharge of the menstrual fluid.

It also often happens, that other inconveniences than those enumerated occur; such as a sense of weight at the lower part of the abdomen; pains in the back, or the womb; scalding of the urine; bearing down; with listlessness, &c. &c.; any or all of which may be regarded as symptoms of the approaching discharge.

Very important changes, both physical and moral, take place at this period, a period which, above all others, perhaps, is replete with consequences of the first magnitude to the inexperienced female. The voice at this time assumes gradually a different tone; the neck and throat increase in size; the breasts swell, and the nipples protrude; the chest expands; the eyes become more brilliant and expressive of intelligence; in a word, the girl becomes a woman, and almost another being. A corresponding change also takes place in the mind. Childish pursuits and amusements now afford less diversion, whilst the general deportment becomes more graceful, and altogether confer upon the female a perfection of those attractive charms of which she is so eminently susceptible.

The quantity of fluid evacuated at each period of menstruation, is much varied in different individuals, and in different cli-

mates. In some, the quantity is very small; whilst in others it is much larger, though this seems to have no connection with the health of the individual. It is only the large quantity compared with what the same person usually discharges, that appears to have any influence upon health. In regard to climate, the quantity is greater in temperate than in either cold or hot regions.

The menstrual purgation usually requires from three to six days for its completion; and commonly returns with great regularity in women who enjoy good health; rarely overgoing twenty-eight days; though it sometimes, in consequence of ill health, appears once a fortnight, and at other times, disappears for five or six weeks.

As the time approaches at which this evacuation is to cease, it becomes more irregular, both as regards the quantity discharged and the periods of its return. The latter may be from two to six weeks; and finally, the discharges cease altogether.

The period of the cessation of the menses, is also one of deep interest to the female constitution. It may be fraught with the elements of health and future exemption from previous ills; or it may be the harbinger of some acute disease, or of a painful slow decay.

SECTION 4.

OF THE RETENTION OF THE MENSES.

In the preceding section, we have shown that the period at which menstruation may be expected, is regulated more by the condition of the system as produced by climate and habits of life, than by the age of the female. Nevertheless, this being the case, each climate or portion of the globe has its established general rules as to the age at which this discharge ought to make its appearance; and if long delayed beyond this period, the health is apt to suffer; and to this condition of the system has been given the name of retention of the menses.

The period at which menstruation usually takes place in this climate, as has heretofore been observed, is at the age of fourteen or fifteen. If, however, the menses delay their appearance considerably beyond this period, and the general health is not impaired, we are by no means to regard it as a state of disease. It is only when the common symptoms of the menses make their appearance, without any discharge, and the health evidently is suffering in consequence thereof, that we are to consider it and treat it as a disease. In consequence of the fears and anxieties of those who have the charge of females at this

important period of life, they are often subjected unnecessarily to a most rigorous system of doctoring, and frequently with no better effect than serious and lasting injury to the health.

Girls also very often suffer incalculable mischief at this period of life, from the reprehensible, nay, criminal neglect of mothers, or others in whose care they may be placed. They are often suffered to grow up in ignorance of the discharge which all females, sooner or later, are to expect, and of the rules which ought to govern their conduct at this critical period. In consequence of this ignorance, for which the unfortunate girl is not to blame, menstruation comes upon her unawares, and in the confusion and alarm naturally arising from this unlooked for event, she commits some rash act that perhaps entails upon her a miserable existence for life. Many, under such circumstances, have gone into ponds, rivers, or brooks, or sought other modes of using cold water, for the purpose of washing out the stain, by which means they have taken colds that have often been productive of irreparable injury to the constitution. Convulsion fits, and incurable chronic complaints of various kinds, are the common and frequent results of this species of imprudence, which might, in all probability, have been avoided had the unhappy victim only been apprised of what she should expect, and the rules by which she ought to have been governed. We are at a loss to perceive any rational excuse for a mother allowing her daughter to grow up in ignorance of what is so intimately connected with her earthly happiness; and we cannot but advise, most seriously and strenuously, that where mothers have any reason to believe their daughters ignorant, in any degree, of whatever is important for them to know relative to menstruation, that they take seasonable measures to communicate this necessary information to them. If their own delicacy or diffidence, or the delicacy or diffidence of the daughter, be an obstacle to the free and frank communication of suitable instruction, procure some one in the confidence of the daughter, to instruct her. She may also be permitted to read such books as will enlighten her mind on this subject, the rules of which should be occasionally explained or enforced by any discreet individual. There is no palliating excuse for that squeamishness and false delicacy which many feel and approve, about their daughters being informed, or their reading books containing suitable instruction. They must unavoidably obtain this knowledge by some means or other, and many, by the criminal neglect of mothers or others, have acquired it at the expense of health, and even life.

But we cannot omit observing to those who have the charge of females, that the lapse of the ordinary term of years is not all that is requisite to produce menstruation: the womb and

ovaries must have arrived at maturity and be in a healthy condition, before the menses can show themselves. The maturity of the organs is always indicated by corresponding changes in other parts of the system—there must be evidences of womanhood before these discharges will make their appearance.

After girls have arrived at that age at which the menses commonly appear, and their breasts have become enlarged, with other signs of puberty; and have also the ordinary symptoms which commonly precede this discharge, such as pains in the back, hips, and loins; sensation of weight, fullness, and heat in the pelvis or lower part of the abdomen, attended sometimes with a bearing down, measures should then be taken to facilitate the discharge. There will also often be head-ache, loss of appetite, weakness of the limbs, and a paleness which seems of a peculiar kind, with a sinking of the spirits, loss of vigor, hysterical affections, and other derangements of the general health. These symptoms usually occur periodically for a time; but sooner or later end in protracted ill health.

Treatment.—If the patient be not accustomed to laborious exercise, she ought to employ herself in some way best calculated to give all the organs of the system that activity which they require. She ought by no means to keep her bed, or remain shut up in a close room during fair weather; but go into the open air and take exercise by walking, or riding on horseback or in a carriage, or in any other manner she may prefer. But she must by all means avoid being out in the night air, walking in the dew, going barefoot into cold places, as well as all other means of taking cold.

At those times in which nature seems disposed to favor the discharge, she may take rattle-root tea, madder tea, pennyroyal tea, diaphoretic powders, or cayenne pepper, and use the vapor or steam bath, at discretion. The madder tea, which has obtained much notoriety for this complaint, is made by steeping an ounce of madder, with a few cloves, in a pint of boiling water for fifteen minutes; then sweeten, and when cool strain off, and give a wine-glassful every three hours.

If the foregoing means fail to produce the discharge, either the vegetable cathartic, or Bunnell's pills may be given, two or three of them at night, and if they do not operate, one or two more in the morning; after which a dose of the bitters may be taken three or four times a day. Injections, applied either to the rectum or vagina, will also be found very beneficial. The injections for the vagina should be composed of a strong tea of witch-hazel, or red raspberry leaves, or of the anodyne powders, with a very small portion of cayenne, tincture of myrrh or anodyne drops, added, and repeated two or three times a day

and the pills once or twice a week. But if after using the means which have been recommended for a reasonable time, the desired evacuation is not produced, we must then resort to a course of medicine, as described in the second volume; which must be repeated according to the urgency of the symptoms, two or three times a week, taking, during the intervals between the courses, the bitters and diaphoretic powders, six or eight times a day, in doses of half or a whole tea-spoonful; or, in addition, the madder, or rattle root tea may also be taken twice a day; and thus continue until a cure is effected.

SECTION 5.

OF PAINFUL MENSTRUATION.

This disease, says Dewees, is very common in our climate, and is one not only of great suffering, but also very often of great obstinacy. Single and married women are alike liable to its attacks, and continue so from the commencement to the termination of the menstruating period of life.

The causes of this painful malady have not been satisfactorily accounted for; but those usually assigned are—taking cold, particularly during the flow of the menses, or after an abortion or miscarriage.

The suffering of women who are subject to this complaint, is often of the severest character; resembling, in point of intensity, that of labor. It usually commences with a slight menstrual discharge, which being pretty suddenly stopped, a pain almost instantly ensues, which is described by women as a forcing or bearing down pain, returning at longer or shorter intervals, until either a membranous substance, or small clots of blood, are discharged. After the expulsion of either of those substances, the woman generally enjoys a period of ease. Sometimes, however, there is a fresh production of one or the other of those substances, and then there is a return of pain. These pains generally continue, with different degrees of violence, during the whole continuance of the discharge.

In some cases of painful menstruation, the breasts appear to sympathize with the womb, and become swelled and very painful; and besides the labor-like pains, of which we have spoken, there is often, if not always, a permanent pain in the hips, and back or loins. There is also very frequently head-ache, sickness at the stomach, vomiting, and many other unpleasant and distressing symptoms.

We have elsewhere remarked, that the menstrual discharge,

although it has the appearance of blood, is still a very different fluid, inasmuch as it never coagulates, that is, never clots like blood issuing from a wound. But, as we have just observed, a part of the discharge in painful menstruation, is actually clotted or coagulated blood. And it will be found, that whenever this kind of discharge attends menstruation, it will also be attended with severe pain. Moreover, women who have discharges of clotted blood, will never become pregnant and bear children.

TREATMENT.—We may commence the cure of this painful malady by giving two or three vegetable cathartic pills, at bed time, and if necessary one or two in the morning, so as to produce brisk purging. This may be repeated once or twice in the course of the month, preceding the return of the menses, taking care so to manage as to administer a dose either at the time, or a day or two before the discharge makes its appearance.

After the operation of the first dose of the pills, the patient should take regularly, three or four times a day, a dose of the laxative bitters, and at bed time a dose of the diaphoretic powders. When menstruation actually commences, she should drink, in addition to the bitters, very frequently of strong tansy tea, which appears often to exert a powerful influence in allaying painful menstruation. Injections, as recommended for retention of the menses, should also be occasionally administered.

The unicorn root, which has been highly recommended to prevent abortion, it is very probable might be advantageously employed in painful menstruation, both preceding the return and during the flow of the menses. The partridge berry (*Mitchella repens*) is also recommended for this disease.

After a trial of those means, if they do not afford relief, or effect a cure, in addition thereto, a course of medicine should be occasionally administered, and particularly at each return of the menstrual period. During the time the menses are flowing, if notwithstanding the use of what we have recommended, the pains should be severe, the patient ought to take freely of cayenne, retire to bed, and have hot bricks placed at her feet and back or bowels. The cayenne may be given either in tansy tea or a decoction of Dr. WELLS' anodyne powders. His anodyne drops may also be used; and the tincture of myrrh has likewise been found serviceable in some cases of this kind.

SECTION 6.

OF PROFUSE MENSTRUATION.

PROFUSE menstruation can only be ascertained by comparison with the same discharge from the same woman at other times, or by its debilitating effects. No two women, necessarily, discharge the same quantity; and therefore the amount evacuated by one may be far greater than that discharged by another, and yet be productive of no bad consequences. The menses should not be considered profuse, or rather their large quantity ought not to be regarded as a disease, unless they produce debility or other inconvenience.

This complaint may arise from general debility of the body, or a particular weakness of the uterus or womb. It is also supposed to be caused by an attenuate or thin state of the blood; by repeated miscarriages; poor weak diet; and excessive indulgence in sexual pleasures.

Menstruation may be profuse either from the circumstance of of its too frequent recurrence, or from its too great quantity when recurring at the proper periods. There is also often attendant upon this disease, a discharge of real blood, which proves very debilitating. These circumstances, however, require no change in the treatment which, in all cases, may be the same.

TREATMENT.—In the treatment of this complaint, we should make use of such means as have a tendency to strengthen the whole system, and particularly the womb. For this purpose, birth root, tansy tea, spice bitters, or any of the astringent tonics, particularly the anodyne powders, may be used. Cayenne pepper must also be freely administered if profuse flooding occur, taking it in half or whole tea-spoonful doses, several times a day, according to the urgency of the symptoms. Injections and the vapor bath are also highly serviceable, and should be resorted to if the other means advised fail. Or, if the disease prove obstinate, in addition to those means, a course of medicine must be resorted to, and repeated as the circumstances of the case may appear to require. A tea of the queen of the meadow has often been found useful in weakness of the uterine vessels, and is therefore proper in this case. A decoction of the amaranth or prince's feather, is also a very popular remedy for flooding, and may be employed with much confidence.

SECTION 7.

OF SUPPRESSED MENSTRUATION.

SUPPRESSED or obstructed menstruation is usually caused by exposure to cold; and hence, amongst females, is usually styled, somewhat significantly, *taking cold.*

This is a complaint to which women are exceedingly liable, and is often productive of the worst of consequences. The bad effects, however, of taking cold do not always show themselves immediately; but generally become manifest after repeated obstructions have occurred; sometimes producing dyspepsy, dropsy, consumption, &c. The menses are suppressed during pregnancy and suckling; and also occasionally by disease; but under such circumstances it is not to be considered as a disease itself. Suppressions from cold are often attended by hysterical affections.

When a cold has been taken during the interval between the periods, the first notice perhaps, which the woman may have will be the want of a return of the menses at the proper time. With women who are otherwise in good health, there may be little or no pain or other inconvenience experienced, until the menses fail to return for two or three periods: But in those whose health is otherwise deranged, and especially such as have had frequent obstructions of their monthly purgations, there is often much pain in the back and bowels, together with head-ache and fever. The countenance now becomes pale; the flesh diminishes, and the strengtn fails. There may also be palpitations of the heart; a sense of suffocation, and difficulty of breathing, together with fluor albus or whites, and various other symptoms.

When the menses are obstructed by cold taken near the time they are about to appear, or after they have actually commenced, the painful symptoms are often much aggravated. In such cases, the patient may be attacked with pain in the head, back, and bowels; and sometimes with such violence as to create much alarm. Violent hysterics, painful colics, and even temporary derangements, have sometimes been known to result from this cause.

Women should be careful about exposing themselves to cold at all times, but particularly near the time they expect their monthly evacuations, and especially after these have commenced. Many a good constitution has been ruined, and the happiness of many a female destroyed for life, by carelessness at those periods. Indeed, a very considerable number of the diseases of women arises from this one cause.

TREATMENT.—In all recent cases, very simple means will generally restore the discharge. If the difficulty be caused by a cold taken during the flow of the menses, or immediately preceding their expected return, it will almost always be removed by drinking freely of pennyroyal, tansy, rattle root, or madder tea. The rattle root especially may be regarded as one of the most certain remedies in all cases of this kind. It seems to be so prompt in its operations, that we have sometimes been fearful that its indiscriminate or frequent use might be attended with danger. But we know of no bad consequences resulting from its administration. Cayenne pepper is also a valuable remedy in this complaint, and may be given freely, especially if there be much pain or fever. Sitting before a hot fire, with the feet in warm water, and at the same time drinking any of the forementioned teas as warm as can be borne, to promote sweating, is very serviceable; or if the case be severe, steaming will be still better, or even a full course of medicine may be resorted to and repeated if necessary. And in short, any thing warming or heating taken into the stomach, and at the same time applying heat externally, as it relaxes the system, has a tendency to restore the monthly courses, when stopped by a cold; and women, when they find this to be their situation, ought immediately to use some of the means which are here recommended, and persevere in them until the obstruction is removed. By neglecting this, they may lay the foundation of painful and sometimes incurable maladies.

In cases where colds of this kind have been disregarded until the foundations of health have become fairly sapped; when the peculiar paleness and debility consequent thereon, give evidence of the existing evil; when a train of nervous disorders, and hysterical affections are preying upon the unfortunate sufferer, it will then be necessary to adopt more active measures. She should then commence with taking the diaphoretic powders and laxative bitters alternately, five or six times a day, for a few days, and then have a full course of medicine, and occasionally throw an injection into the vagina, made as directed in section 4, of this chapter. The course of medicine should be repeated two or three times a week, together with the diaphoretic powders and especially the bitter tonic, until the usual symptoms indicating the return of the monthly evacuations take place; when a dose of the vegetable cathartic, or Bunnell's pills ought to be administered.

If there should be much pain, or other apparent disorder, after the pills operate, whether the menses appear or not, the anodyne powders, anodyne drops, or both, may be employed. If the female have an idea of the time when she should expect her courses. she may commence drinking the rattle root tea a

day or two before this time, and continue it moderately until the discharge takes place; when she ought to leave it off. If the discharge be profuse, she may drink freely of a tea of the astringent tonics; or of the birth root or witch hazle leaves, adding to each dose, from half to a whole tea-spoonful of cayenne.

Should the menses not be restored by the means recommended, at the first period the organs seem disposed to favor it, the courses of medicine ought to be continued once or twice a week, according as the health of the individual may require, until another period arrives. The use of the bitter tonic must also be persevered in, and if the health appear to demand it, the diaphoretic powders should be taken once or twice a day, particularly at night on going to bed, together with the occasional use of injections as before recommended.

About the time that the courses are expected, or whenever the symptoms thereof occur, the rattle root or madder tea must be employed as heretofore pointed out. And in the manner which we have directed, or as nearly so as the circumstances of the case may require and the judgment dictate, all cases of this kind may be treated, not only until the menses are restored, but until they become regular in every other way, and the general health is fully established. There may be many deviations from the circumstances and symptoms herein detailed, and so there may be variations in the treatment laid down; yet but few, if any, can mistake the disease, and perhaps none misapply the medicines.

SECTION 8.

OF THE CESSATION OR DECLINE OF THE MENSES.

We introduce this subject here not because the cessation of the menstrual discharge is a disease, but because this period is one of peculiar interest to women, all of whom view the near approach of the forty-fifth year with great anxiety. This is the most common age at which menstruation ceases; and it often happens that those women who have enjoyed good health up to this time now become the subjects of some severe disease; whilst others whose health has been bad, may acquire an energy and vigor which, perhaps, they had never before experienced.

It does not, however, necessarily follow as an effect of the suppression of this function, that such changes should take place in the constitution. The cessation is perfectly in accordance with the laws of nature; the organs have become worn

out, that is, their procreative powers are exhausted, and their functions of course must cease. These changes, when they do take place, are produced by accidental causes which cannot always be distinguished or for which we cannot account.

Delicate women, and especially those who have lived in idleness, cease to menstruate at an earlier period than those who are robust and have been accustomed to labor. In some few instances, however, the menses cease very early in life without any apparent cause, and without producing any bad effect upon the constitution; and on the other hand, instances are recorded in which this discharge continued to an advanced age.

In some cases, the cessation of the monthly courses produces so little alteration as scarcely to be noticed by the woman herself; in others their decline is so gradual as not to attract attention until the diminished quantity gives notice that they are about to leave her forever; but sometimes they become so irregular, both in the periods of return and in quantity, as to excite just alarm, as well as produce the most serious consequences. And it is on account of this latter circumstance, that the decline of the menses has here been noticed.

No judgment as to the consequences which may succeed the cessation of the menses, can be drawn from their irregularity either of time or quantity. So long, however, as health continues good, no apprehensions need be entertained as to the result.

At this period of life, nothing will so effectually secure females against injuries which may arise from deviations of the menstrual discharge, as regularity in eating and drinking; in exercise and rest; and in the proper government of all the passions. Extremes of every kind should be avoided, and the utmost care must be taken to preserve the general health unimpaired.

But in case the health should become affected, the same general plan which we have recommended for other complaints ought to be pursued; such as using the diaphoretic powders, bitters, tincture of myrrh, &c., and if the health suffer much diminution, a course of medicine must be resorted to occasionally. If the impaired health appear to arise either from the increased or diminished quantity of the menstrual fluid, the course of treatment advised under the heads of profuse and suppressed menstruation must be adopted, according as either of those conditions may prevail.

SECTION 9.

OF BARRENNESS

An unfailing source of unhappiness in the married state, is barrenness or inability to conceive offspring. It may arise from various causes, such as imbecility or want of tone in the organs of generation, which may be produced by injuries either from violence, or from disease of the parts; abortions; violent floodings, or suppressed menstruation; or from excessive indulgence in sexual pleasures.

Barrenness may also be caused by some natural or accidental defect in the organs. The ovaries, fallopian tubes, or even the womb itself, may be defective; or the vagina may be too narrow, the hymen imperforate, or if perforate, it may be too dense and not yield to the force of the sexual embrace; or the fault may be in the male. It is only, however, with the inabilities of the female that we have any thing to do here. Another source of barrenness, which we have before noticed, is to be found in the same cause that produces painful menstruation, when coagulated or clotted blood is discharged at the menstrual period.

Treatment.—The best method of treating this misfortune, is to make use of such means as will promote the general health, and establish a proper tone of action in each particular part. Injections both to the vagina and rectum will have a strong tendency to promote an action in the womb and organs connected with it—the ovaries and fallopian tubes.

When irregularities of the menses appear to be the cause of barrenness, the treatment will be found under the heads of those complaints. If it is produced by any natural defect of the organs, a cure cannot then be expected.

Dr. Ewell recommends very highly, the exciting a secretion or flow of milk in the breasts, as a cure for barrenness; and we have no doubt of its being well worth a trial. There is certainly an intimate connection between the womb and the breasts, as we see in the fact that the breasts of a healthy woman always furnish milk after the birth of the child.

"The most natural action," says Ewell, "for the breasts, is the secretion of milk. They have often been excited to the discharge without pregnancy. A child losing its mother, and sleeping with a female friend, has been known in the night to get the nipple in its mouth, and to excite milk by morning; the discovery led to the resort, and the child was abundantly nourished at the breast of the maid. Would it be indelicate or disgraceful—nay, would it not be very commenda

ble as it would be serviceable, for many single women to undertake this office for motherless infants? There are circumstances in which it is surely loudly called for."

"There can be no question," continues he, "that any female breast may be excited to the secretion of milk. The means are simple. The woman should drink freely of any kind of liquid, and live freely. The breasts should be handled frequently, rubbed with the softest hand, bathed in sweet oil, and a warm poultice applied over the whole of them for an hour. Then it should be removed, and the breasts still be handled and sucked gently, at repeated intervals throughout the day, for several minutes. Particularly every morning, noon and night, the operation should be renewed until the milk comes. A young dog has often been used for drawing the breasts. When the action is excited, it should be kept up for months, by daily sucking them. About the time of discontinuance, or sometime after, impregnation may most probably be effected. There can be no doubt of the womb being more acted upon, more roused to natural action, by these means, than any other we know; and they ought long since to have been tried. I repeat the declaration, that I have had it actually done with complete success; the good effects of which, in one instance, exceeded expectation."

Ewell's Family Physician, p. 205, Georgetown, 2d ed.

CHAPTER III.

OF THE DISEASES OF PREGNANCY.

Pregnancy, although a perfectly natural state, renders the woman liable to the inconveniences of certain diseases which, under other circumstances, she might more frequently escape. The most common complaints attendant upon this state of the system are such as are not dangerous in their character, but which are still very often exceedingly troublesome and annoying. And we can scarcely conceive of any ordinary situation in which a female can be placed, that more urgently calls upon the husband for sympathy and soothing consolation, than that of suffering under the complicated ills so often attendant upon pregnancy; nor one in which he ought more earnestly to exert himself to lighten her burthens and by the soft blandishments of connubial kindness, assuage those irritable feelings to which her situation often gives rise.

The other sex may, and we have reason to fear that many of them do, look upon the pregnant female with the unpitying eye of cool indifference, whilst to herself it is a period full of painful importance, and not unfrequently of fearful apprehension. She is often harassed by a train of the most disagreeable symptoms, with the certain prospect that their termination, however anxious she may be for the accomplishment thereof, must be a scene of still more exquisite and indescribable anguish to her mind. But we do not wish to heighten the picture of female wo: such as have borne children can respond to the truth of what we have said; whilst those who have not, need not allow their minds to be depressed. The process of gestation or pregnancy has been passed through by thousands and tens of thousands, without any remarkable difficulty, though not without pain — whilst the consolation of being mothers, the pleasures associated with lovely, endeared offspring, afford a rich reward for all.

Our object in thus enlarging upon this subject is to excite that tender sympathy in the minds of the other sex which the pregnant female so justly deserves, and so much and so imperiously needs. Every husband has it in his power to add immensely to the happiness of his wife; and during the often oppressive and tedious months of gestation she is certainly entitled to all that he can bestow. We very well know, however, that some women pass the period of pregnancy, without experiencing

much more inconvenience than at other times; yet this can be said of but very few.

The increased susceptibility to disease which most females experience on becoming pregnant, is supposed to be owing to a more acute sensibility of the nervous system; but whilst they are more liable to be affected by slight impressions, they are less exposed to many fatal maladies.

SECTION 1.

NAUSEA AND VOMITING.

Sickness at the stomach and vomiting are regardad as among the rational signs of pregnancy, and, next to a suppression of the monthly courses, are often the first to give notice of this situation. When vomiting is moderate, it is regarded as fulfilling some wholesome intention upon the system. But, be this as it may, it is very unpleasant and distressing to the woman; and sometimes reduces her to a state of great debility. In general, these symptoms cease with the first few months of pregnancy; though in some instances they continue during the whole period. With some women, nausea and vomiting occur only in the morning on getting out of bed; whilst with others, they continue through the day, and take place whenever they eat or drink.

Treatment. — As these disagreeable symptoms arise in consequence of the changes produced in the state or condition of the womb, but little benefit, in general, could seem to be expected from medicine. Where the sickness is very harassing, however, something should be attempted. We may just remark, that the sickness is often aggravated by the peculiar longing for some particular food; which, if possible, ought always to be gratified.

If the bowels are costive, they should be relieved by some mild cathartic, or the daily use of injections. As a cathartic, charcoal may be tried, and if found ineffectual, the butternut syrup or pills may be used in its stead.

Repeated small doses of the diaphoretic powders, or of the spice bitters, have also been found very serviceable as a stimulus to the stomach; and when these fail, the cayenne will often answer the purpose. The nervine tincture is likewise a medicine well adapted to allay the irritation of the stomach in the vomiting of pregnancy, or any of the articles found under the head of anti-emetics may be used, particularly the antispasmodic aromatic drops.

When sourness appears to aggravate the complaint, the white lye, salæratus, pearlash water, or soda, should be employed; and if these fail to check it, vinegar, or lemon juice and water, has been found of vast advantage. The use of the vapor bath or steaming ought also to be resorted to, and will rarely, if ever, fail to produce a good effect.

But if these means fail, and the puking is severe, a vomit of the tincture of lobelia should be taken, together with the whole process or course of medicine. This may be repeated, and any or all of the other means employed, at suitable intervals, whilst the vomiting continues. No fears need be apprehended with regard to the effects of a vomit of the lobelia. Instead of its producing abortion or miscarriage, it is found to be the best means of preventing it.

SECTION 2.

OF THE CRAMP.

This distressing complaint, is one of the early symptoms of pregnancy with some women, and often continues with unremitting if not increasing severity, during the whole period; whilst with others, it makes its attacks at much later periods With some too, it is confined to the legs and thighs, whilst others suffer most severely by its attacking the womb.

Treatment.—Strict attention should be paid to the state of the bowels, to keep them loose and regular, and at the same time avoid exposure to cold and all other circumstances and situations which are found to induce an attack. Rubbing the parts with opodeldoc, or camphor dissolved in oil; or with any kind of bathing drops, will often be found useful. Taking internally a dose of cayenne pepper, or anodyne drops, will sometimes be advantageous. But where it becomes very tedious, either from its severity or frequent occurrence, a course of medicine should be resorted to, as occasion may require. The steam or vapor bath ought often to be employed during pregnancy, by those who are subject to cramp. Or, instead of the trouble of steaming, have some hot water prepared at bed time, and sit before a warm fire, with the feet in the water as hot as can be borne, drinking occasionally of a tea of the diaphoretic powders, or cayenne, and be covered with a blanket. In this way perspiration may, in general, readily be produced; which will usually relieve not only cramp, but many other painful or otherwise disagreeable symptoms attending pregnancy.

Another simple though somewhat antiquated remedy, highly recommended by many, is either rubbing the part affected with a roll of brimstone; or burn the brimstone on coals or a hot shovel, and let the patient inhale the smoke or vapor.

SECTION 3.

OF SALIVATION OR SPITTING.

A FREQUENT and sometimes almost constant spitting, is a common, if not general, occurrence in pregnancy. The cause assigned for it, like that for many other phenomena, is unsatisfactory, being attributed to sympathy between the salivary glands and the womb. This frequent spitting is commonly attended by sourness of the stomach and a costive state of the bowels. The quantity of saliva discharged is sometimes very great, producing, in a few instances, much debility, though more commonly, perhaps, it principally annoys the woman by its very unpleasant and sometimes nauseous taste.

TREATMENT.—"As a general plan of treatment in this complaint," says DEWEES, "either when moderate or severe, I endeavor to destroy the acidity of the stomach by the various antacids;* to keep the bowels free, by the frequent use of magnesia; rinsing the mouth frequently with lime water, and the use of solid animal food; together with a strict injunction to the patient to resist the desire to discharge the saliva from the mouth, as much as possible." There is no doubt that Dr. DEWEES' plan is judicious; but the principal thing which we have employed that proved of much value, was the spice bitters, infused in boiling water, a swallow of which is frequently taken through the day.

SECTION 4.

PALPITATION OF THE HEART.

THIS is not an unfrequent attendant on pregnancy, especially during the early stages; after which it often ceases, to return again in the latter period of gestation.

TREATMENT.—The powdered roots of lady's slipper, in doses of a tea-spoonful, repeated as often as the urgency of the symp-

* White lye, pearlash water, lime water, chalk, or soda water, may be used for this purpose.

toms may require, are very good for this complaint. Or the tincture of those roots, the nervine tincture, or the anodyne drops may be used, and will be found very serviceable. Asafetida, either in pills or tincture, has been found a useful remedy. If these medicines, however, fail, or only produce a partial effect, the patient should be steamed, or sit before the fire with her feet in warm water, to promote profuse perspiration, which will rarely fail to give perfect relief. But if it does not remove the malady, a course of medicine must be resorted to, and if necessary, should be repeated.

SECTION 5.

OF HEARTBURN.

This very distressing symptom is sometimes one of the first the woman experiences after she has become pregnant; but at other times it does not arise until the latter period of gestation. Occasionally it is absent altogether. Whenever it is present, it is difficult to cure.

Treatment.—A very common remedy is chalk, and in many instances it answers the purpose very well. White lye, pearl-ash water, soda water, &c., are also useful. Lime water is highly recommended, on the authority of Dr. Young. Magnesia is also very valuable, and possesses the advantage of relaxing the bowels, which are so apt to be costive during pregnancy. An emetic should be resorted to if the case proves obstinate; after which the bitters may be used to strengthen the powers of the stomach.

Any of the articles mentioned under the head of anti-emetics, may also be employed.

SECTION 6.

OF HEADACHE.

Headache, attended with drowsiness, and sense of fulness of the vessels, with pains in other parts, are very common symptoms during pregnancy, and frequently become distressing, unless timely relieved by proper means. The common remedy when any of these symptoms occur, is bleeding. This practice we have, in the first volume of this work, shown to be unnatural, and therefore we need not go into any argument to prove its inconsistency here. Bleeding should no more be resorted to

for removing the diseases of pregnancy, than those of any other state or stage of life.

TREATMENT.—Any of the common means recommended to promote perspiration may be used, and will be much preferable to letting blood, which, although it may relieve, deprives the body of a portion of its most important fluid. Sitting before the fire with the feet in hot water, or over a steam, taking at the same time warm teas, diaphoretic powders, or cayenne pepper, in general will relieve any of those symptoms arising from what is termed plethora, or fulness of the vessels. The bowels ought also to be kept loose; and if these means do not remove the difficulty, a course of medicine must be resorted to, and repeated as often as necessary.

SECTION 7.

OF COSTIVENESS.

THIS difficulty during pregnancy, as at all other times, is one from which many others flow, and, therefore, ought to be specially guarded against. It is sure, when allowed to continue long, to aggravate, if not produce, many of the annoying diseases incident to gestation. Costiveness is almost sure to accompany the first, as well as last, stages of pregnancy; and frequently continues unabated during the whole period. This state of the bowels is produced principally, if not wholly, by the pressure of the womb, with its contents, on the rectum.

TREATMENT.—Purgative medicines should by no means be the principal, nor even the common remedies employed, for the removal of costiveness. They may, however, be used occasionally; and for this purpose, the butternut syrup, black root, castor oil, or magnesia, may be taken in doses just sufficient to loosen, but not to purge, the bowels. The laxative bitters will also be found very serviceable, and in addition to their laxative effects, will strengthen and invigorate the stomach, and relieve several other unpleasant symptoms.

Eating bran, as recommended in the second volume, or living upon bread made of unbolted flour, or drinking strong or rich bran tea, or eating parched corn, will be found to relieve costiveness in a very natural and agreeable manner, and ought always to be resorted to in preference to purgative medicines. But in obstinate cases, injections ought to be employed, at least so often as it is necessary to procure a passage from the bowels.

If one injection does not answer the purpose, it must be repeated until a sufficient discharge is procured; and where the costiveness is very obstinate, a little of the butternut syrup, or oil, may be added to each injection. The injections should be composed, in general, of warm water, or warm pennyroyal tea, sometimes adding a little cayenne, or the tincture of myrrh, and administered in large quantity. But if they do not answer the desired purpose, when prepared in this simple manner, they may be made more stimulating by adding more of the cayenne.

SECTION 8.

OF THE PILES.

This complaint is caused principally by costiveness, and is sometimes very troublesome and painful. Many women, who at other times are not afflicted with this disease, are very liable to it during pregnancy. The first symptom is a fulness and aching about the anus, which is followed by a slight throbbing. These symptoms are momentarily relieved by pressure on the part; but swelling soon succeeds, to a greater or less extent, attended by various degrees of pain. In general, the pain is in proportion to the size of the swelling and degree of inflammation.

Treatment.—The means for removing costiveness, recommended in the preceding section, should be faithfully employed, especially the bran bread, and above all the injections, as a preventive, and if the bowels continue in a costive state after the piles have become troublesome, the same means must be persevered in. It is usual, however, for the bowels to become relaxed just before, or at the same time that the piles come on. Then the woman should drink freely of the tea of the diaphoretic powders, astringent tonics, or anodyne powders, and use injections of any of the astringent preparations, which ought to be often repeated whether the bowels are loose or costive.

She must also keep mostly in bed, and have a hot brick or any other hot substance applied near the part affected, which may also be anointed with an ointment made by mixing the powder of the common puff ball with hogs' lard, fresh butter, or cream, or any other of the usual remedies for this complaint may be employed.

Steaming should also be freely and frequently employed in all cases of piles, and may be regarded, in conjunction with the injections, as the best means of removing the disease, as well as of preventing its occurrence.

SECTION 9.

OF PAINS IN THE OS PUBIS.

In the advanced stages of pregnancy, some women experience a severe pain in or about the front bones of the pelvis, which is often very distressing. It appears to be caused by the continual pressure of the womb upon those bones, which becomes the greater as gestation advances.

Treatment.—The pain may often be relieved by the vapor bath or steaming, or by profuse sweating before the fire.—But the most effectual relief is obtained by supporting the belly with a bandage, over the shoulders and around the lower part of the abdomen. That part of the bandage which supports the bowels, should be broad, so as to give an equal support to every part. To apply the bandage, the woman should lie down, and place it so as to be just of a suitable length in that position; and then when on her feet, it will support the abdomen, and prevent the pressure upon the os pubis or front bones of the pelvis.

SECTION 10.

OF THE RETENTION OF THE URINE.

A difficulty of discharging the urine sometimes takes place during pregnancy, in consequence of the pressure of the womb upon the urethra or pipe of the bladder. The consequences of a retention or stoppage of the urine are—a swelling of the bladder, attended with great pain; and if permitted to continue, will produce inflammation of the bladder and urethra, and sometimes terminate in death.

Treatment.—If the stoppage has been suffered to continue until much pain and inflammation have arisen, warm fomentations, by means of cloths wrung out of hot water, or fomentations of bitter herbs, should be applied to the abdomen, or the steam bath may be employed; taking at the same time some warming teas, or cayenne, to promote sweating. This course not only relaxes the parts, but also prevents or removes inflammation. Injections made of either flax seed or slippery elm tea, or even warm water, may also be thrown into the vagina, from time to time.

But the difficulty and danger attending a stoppage of the

urine may be avoided, or if allowed to occur must be removed, by a *catheter*. This is a very simple instrument, and the method of using it is equally simple. The catheter in common use, is nothing more than a flexible tube made of gum elastic, and may be procured at a trifling expense at most apothecary shops. Or instead of a catheter, which may not readily be procured in all places, a goose quill will answer the same purpose.

We have just said that the method of using the catheter is very simple, and so we know it will be found by all who attempt it; but what say medical writers? Why, with but a very few honorable exceptions, they represent it as an operation requiring "professional aid," "chirurgical assistance," &c. &c.

The illiberality of these "professional" attempts to blind the eyes of those upon whom physicians are palming these impositions, will be generally better understood at some future period than they possibly can be at the present time. It will then be seen how little the physicians of this age value the feelings of female modesty and delicacy, by the gross outrages which they so deliberately press upon them! We can look upon their efforts to keep up some peculiar prejudices, in no other light than as "professional" aberrations of a most indelicate and highly censurable character. We hope to be pardoned, if pardon be necessary, for the warmth of our feelings; it is produced by the high value which we place upon female delicacy and the sympathy which we feel for females, in the necessity that they often find imposed upon them of submitting to the unnecessary interference of "professional hands," to perform operations of the most simple kind, which they ought to manage themselves.

When we meet with a writer, insisting that "professional aid" is indispensable in the performance of so simple an operation as drawing off the urine with a catheter, our feelings will not permit us to view him in any other light than as an intruder upon common sense and decency. If he knows any thing, he knows that the woman, if in health, can do it herself; and with this knowledge, if he insists upon the necessity of professional interference, self interest must predominate over moral duty and that refinement of feeling which ought to distinguish every physician. Even Dr. Dewees, whom we understand to be in other respects a gentleman, and who is certainly a good author, gives currency to the same gross prejudices. In an account of a case of *prolapsus uteri*, producing a retention of urine, he says "so permanent was it, and so often repeated, that the husband *learned* the mode of introducing the catheter;" as if it required long and repeated practice to learn to do an act which, if any husband, after a simple description of the operation, could not perform, he ought certainly never to possess a wife. And this description, physicians are undoubt-

edly capable of giving, and ought certainly, when necessary, always to give; and which, if they placed any kind of value upon female modesty, would give, rather than shock her feelings by performing so indelicate an operation themselves.

Yet, above every consideration of delicacy and modesty, there should be a stronger inpulse—a higher motive, to stimulate physicians to impart to females this necessary—but simple knowledge. If, as has been admitted by medical writers themselves, females, for the want of this "little knowledge" which the faculty have it in their power to give, are liable to "very great injury;" and that "many of them have actually expired, for want of some one to draw off their urine;"—we say, if these are facts, of which none need doubt, how can physicians stand acquitted in the eyes of the community, or at the day of final account? Who that knows the simplicity of the process of using the catheter, and reflects upon the sufferings that women have endured, and even death itself, but will feel the keenest indignation towards those whose duty it was and is, to communicate the "little knowledge," which every woman can, "and ought to understand" and exercise, when necessary, for her own preservation. Do not the serious consequences which arise from the withholding of the knowledge in question, fully justify the warmth of feeling which we have expressed, and the severity of language which we have used in relation to this subject?

What! can any one be found who will not, with us, deal out the severest rebukes to those who, by neglecting to communicate the knowledge of which we are speaking, not only endanger but actually destroy the lives of "many" women. We know that we have used strong language, but we trust that before leaving the subject we shall satisfy the candid reader there is good reason for it. We are also well aware of the respectability of, and the great deference which is paid to, the medical profession; and we are equally sensible how much, as well as how little, the world is indebted to them. As a learned body, they are certainly not excelled by any other class in community: and this, joined to their high respectability, renders the difficulty of correcting the popular prejudice in question, the greater.

The servility with which the faculty of medicine, in some respects, is adhered to, is certainly far behind the intelligence of the age. We wish women, and likewise men, to think and understand and act for themselves; and be dependent no further than necessary upon others, especially in matters of so much simplicity as the one under consideration, and which at the same time is so intimately connected with their delicacy, health and happiness.

But we would not dwell upon this one breach of refined feel-

ing, and professional trespass upon female chastity, if it stood alone, an isolated monument of the unblushing turpitude of the medical profession. It is only a part, and a small one too, of a most stupendous scheme by which they are imposing upon the ignorance and credulity of the multitude, for the purpose of their own pecuniary gain or personal aggrandizement; of which more will be said hereafter.

And what is the operation of introducing the catheter? says Dr. EWELL, whose name we cannot mention but with sentiments of respect. His writings evince that his whole heart and his whole mind, are animated by the finest feelings of human nature; that he inherits the rare and uncommon qualification so desirable in physicians, though seldom met with in the present age,—a sense of the proper estimate of female delicacy, modesty, and morality. Dr. EWELL says, speaking of the necessity of using the catheter, "There is no complaint to which females are subject, more manageable among themselves, and consequently which they ought to attend to with more earnestness; and the knowledge of which is of such easy acquisition, and the performance so simple, that much attention is scarcely necessary. Nevertheless," continues he, "this little knowledge, this little ability to perform, has been so neglected, that not only innumerable females have had to exhibit themselves to men, but many of them have actually expired, from want of some one to draw off their urine, by means of a little tube called a catheter, corresponding nearly in shape to a goose quill, and which has actually sometimes proved a convenient substitute."

"And what is the operation of introducing the catheter to evacuate the urine? The bladder containing the urine, is immediately behind the front bone called the pubes; the canal to it direct—not three inches long. The instrument, the catheter, is adapted to the size of the canal, and the woman lying on her back, finding the entrance, into which the end of the catheter is introduced and pushing it backwards and upwards, pushing it gently in the direction where least resistance is made, can readily introduce it herself to draw off the urine. If the woman be too sick to *perform the operation on herself, her associate, her nurse, her servant, can do it.*"*

"From motives of delicacy alone," says Dr. BARD, "this easy operation ought to be in the hands of women; but what is of much more consequence, if a man is to be sent for every time it may be necessary to perform it, it will generally be neglected too long, particularly in the country; to the very great injury, and in some instances danger, of the patient.—The orifice of the urethra, or urinary canal, is situated under

* EWELL's Family Physician, page 163, 2d edition.

the arch of the pubes or share bones, and the canal, making a slight curve, ascends very little, and enters the bladder almost immediately behind it: it is not above an inch and a half long, so large as to admit a catheter of the size of a goose quill, and so little curved, [crooked] that a straight instrument is by some preferred."* It was formerly customary to have none but crooked, metal catheters; though now, gum elastic ones are mostly used, and are preferable.

We have made the preceding quotations in order to show how simple the process was of using the catheter, as well as to give respectable authority for the propriety of confiding it to the hands of females themselves. The opinions of BARD, no medical man will lightly contradict; whilst that of EWELL requires nothing but time to make it equally respectable. What then becomes of all the mystery which most modern writers have endeavored to throw around the "easy operation" of drawing off the urine with a catheter? the performance of which is "so simple that much attention is scarcely necessary," "and from motives of delicacy alone ought to be in the hands of women." Oh! professional shame, where is thy blush?

In introducing the catheter, "if some little difficulty should occur, patience, and gently moving the hand from side to side, or upwards and downwards, will overcome it with very little or no force, and with little pain to the patient. At any rate, force is never to be used; it is better to desist, and make a second or a third attempt; for whenever any difficulty presents, it is owing to circumstances not to be overcome by violence, which can never do good, but may do infinite mischief." Dr. BARD also directs in cases where there may be difficulty in introducing the catheter, that it be put "*into the hand of the patient, who, directed by her own feelings, will sometimes succeed more easily than any other person.*"

We will close these observations, by remarking, that if, for want of a catheter, a goose quill is used, one of the smallest size, with a long barrel, should be preferred. To prepare it for use, cut a hole in the side of the quill near the end, minding not to cut the end off; by doing so we make sharp edges to the quill, which may do an injury in passing through the urethra to the bladder. Next cut another hole at the most extreme part of the hollow where the barrel is attached to the feather part, which must not be cut off. This precaution is necessary, as by cutting the feather from the barrel of the quill it has, in using, slipped from the fingers and passed into the bladder, which has subjected the patient to a dreadful operation to extract it. By leaving the feather part on the quill, this danger is entirely avoided.

* BARD's Midwifery, page 46; New York edition, 1808.

Before introducing either the catheter or the quill these instruments should be rubbed all over with oil or lard.

"This is the whole secret of using the female catheter, for a want of the knowledge of which thousands of females have been compelled to submit to an exposure of their persons, and thousands more have lost their lives, where assistance could not be obtained. By a little attention to this subject, female friends, or even female servants, could easily give the required assistance;" as well as "always be enabled to relieve themselves, without an indecent and mortifying exposure of their persons to males who act as physicians."*

SECTION 11.

OF PAINS IN THE RIGHT SIDE.

A LITTLE after, and seldom before, the fifth month, women are frequently attacked with a deep seated dull pain immediately in the region of the liver. Its commencement is with a very trifling pain in the part, which gradually increases as pregnancy advances. The pain is very seldom severe, but is almost constant both day and night; and especially during the latter.

Women are more liable to this complaint during their first pregnancies than afterwards. The cause is supposed, by DEWEES, to be the pressure of the uterus upon the liver as it enlarges in the progress of gestation.

TREATMENT.—From the cause which produces this complaint, little can rationally be expected from medicine; yet if it be severe, something should be attempted. Lying on the left side commonly affords some relief. The side should also be bathed with cayenne pepper and vinegar, or any of the bathing drops. A strengthening plaster may also be applied to the part. Placing a hot brick or stone near the part, on going to bed, may likewise afford relief; or promoting perspiration by any other means will be found very useful.

SECTION 12.

OF INABILITY TO SLEEP.

TOWARDS the latter period of pregnancy, many women experience much inquietude, with an inability to sleep. This disturbance is sometimes so great as to prevent the possibility of

*GUNN's Domestic Medicine, page 421

sleeping. The difficulty seems principally to be caused by spasmodic or involuntary contractions of the muscles of the limbs; which take place, sometimes with considerable force, just as the patient appears to be falling into a sweet slumber. The disturbance thus produced immediately, forces the woman from her sleep very much against her inclination.

These disagreeable startings of the limbs, continue longer or shorter, but at length yield to the impulse of nature, and the woman falls asleep, though sometimes not till towards morning. Sleep, however, when it does come, appears very refreshing, and she rises in the morning apparently as well as after an undisturbed night's rest.

TREATMENT.—Nervine medicines appear in general to have no great influence over this condition of the system; though they ought to be tried. For this purpose, the tincture of lady's slipper root, or the nervine tincture, is perhaps the best; and Dr. WELLS' anodyne drops might also be tried. Washing the face, hands and feet, at going to bed, is a very good remedy; but nothing probably is equal to a good sweat at evening, either by steaming, or sitting before the fire, and drinking a tea of the diaphoretic powders. The partridge berry tea might also be tried, as it is the principal ingredient in a compound highly recommended for this difficulty by Dr. SMITH. It is also highly probable that the blue cohush might be advantageously employed in this complaint.

SECTION 13.

OF PRURITIS, OR ITCHING.

PREGNANT women are liable to a most troublesome and distressing itching about the private parts. It is, however, not exclusively peculiar to pregnancy, but is much more common to this state than to any other. The disposition to scratch is sometimes so extremely pressing as to set decency at defiance, or oblige the unfortunate woman to abandon company.

This extremely disagreeable complaint, sometimes makes its attack during the early part of pregnancy; but more commonly not until the sixth or seventh month. If cleanliness be neglected, says DEWEES, it is sure to be aggravated; though no attentions of this kind are capable of overcoming the disease. No satisfactory cause has, as yet, been assigned for this troublesome disorder.

TREATMENT.—The application of cold water to the part, will often afford relief, but does not effect a cure; the relief being

only momentary. A solution of borax in water, as much as the water will dissolve, applied as a wash and by injection, has proved highly advantageous, in some instances; whilst in others, the balsam of capaiva has succeeded better. We think, probably, in those cases where the capaiva would answer, the balsam of fir might be equally as good.

We believe, however, that injections prepared as heretofore directed in Section 4, chapter II, applied to the vagina, and especially if made moderately stimulating with tincture of lobelia tincture of myrrh, or cayenne pepper, would be far more likely to give permanent relief, than perhaps any thing else. After trying this, or any other means which might be thought advisable, a course or two of medicine should be resorted to, and if found beneficial, continued until a cure is effected.

SECTION 14.

OF SWELLING OF THE LEGS.

This complaint is a very common attendant on pregnancy; towards the close of which, it sometimes produces much inconvenience and pain. There is also, very frequently, a swelling or enlargement of the veins, which is troublesome in pregnancy. Both difficulties appear to arise from one cause, which is a pressure of the womb upon the vessels by which the fluids are returned to the body, from the feet and legs. Neither of those swellings are dangerous, but disappear at delivery.

Treatment.—It may often answer a good purpose to draw on a pair of small tight stockings to reach to the body: and some swathe the legs with a bandage, to prevent the swelling. The vapor bath or steaming, always affords relief; in addition to which, the bowels ought to be kept loose. It frequently answers an excellent purpose to bathe the legs with tincture of myrrh, cayenne and vinegar, bathing drops, or any other stimulating wash. Nothing, however, will effect a permanent cure but delivery.

SECTION 15.

OF ABORTION.

During every period of pregnancy, after the first month, the woman is liable to abortion or miscarriage; but the time at

which it most frequently happens, is about the third or fourth month, or from the tenth to the eighteenth week. Some women are very liable to miscarry; and when the habit is once formed, there is difficulty in preventing it. Abortion may be caused by a variety of circumstances; some of which can be guarded against, whilst others are entirely beyond control. It may be produced by violent exertions of strength; by severe exercise; by frights, violent fits of passion, great uneasiness of mind, strong purges, excessive venery, external injuries, as blows and bruises, &c. &c.

The symptoms which usually precede an abortion are, a softness or flaccidity of the breasts; pains in the back, loins, and lower part of the belly; shiverings and palpitations of the heart; a falling or subsiding of the belly; pain in the inside of the thighs, &c. &c. When any or all these symptoms take place in a pregnant female, and are attended by a flooding or flow of blood from the womb, a miscarriage may with much certainty be calculated upon. Miscarriage may be attended by various degrees of suffering and danger, from trifling pains and discharges of blood, to the most exquisite torture and alarming hemorrhages; and not unfrequently death. All these symptoms, however, may be mitigated and divested in some measure of their alarming character, as well as abortion itself prevented, by a timely use of suitable medicines.

Treatment.—When symptoms of abortion make their appearance, the woman should take freely of the diaphoretic pow ders, or a tea of the anodyne powders, with the anodyne drops, and keep herself as quiet as possible in bed. She may also take of the nervine tincture, and have a hot brick applied near her bowels or back; and if there be much pain or flooding, she should take repeated large doses of cayenne in a strong tea of equal parts of birth root and witch hazel leaves, or either of them alone; or, if neither can be had, make use of almost any other astringent article in their stead. However startling may be the idea of administering large doses of cayenne in cases of flooding, we are satisfied, by repeated experience in the most alarming cases, that it is of great value. The vessels of the womb, from which the flooding takes place, when they act under a healthy influence, always close and prevent a discharge of blood; but in a case of hemorrhage they have lost this power Hence they require the application of a stimulus to enable them to assume a healthy action, and thus prevent the discharge of blood.

We are very sensible that physicians will generally oppose us in these opinions, by referring to the doctrine of *active* and *passive* hemorrhage, the fallacy of which we could easily prove

but as we think the statement which we have made, of the mode or principle by, or upon, which the cayenne acts, is sufficient, we will take no further notice of it here.

If the symptoms are more violent, the medicines should be given the more frequent; in addition to which, the woman should be steamed. If these means do not moderate the symptoms, a course of medicine must be resorted to, and, if necessary, repeated at proper intervals until the danger is removed.

We can assure our female readers, that, however contrary our treatment may be from what they have previously been accustomed to, it is nevertheless not only perfectly innocent, but absolutely better than the too common custom of bleeding and using cold substances; which, instead of strengthening nature to do her own work in her own proper way, weaken the living power, and make the woman a more easy prey to disease. We, therefore, intreat you, if symptoms of abortion make their appearance, not to allow your fears to overpower your judgments and pursue a course so hostile to life. But keep yourselves quiet and warm; take freely of cayenne and the astringent medicines, particularly the birth root, or witch hazel leaves; make free and frequent use of the steam bath, at all times during pregnancy, but especially when threatened with abortion. Persevere in this course, nothing deterred by the violence of the symptoms; but the more violent they are, the more freely you should use the medicine. If this course does not check the disease, and especially if there be flooding, take a thorough course of medicine, which may be repeated at discretion. This plan of treatment, seasonably adopted and persevered in, would save many from premature death. If costiveness prevail, make use of injections to relieve the bowels. Astringent injections may also be thrown into the vagina, in cases of flooding; or if sudden and profuse flooding takes place, threatening quickly to destroy life, it has been recommended and practiced, to make use of what is termed the *tampon*. This is nothing more than a piece of sponge of suitable size, moistened with vinegar, and crowded into the vagina. "It almost instantly puts a stop to the hemorrhage; and, in some instances," says Dr. Dewees, "I believe I was entirely indebted to it for the preservation of my patients' lives." When sponge cannot be procured, he recommends rags, tow, or flax, well moistened with oil or lard, to be introduced or confined there, until the difficulty can be removed. We are inclined to think, however, that astringent injections composed of a strong decoction of birth root, witch hazel, or any other astringent article, applied to the vagina, is more to be relied upon than the tampon.

CHAPTER IV.

OF THE DISEASES CONSEQUENT ON DELIVERY.

PARTURITION or delivery, although it is a natural process, yet it lays the woman under additional liabilities to disease, and even sudden death. Several circumstances conspire in the production of these increased liabilities; such as the exhaustion produced by labor; the removal of the pressure upon the abdomen, from the expulsion of the child; the opening of the mouths of the blood vessels in the extraction of the placenta or afterbirth, which sometimes causes profuse flooding; the injury which the womb is liable to sustain during the progress of a painful and tedious labor; the liability to take cold, which interrupts the *lochial* discharge, as well as to produce other painful affections, &c. &c.

SECTION 1.

OF FLOODING AND FAINTING.

WHERE either of those circumstances occur at child birth, they may be regarded as somewhat dangerous. Fainting sometimes takes place apparently from mere exhaustion, whilst at other times it is consequent on flooding. The flooding may either discover itself by a discharge of blood externally from the vagina, or it may be retained in the womb; and in either case it may prove suddenly fatal if not quickly stopped.

Instances indeed have occurred, in which sudden death followed fainting without any flow of blood, either externally or internally, or any other discoverable cause; but occurrences of this kind are very rare.

TREATMENT.—Whenever fainting or flooding takes place after delivery, we have just cause to be alarmed; and the most active measures should be taken to give relief.

A dose of cayenne, anodyne drops, diaphoretic powders, tincture of myrrh, or almost any warming drink, should, in all cases of flooding or fainting, be administered as soon as possible, and repeated until the urgent symptoms are removed. Measures ought also to be instantly taken to promote perspi-

ration, by the application of hot bricks or stones, or of bottles or jugs filled with hot water, to the feet and legs. In addition to these means, the bowels must be bathed with the bathing drops, tincture of myrrh or of lobelia, cayenne and vinegar, French brandy, or any other kind of spirits which may be at hand. Strong astringent injections may also be freely and frequently thrown into the vagina; and if these measures fail, recourse must be had to the tampon, as recommended in Section 15, Chapter III.; still continuing the other remedies both internally and externally, until the uterus is contracted, the flooding ceased, and the patient out of danger.

One of the best means, however, and one of universal access and application, is friction applied to the abdomen, either with or without the external remedies, which rarely or never fails, when properly employed, of producing a contraction of the womb. This organ, by the growth of the child, having become vastly expanded, now, after delivery, must contract, which will close the mouths of the bleeding vessels. The most usual cause of flooding, is the want of proper tone or action in the womb to enable it readily to contract after the expulsion of its contents. And hence the necessity of giving stimulating medicines to restore that living healthy action to the womb, by which it is enabled to contract, and thus prevent hemorrhage or flooding.

In addition to administering stimulating medicines, the astringent tonics must also be employed. Birth root and witch hazle leaves are amongst the best of this class of medicines for checking hemorrhage; a strong tea of which should be freely used in all dangerous cases. For the want of either of those articles, any of the astringent tonics may be employed in their stead. Injections of the same should also be thrown into the vagina, at proper intervals, until the difficulty is removed.

The erigeron canadense, particularly its oil, is recommended as a most powerful medicine in flooding. Two or three drops of this oil, it is said, will suddenly arrest this dangerous discharge. We would, however, advise these who employ this powerful article, to be cautious in its administration, although we know of no instance in which it has produced any bad effect. Yet we deem this caution necessary, on account of the activity and power which the erigeron appears to possess.

But before leaving the subject of this section, we will add a few remarks upon the method of checking hemorrhage or flooding, by friction and pressure upon the abdomen. We thus enlarge upon this important method, not only because we have but slightly mentioned or noticed it, but because the practice is supported by the best authority. It is, however, to Dr. Dewees, alone, that we are indebted for the extracts which follow; and he not only expects friction to promote the contraction of the

womb, but also, in some instances, the expulsion of the after-birth.

In DEWEES' System of Midwifery, page 459, he describes his method of employing friction; which is "by pretty briskly passing the hand over the region of the uterus, and from time to time attempting, as it were, to grasp the uterus by closing the fingers upon it." This is certainly a very simple process, and may be used with all safety; and "I have never," says DEWEES, "had the misfortune to meet with a uterus that was insensible to this mechanical stimulus, or to *lose a patient from immediate loss of blood.*" And in another place he says, "its influence is as prompt as it is efficacious: Indeed, I consider this as indispensable, let whatever other means be employed."

Another very successful practitioner assures us, that after the expulsion or extraction of the afterbirth, he employs nothing but simple pressure; applying both hands, and pressing in such manner as most to favor the contraction of the womb, and its descent into the cavity of the pelvis. A late writer recommends simply a tight bandage to be tied around the bowels immediately after the expulsion of the child, without waiting for the extraction of the after-birth as is usual. We believe this to be a good practice, as it at once affords support to the relaxed abdomen, and prevents faintness and other disagreeable or dangerous symptoms.

The contractions of the womb may, with certainty, be known by the feeling of a hard tumor on pressing upon the bowels, or by rubbing the ends of the fingers back and forward from the pubes towards the stomach, and vice versa. But if the womb is not contracted, on thus examining the abdomen, it will appear uniformly soft and yielding, without any hardness or tumor.

"But in adopting this method," says DEWEES, "we are to take care we do not abandon it too soon; for it is not sufficient that we procure the contraction of the uterus; but that we maintain it in this condition for some time, by the continuance of the friction. And I would here caution the inexperienced practitioner," continues he, "against alarm, when almost at the instant he feels the uterus hardening and diminishing under his hand, he hears very plainly a considerable discharge of coagula and fluid blood from the vagina; and at the same moment he finds the uterus retiring, as it were, from under its pressure.

"This discharge is but the effect of the contraction induced by the friction upon the external surface of the abdomen, and must be regarded as a favorable omen, as it assures us that the uterus is about to regain its powers. Perseverance is now all important; the frictions are to be continued until there is sufficient evidence of the permanency of the contraction, by noticing that the uterus no longer relaxes itself, as it did probably at the commencement of the operation."

SECTION 2.

OF AFTER-PAINS.

Soon after delivery, every woman is liable to be severely tormented with what are termed after-pains. With a first child. however, these pains are either very slight, or altogether absent. After tedious labors, they are also lighter than when the labor has been short.

After-pains are caused by the contractions of the womb to expel clots of blood which form in it, and are sometimes almost as severe as those of labor. They are also sure to be produced or aggravated, for several days, whenever the child is applied to the breast.

Treatment.—If the pains are very mild and produce but little inconvenience, it will scarcely be necessary to attempt to mitigate them; but if they are violent and distressing, a dose of the diaphoretic powders, cayenne pepper, or anodyne drops, may be frequently given, in a tea of the anodyne powders or the red raspberry leaves. A hot brick, or bottle filled with hot water, should also be applied to the bowels, and replaced when cool. By these means the skin will be kept moist, the blood vessels of the womb stimulated to contract, and thus prevent the formation of clots, and at the same time the blood be diverted away from the womb and internal parts, to the surface. But if the pains should continue severe, notwithstanding the use of these means, an injection must be given, composed of catnip tea or warm water, adding a little tincture of lobelia and tincture of myrrh. or cayenne pepper.

SECTION 3.

OF IRREGULARITIES OF THE LOCHIAL DISCHARGE.

The discharge which takes place after delivery, is termed *lochia*. It proceeds from the mouths of the vessels which have become exposed by the removal of the after-birth; and the quantity must, therefore, depend upon the size of the after-birth, and the well or ill contraction of the womb. Should the womb not contract at all, or but imperfectly, after the expulsion of the child, a dangerous flooding is the consequence; but if the contraction is more perfect, the discharge is not a flooding, but is termed the lochia.

The lochial discharge may be either too profuse or entirely suppressed; or it may become of a bad quality, and, from its offensive smell, extremely loathsome. Its profusion is caused by the imperfect contraction of the womb and mouths of the blood-vessels, so that too much blood is suffered to escape from them into the womb. A suppression is caused only by taking cold, which produces much pain and fever, and if not soon relieved is attended with danger. The vitiated quality of the lochia may be ascribed to a peculiar morbid condition of the womb by which the discharge is changed from its usual appearance to a profuse watery fluid, of a greenish color, exhaling a very fetid odor, and frequently so acrid as to excoriate the parts upon which it may fall.

TREATMENT.—If the discharge be profuse and debilitating, the birth-root, diaphoretic powders and bitter tonic should be liberally employed; taking a dose of one or the other five or six times a day; and occasionally the fourth of a tea-cupful of a tea of the anodyne powders, or raspberry and witch hazle leaves, with half a tea-spoonful of cayenne in it. Strong astringent injections are also to be thrown into both the vagina and rectum. Proper care must be observed to keep the skin moist, by the application of hot bricks or stones; and if these means do not check the discharge, a thorough course of medicine must be added to the treatment, and repeated as the circumstances of the case may require, until the complaint is removed.

When the lochia becomes suddenly suppressed from cold, active measures must be immediately taken to restore it; for which purpose a liberal use must be made of the diaphoretic powders and cayenne, with the application of hot bricks or stones, to promote perspiration. If the pain be severe, stimulating injections should be administered, and the abdomen bathed with any stimulating wash, such as the tinctures of myrrh or lobelia, bathing drops, &c., and then apply a hot brick to the part which will increase the stimulant effect of the wash and promote perspiration. If these means, faithfully employed, do not produce the desired effect, a course of medicine must be resorted to in addition to the other treatment, and repeated at discretion until the discharge is restored.

In case the lochia becomes vitiated in its quality, the same course, in general, must be pursued as that just pointed out for the other deviations, particularly resorting to the bitter tonic, injections both to the rectum and vagina, and bathing the bowels. In fact there is no mode of relieving complaints of the abdomen better than applying medicinal washes externally, and it ought, therefore, never to be neglected.

SECTION 4.

OF COSTIVENESS.

This is almost sure to take place after confinement, and then, as at all other times, is productive of disagreeable consequences. The consideration of it in this chapter does not seem perfectly consistent with our arrangement, but its importance we think fully justifies its introduction here.

Treatment.—Dependence should be almost exclusively placed upon injections. These may be made of warm water, cat nip or pennyroyal tea, adding a little tincture of myrrh, or cayenne; and be repeated until the bowels are relieved. If no bad symptoms arise, the injections need not be used until the second or third day after delivery; and in case the costiveness should be obstinate, either a tea or the syrup of the twigs or bark of the butternut should be added to the injections; or castor oil, or a decoction of the black root, may be employed for the same purpose.

SECTION 5.

OF CHILD-BED OR PUERPERAL FEVER.

This is by far the most fatal disease to which lying-in women are subject; it having been asserted by some, among whom is Dr. Wm. Hunter, that three-fourths of those who take it die; and also that one-half who die in child-bed, are cut off by this one complaint. This fever is peculiar to lying-in women, none others having ever been known to have it. It is apt to be much more prevalent in some seasons than others.

It would seem from a number of facts and circumstances on record that child-bed fever was contagious; though further proofs are yet wanting to place it beyond doubt.

In the Royal Infirmary at Edinburgh, this fever was unknown for several years; but when a case did occur, "almost every woman, in a short time after delivery, was attacked with it; though prior to delivery, she may have lain for even weeks together, not only in the same ward with the infected, but even in the very next bed." The disease, it is said, "was only eradicated from the hospital in consequence of the wards being entirely emptied, thoroughly ventilated, and new painted;" after which "the hospital remained as free from disease as formerly."*

* Thomas' Practice, article, Puerperal Fever.

Many instances are related by which it would seem as if the contagious matter was carried about the persons, or in the clothes, of midwives and nurses. In a late work on females, by Dr. Gooch, of London, he says: "It is not uncommon for the greater number of cases to occur in the practice of one man, whilst the other practitioners of the neighborhood, who are not more skilful or more busy, meet with few or none."* "A woman in the country, who was employed as washerwoman and nurse, washed the linen of one who had died of puerperal fever; the next lying-in patient she nursed, died of the same disease: a third nursed by her met with the same fate; till the neighborhood, getting afraid of her, ceased to give her employment."†

Dr. Gordon, in an account of an epidemic child-bed fever which prevailed between 1789 and 1792, in Aberdeen, says: "This disease seized such women only as were visited or delivered by a practitioner, or taken care of by a nurse who had previously attended patients affected with the disease."‡

Dr. Gooch also relates another singular case:—"A practitioner opened the body of a woman who had died of puerperal fever, and continued to wear the same clothes. A lady whom he delivered a few days afterwards, was attacked with, and died of, a similar disease; two more of his lying-in patients, in rapid succession, met with the same fate. Struck by the thought that he might have carried the contagion in his clothes, he instantly changed them, and met with no more cases of this kind."§

Another still more remarkable case is related by the same author:—"A general practitioner in extensive midwifery practice lost so many patients from puerperal fever, that he determined to deliver no more for some time, but that his partner should attend in his place. This plan was pursued for a month, during which not a case of the disease occurred in their practice. The elder physician being then sufficiently recovered, returned to his practice; but the first patient he attended was attacked by the disease, and died. A physician who met him in consultation soon afterwards, about a case of a different kind, and who knew nothing of his misfortune, asked him whether puerperal fever was at all prevalent in his neighborhood; on which he burst into tears, and related the above circumstances."‖

These statements are selected from among many others of like character, but are not adduced as proof positive that child-bed fevers are contagious; though if they are not, the coinciden ces are certainly very striking and extraordinary—sufficiently so. to put midwives, nurses and women, on their guard, in such cases.

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* Gooch on Females, page 19 † Ibid, page 20. ‡ Ibid, pages 27, 28
§ Ibid, page 19. ‖ Ibid, page 77.

Child-bed fevers generally begin a few days after delivery, with a pain extending over the bowels, with such tenderness of the abdomen as to make the least pressure upon it extremely painful. The patient is often unable to bear the weight of the lightest bed clothes, or even to turn herself, or be turned in bed.

The abdomen also becomes swelled, and as the disease advances, the swelling sometimes increases, though the pains grow less severe. Shivering is also a common symptom, and is followed by a very quick, and generally full pulse, vibrating under the finger; hot skin; short anxious breathing; severe pain over the forehead; peculiar wildness of the eyes; sharpness of the features; prostration of the living power; suppression of the lochia and milk, and softness of the breasts; fœtid stools, and diarrhœa. When this disease proves fatal, it does so about the fifth day.

Treatment.—This disease, which, from its fatality, carries terror and dismay wherever it makes its appearance, is as much under the control of medicine, and may, in general, be as readily cured, as other fevers.

Various modes of treatment have been proposed and tried, with different degrees of success. Some have recommended tonics; others sudorifics; and others again have advocated depletion, by large bleedings, and purges. The success or failure of either plan, has depended partly upon the state of the system, and partly upon the indolence or activity with which each plan was pursued.

Dr. Gooch, who is the latest author on this complaint, pursued sometimes a depleting, and at others a stimulating, plan of treatment, according to the apparent nature of the symptoms. When they were obviously inflammatory, he let blood copiously; but when of a contrary type, ne made use of stimulants. It would seem, however, to those who are acquainted with the general principles advanced in the first volume of this work, as unnecessary that we should examine the contradictory theories and doctrines of the more fashionable practitioners, as we make one rule and one principle of practice apply to all. We nevertheless, cannot omit, whilst writing upon this most fatal complaint, to offer a little of the evidence collected from other sources, in support of our own practice.

Dr. Denman appears to have depended principally upon the use of antimonial preparations, which acted sometimes by vomiting, purging, or sweating; the two latter, and especially sweating, appearing to be essentially necessary to the cure. Clysters or injections, he also considers of much advantage, as contributing to the immediate relief of the patient.

The antimonial remedy of Dr. Boer, of Vienna, seems to have produced its good effects by a "profuse sweat" and the free passage of urine; as it appears to have "always effected a cure in one and the same way." "After the adoption of this remedy," says Boer, "the puerperal fever was never fatal."

One part of Dr. Gooch's treatment, upon which he lays much stress, was the application of hot substances to the bowels, "renewed so often as to keep up heat and moisture."

The foregoing circumstances and facts, drawn from the writings of eminent medical men, are not introduced, by any means, as proof positive of the correctness of the principles of our own practice, but as collateral evidence of the importance of promoting perspiration. Many more authorities to the same effect, might have been adduced; but these must suffice.

Previously, however, to describing our own mode of treatment, we will observe, that we believe child-bed fever might almost always be prevented, by being careful to avoid taking cold, and by keeping the skin moist by the frequent use, if necessary, of the diaphoretic powders, and by strict attention to the bowels to prevent costiveness.

If, notwithstanding proper care, or by carelessness, or by any other means, the woman takes cold, or gets a fever of any kind, a course of medicine should be the first and immediate resort. Steaming should be thoroughly performed, and the stomach well cleansed by an emetic of lobelia, and the intestines well emptied by laxative injections. But if the intestines do not seem relieved by these, a dose of castor oil, butternut physic, cathartic pills, or black-root, should be taken, enough to operate freely. The operation should be encouraged by the administration of warm injections, and the strength of the patient sustained by broth, soup, or gruel. Hot applications externally to the bowels, will also be very beneficial to relieve the pain and soreness. For this purpose, a hot brick or stone, bottles of hot water, bags of scalded bran, or cloths wrung out of hot water, may be used. Much advantage will also arise from the frequent application to the abdomen of the tincture of myrrh, or any preparation of bathing drops. The steaming and emetic must also be repeated, if necessary, at discretion.

Before leaving this subject, we cannot too strongly urge the necessity of immediate attention to any of the symptoms of child-bed fever. Promptly pursuing the plan which we have laid down, at the first onset of this fever, we believe would, in almost every instance, at once remove the disease; but neglecting it only for a few hours, always renders the cure more difficult, and longer delay may make it fatal.

SECTION 6.

OF MILK FEVER.

Two or three days after delivery, the breasts become distended with milk, whilst the discharge from the womb, at the same time, is diminished. This is apt to be attended by feverish symptoms, such as headache, thirst, heat, and quickness of pulse; and is known by the name of milk fever.

TREATMENT.—By keeping the skin moist, and especially by bathing the breast with some relaxing oils, or with any of the bathing drops, and keeping them covered with a flannel, to promote perspiration in the part, the unpleasant symptoms may always be prevented, or much mitigated. But if they arise, proper means should be employed to promote perspiration; such as placing warm bricks, stones, or bottles of hot water, at the feet, bowels, or sides, and particularly one near the breasts. The breasts should also be bathed, as aforesaid, and made to perspire freely; and the child be often applied to them. By pursuing this course, nothing need be apprehended from a simple milk fever.

SECTION 7.

OF SWELLED LEG.

We have heretofore, in the preceding chapter, when treating of the diseases of pregnancy, spoken of swelling of the leg; but the complaint now under consideration is an entirely different disease. It only occurs after delivery, as that does before, and is denominated, in technical language, *phlegmasia dolens;* being also often called white leg. Its attacks may commence at any time between the first or second day and the third or fourth week after delivery.

The swelled or white leg, is commonly preceded by general uneasiness, low spirits, slight pains about the womb, attended with discharges from it of a peculiarly offensive character. These symptoms seldom excite much attention, until the patient is seized with a pain on the inside of the limb, commonly about the calf of the leg, which soon extends itself from the heel to the groin.

The limb very soon begins to swell, and a soreness extends all over it, so that it cannot bear the slightest touch, nor be moved withou' creating exquisite pain. The skin on the leg

becomes pale and glossy; the countenance is expressive of great anguish and dejection; the pulse is quick; the skin hot; the tongue white, and the urine muddy. And if proper measures be not taken, the complaint is commonly tedious, and often times shifts from one leg to the other.

TREATMENT.—Whenever symptoms of this complaint make their appearance, the woman should be immediately carried through a course of medicine; previous to which, however, the leg should be bathed, using much friction, with cayenne and vinegar, or any of the bathing drops. And as some authors suppose the disease is caused by some irritating matter in the womb, they have recommended the free use of injections, forcibly thrown into the vagina, with a view of cleansing those parts.

Whether the theory, of the irritating cause being in the womb, be true or false, there is no doubt that strict attention to the cleanliness of those parts, after child-birth, as well as during and after the monthly purgations of women, would be very conducive to health. The injections are directed to be made of warm water, or warm milk and water; and during the intervals between their application, to make use of sweet oil, applied to the same part.

If one course of medicine does not remove the complaint, it should be repeated, at intervals of two or three days, occasionally during the day, bathing the leg as before directed, and keeping it wrapped in flannel, and a hot brick or stone at the feet, to promote perspiration.

The woman ought also to take, two or three times a day, a dose of the diaphoretic powders, and about the same number of times of the laxative bitters. A dose of the black root, or of some other kind of physic, may also be taken occasionally; and if costiveness prevail, make frequent use of injections.

SECTION 8.

OF SWELLED BREASTS AND SORE NIPPLES.

SWELLED, sore, or inflamed breasts, is a source of frequent and excessive misery to mothers, and of inconvenience and deprivation to children.

This difficulty is caused by taking cold, or as some think, by fever produced by want of proper care, after delivery.—But be the cause what it may, it is a most distressing and painful malady; and cannot be too carefully guarded against, nor too perseveringly opposed if it take place.

Sore nipples are also exceedingly painful, and from their tenderness and irritability, torture and distress the woman very much. This is especially the case when the child is applied to the breast. Sore nipples, like swelling of the breasts, may and ought to be guarded against.

Treatment.—In order to prevent the difficulties of which we have been speaking, the breasts should be occasionally bathed with relaxing ointments or oils; such as sweet oil, bear's oil, horse oil, or goose oil. Care must also be taken to prevent exposure to cold, and its bad consequences guarded against by the use of the diaphoretic powders or cayenne pepper. Washing the breasts in cold water has also been highly recommended as a preventive of colds and obstructions.

But should the breast actually become inflamed, swelled, and painful, perspiration must then be freely promoted, by using the cayenne pepper or diaphoretic powders in suitable quantity, and by the application of hot stones to the feet, and particularly to the breast; which should in this manner, and by bathing with pepper and vinegar, or with bathing drops, be made to sweat freely. If this be attended to early and perseveringly, the complaint may almost always be removed without further bad consequences.

If these means, however, fail, a full course of medicine must be resorted to, by which a more powerful impression is made upon the system; the vessels are relieved of their morbid contents; the fluids are made to circulate more freely, and the complaint will thus be with greater ease and certainty removed. The local applications to the breast should also be continued; and, to keep it soft and moist, a flannel cloth ought to be worn over it, moistened with rum or the tincture of myrrh.

But if, notwithstanding all this, the swelling should be disposed to go on to suppuration, that is, gather, as is commonly said, we may then apply a poultice, renewing it when necessary, and continue it until the breast is ripe for opening, when, if the breast be not inflamed, it may be left off. After the matter is discharged, a tent moistened with salve must be kept in the opening, over which, for a while, a cloth moistened with rum, or tincture of myrrh, should be placed; or if there should be pain or inflammation, the poultice may be continued. The abscess may also, every day, be syringed out with a weak soap suds, followed by a strong tea of red raspberry or witch hazle leaves, to which should be added a little of the tincture of lobelia, or compound tincture of myrrh.

For sore nipples, the best method of preventing, is to wash them often with tincture of myrrh, and then with a strong tea of any of the astringent articles; such as hemlock bark, pond

lily root, witch hazle or red raspberry leaves, or with a tea of golden seal.

Should the nipples, however, become sore, they must be protected from the irritation of the clothing, by wearing over them nipple glasses, or nipple shields which are made of wood or wax. The wash just recommended, may be continued, and be more often applied, together with the common salve spread on a fine piece of muslin, and laid over the whole nipple.

In all cases of swelled or sore breasts, the child must be permitted to suck, or some one draw them frequently, as by doing so the breasts may not only be prevented from swelling and suppurating, but if they do swell and suppurate, the soreness and pain will thus be much relieved. These directions should be rigidly complied with, not only for the purpose of preventing pain, but also to prevent the milk from drying up, and making the breast useless.

CHAPTER V.

OF DISEASES WHICH ARE COMMON BOTH TO THE PREGNANT AND UNPREGNANT STATE.

HAVING heretofore considered the diseases either peculiar or common to particular states of the female system, we now devote a chapter to a few which are common to every state excepting that of childhood, or the time of life previous to puberty or maturity. We do not claim to be exactly systematical in every part of our arrangement; but we are enough so, perhaps, for all practical purposes.

SECTION 1.

OF INFLAMMATION OF THE EXTERNAL PARTS OF GENERATION.

INFLAMMATION of the external parts of generation, may occur at all times, and is sure to take place, more or less, at child-birth. It has been observed, that these affections of the private parts, when not caused by child-birth, are apt to run hastily into suppuration; which, indeed, is no uncommon occurrence after labor.

TREATMENT.—Inflammations of these parts, are to be treated the same as all others. Warm stimulants, such as diaphoretic powders, or cayenne pepper, must be taken internally; and cooling applications, such as cold water, or cold poultices externally. If ulcers form, they must be treated the same as ulcers of other parts; for which the reader is referred to the second volume, under the head of "*Ulcers.*"

SECTION 2.

OF THE HYSTERICS.

THIS is a very common form of disease with many women; and is more particularly apt to occur, when any important changes are taking place in the organs of generation. Hence it is very frequent at the period of puberty, when menstruation is about to commence; and also at each menstrual period, especi

ally if this function be in any way disturbed; and is likewise common during pregnancy.

Hysterics appear under a great variety of forms, imitating various other complaints, from some of which it is often difficult to be distinguished.

This disease is attended by dejection of spirits, anxiety of mind, difficulty of breathing, weeping, sickness of the stomach palpitations of the heart, &c. &c. When it amounts to what is termed a hysterical fit, it commonly commences with a pain and sense of fulness in the abdomen, near the navel, towards the left side; but gradually increasing and spreading, a sensation is felt as of a ball passing upward, which appears to stick in the throat, and occasions a sense of suffocation.

The patient now becomes faint, and is sometimes affected with stupor and insensibility; the limbs and body are agitated, and she falls down. Laughing, crying, screaming, and incoherent expressions, often take place alternately, and a temporary delirium frequently arises. But these symptoms at length abate, and a quantity of wind is belched from the stomach, with frequent sighing and sobbing, and sometimes a severe pain in the head, and soreness over the whole body.

In some instances, however, there is little or no agitation of the body and limbs, and the patient lies apparently in a profound sleep, without either sense or motion. Indeed the symptoms are so extremely various, that any ordinary description could not apply to all cases of the disease.

Treatment.—In cases where this complaint originates from an affection of the womb, the proper measures must be taken to remove this difficulty. And for this purpose, strong tansy tea, or almost any strong bitter, with a free use of cayenne pepper, may be relied on as a general remedy. At the same time, the patient should sit by the fire, with her feet in hot water, covered with a blanket, quilt, or cloak, to promote perspiration and the operation of the medicine.

Any of the nervine medicines may be given at the same time, proportioning the quantity to the violence of the symptoms. The asafetida is a valuable remedy in this complaint; and will be found perhaps more beneficial in bad cases, to give it after the other means here recommended have been employed, and the perspiration has become free.

In very bad cases, however, or in such as are of long standing, and the health much impaired, with frequent returns of the fits, a course of medicine must be resorted to, and repeated according to the urgency of the symptoms. During the intervals between the courses of medicine, the patient should take of the laxative bitters, and diaphoretic powders, or cayenne, together

with occasional doses of the nervine tincture, or of the asafetida. Particular attention ought also to be paid to the bowels, which should be kept loose, or daily evacuations procured by the use of injections.

In hysterical cases amounting to fits, the antispasmodic tincture must be given; which will soon remove them, especially if enough is administered to produce vomiting. For the want of this, give the tincture of lobelia with cayenne; or either may be given alone, if both cannot be readily procured.

SECTION 3.

OF FLUOR ALBUS OR WHITES.

This is a very common complaint with women, especially such as are of a delicate habit, or have suffered much in child-bearing, or in menstruation, or have these discharges often interrupted by cold, and the like.

The degrees of its violence are extremely various, from that of a most trifling discharge of white mucus from the vagina or the womb, and producing no other indisposition, to much greater discharges, of different colors and offensive smell, with great pain and weakness in the back or loins, attended by great prostration and general debility.

Sometimes the discharges are irritating to the parts, as well as being offensive; and occasionally a feeling of heat and itching about the labia, with a sense of weight and relaxation about the lower part of the bowels and top of the thighs.

Treatment.—Cleansing the part from which the discharge issues, by means of injections, is of much advantage in this complaint; though authors disagree as to whether these should be applied warm or cold. Dr. Dewees strongly recommends lukewarm injections, whilst many others prefer them cold.—But the facts are, that both are useful.

In the first place, the vagina may be washed out two or three times a day, by injecting, in quick succession, two or three syringes full of warm water, in which a little mild soap has been rubbed. After the passage has thus been well cleansed, a cold injection should be thrown in, composed of a strong tea of some of the astringent tonics, of which the birth root is the best, adding a very minute portion of cayenne, and then be carefully strained; or a little of the compound tincture of myrrh may be added, instead of the cayenne. This mode of treatment will be sufficient to cure all mild cases of whites, if properly attended to.

In worse cases, or such as do not yield to these means, in addition thereto, a free use should be made of the bitters, and occasionally steaming or sweating before the fire; and, if necessary, taking a full course of medicine, which must be repeated as the circumstances of the case may require. A tea of the birth root is also a most valuable internal remedy, in all cases of the whites. It may be taken in doses of a fourth of a tea-cupful three or four times a day, with the addition of two or three tea-spoonfuls of the compound tincture of myrrh in each dose. Bathing the abdomen frequently with the tincture of myrrh or lobelia, will be found highly beneficial, and should not be omitted.

SECTION 4.

OF BEARING DOWN OF THE WOMB.

THERE is a most distressing complaint, to which many women are exceedingly liable, known by the above name. Its more common name, however, in the works of medicine, is *prolapsus uteri*, or prolapsus of the womb.

This disease first discovers itself by an uneasy sensation about the loins and the lower part of the abdomen, whilst standing or walking, attended occasionally with bearing down pains. After a while these symptoms become worse, and the woman is obliged to confine herself to her bed; and if the complaint goes on increasing, she will suffer the most excruciating pains, with a stoppage of the urine, in consequence of the womb descending into the vagina, and pressing upon the neck of the bladder. If the disease proceed on, without interruption, to its worst stage, the womb will be protruded out through the vagina, and hang as a bag between the thighs. This, however, is a rare occurrence, and is very difficult to cure.

TREATMENT.—The best remedy for this disease, is the application of injections immediately to the part affected; and at the same time using proper means to promote perspiration. Dr. THOMSON, in his account of the witch hazel, says that an injection made of a strong tea of the leaves of this article, with a little cayenne, "is good for piles and many complaints common to females; and in bearing-down pains it will afford immediate relief, if properly administered." The ambiguity of the latter part of this quotation, has caused much anxiety in the minds of those who have purchased his books. By the terms "properly administered," he means nothing more than throwing the injection into the vagina, which usually affords the most speedy relief

For want of the witch hazel leaves, take the birth root, or any other astringent article.

We were once called, in a case of this kind, to a lady who was the mother of several children. She was suffering much pain and anxiety, with some degree of fever. A few doses of the diaphoretic powders were prescribed, and hot bricks placed at her feet, to promote perspiration; after which a witch hazel injection was directed, when we left her. In the course of three or four hours we paid her another visit, and found her easy and composed. She appeared very grateful for the relief obtained by the injection; and remarked that it was the greatest and most sudden she had ever experienced. And to convey an idea of her sufferings, she said she had borne eight children; and would prefer the pain of bearing eight more, to enduring the distress which she had experienced in this instance. She continued taking the diaphoretic powders for a few days, by which her health was completely restored.

But in cases where the womb is protruded without the vagina, the cure will be much more difficult. In such instances, the part which is protruded should be washed with warm witch hazle tea made strong, after which, with the fingers well smeared with oil or lard, the womb must be gently and gradually pushed back to its proper place in the pelvis, when an injection of strong witch hazle tea should be thrown up after it, cold, and repeated several times a day, so long as necessary. The coldness of the injections increases their tonic effect, by which the relaxation of the parts is the more readily overcome, and the womb thus enabled to keep its proper place. They must not be so cold, however, as to render them too unpleasant, or they may be productive of injury from that cause.

But in those cases in which the womb falls quite out of the vagina, the parts concerned in retaining it to its place, will seldom recover their tone immediately so as to be safe to trust to them alone; recourse should, therefore, be had to an instrument called a *pessary*, for a representation of which, of two kinds, see plate I. This indeed may also be found to be advantageous in some cases of permanent relaxation of those parts, when the womb has not descended so low, especially when the case is of long standing.

The pessary is a very simple instrument, made of various substances, such as wax, ivory, metal, and latterly of gum elastic. Excepting those made of gum elastic, they are of a circular form, as will be seen by reference to the plate, but flat and a little oval on one side and hollow on the other, with a small hole through the center. This instrument can be obtained for a small sum, at most apothecary stores.

Most writers on the diseases of women, appear to possess the

same taste and anxiety for introducing the pessary into the vagina, that they have for drawing off the urine, which certainly if they possessed the feelings of common delicacy, they would instruct women to do for themselves or for each other, or entrust it to the hands of the husband, if the woman had one. This would certainly be far more decent, far more consistent with delicacy and sound morality, than for a physician to be permitted to do it. The operation is equally simple with drawing off the urine, if not more so; and we cannot contemplate the idea of a physician doing it, without sensations of sickening disgust. In reflecting upon the impositions practised in this respect, upon women of the nicest delicacy of feeling, and endeavoring to comprehend the shock which such an operation must give them, we feel no abatement in the warmth of feeling which we expressed when treating of the use of the catheter.

We believe every physician who, by his conduct or writings, endeavors to *mistify* any of the operations which are so simple that women may perform them for themselves or for each other, is obnoxious to, and worthy of the most severe reproach. How many women have suffered the most exquisite torment, and even death itself, rather than submit to an operation by a professional hand, which could have been as well performed by herself, her husband, or some confiding female associate! The physician who can calmly contemplate female sufferings, under circumstances such as these, as many undoubtedly have, cannot certainly be accused of possessing any excess of sympathy or decency, however much he may profess of either or both!

The method of introducing the pessary, which any woman possessing common sense, and having one in her hand, would at once understand without any description, is as follows:—The pessary is first lubricated or smeared with hog's lard or oil, then separating the labia with the fingers of one hand, with the other the pessary is introduced into the vagina. When it is fairly within this passage, it must be turned with the hollow side upward, so that the mouth of the womb may rest in it. Previous to its introduction, the urine should be passed, and the bowels emptied by an injection, in order to make all the room possible in the pelvis. If the pessary is too large, it will create pain; and if too small, it will escape when at stool; and therefore the woman should make use of a pot, and not go to the necessary or privy for two or three days, or it might be lost. If it be too large and give pain, it must be removed, and a smaller one put in its place.

The pessary should be taken out once in a while, and cleansed, by washing in soap suds and rubbing with a woolen rag, the woman lying in bed, for fear that the womb fall down and create difficulty; or if she prefer it, she may take it out every

night after retiring to rest, and return it again in the morning before getting out of bed. The pessary should be continued to be worn until the parts have sufficiently recovered their tone to keep the womb to its place, when it may be cautiously omitted. In young women, this may be but a few weeks or months, whilst with older ones, and especially those who have had many children, it may require years, or perhaps must be continued for life.

OF MIDWIFERY.

INTRODUCTION.

We approach this part of our work with seriousness and with diffidence; not because of its anticipated magnitude, or its difficulty of detail, though we look upon these, and especially the latter, as involving much responsibility. But it is the circumstances by which this reputed mysterious art is surrounded, that impress us with a seriousness and diffidence with which, in our other medical labors, we had not to contend. To oppose popular prejudices, or attempt innovations in matters ever so plain, and capable of the clearest demonstration, is certainly no enviable task; it is one from which the mind involuntarily shrinks, in contemplation of its responsibilities, and its interminable discussions and animosities. But when we attack a custom, the subject of which, both from its delicacy and by design, is kept hidden from the broad gaze of the world, and in attacking which we must have recourse to reason to a great extent, in the first instance, to supply the place of demonstration, the weight of responsibility, and other concomitant consequences, recoil upon the mind with redoubled force, and far more repulsive energy.

From the very nature and peculiarity of midwifery, it seems, by common consent, generally to be little inquired into, especially by men; and hence the too great ignorance respecting a matter of the highest importance to the whole community. It seems to be one of the consequent evils of civilized life, that we are disposed to devote our time and attention to things of lesser importance; such as acquiring some unmeaning accomplishment or personal embellishment; whilst the more important concerns connected with health and happiness are disregarded as if they were matters of small account. Hence we find in civilized nations, little is generally known respecting health and disease, and still less about the momentous concerns of pregnancy and child-birth; the very important knowledge of these things being, by common consent, yielded to a select few.

This highly interesting and necessary part of all female education, a correct knowledge of the phenomenon of child-birth, has for many years been passing into the hands of physicians, who appear to hold it with a most tenacious grasp.

We hope, while writing upon this subject, to be excused for any plain language wh ch we may use. The subject is one of much importance to the world, and particularly to females; and it is to them we wish to address ourselves. Upon them devolves the office of mothers—the often tedious process of gestation —the more painful one of delivery, and the still more careful and responsible one of watching over and rearing their tender offspring from infancy to mature age. What claims, indeed, has a mother upon the sympathy, the compassion, and the gratitude of the world!

We feel most sensibly the responsibility of the task which we have imposed upon ourselves—that of endeavouring to convince women of their capacity to render to each other all the needful assistance which is generally necessary at child-birth, instead of continuing the present indelicate, unnatural, and immoral habit of calling upon the other sex. The prejudices which sanction this custom of employing men instead of women, to officiate as midwives, are of comparatively modern origin; and are no where to be met with but in civilized life: and no where are the difficulties of labor so severe, and the mortality in child-bed so great, as amongst those nations which claim to be the most refined.

"I have seldom," says Dr. Ewell, in treating upon this same subject, "felt a more ardent desire to succeed in any undertaking, because I view the present increasing practice of calling upon men in ordinary births, as a source of serious evils to child-bearing—as an imposition upon the credulity of women, and upon the fears of their husbands—as a means of sacrificing delicacy, and consequently virtue—as a robbery of many of the good common women [midwives] of their employment and support. Truly, it shows as extraordinary a revolution in practice, as any afforded by a survey of all the arts." "Should the strangers to the practice, inquire if our men have large unwieldy hands—great curiosity about women; should they ask if our women have the requisites for useful services—small hands, good sense of touch, and *patience in attendance*—they will absolutely deny this monstrous perversion of the course of nature."

But so it is; the practice of midwifery, in all our towns and villages, and to a great extent in the country, is now almost exclusively confined to the hands of the physicians, who by their marvelous tales of the hair-breadth escapes of numerous women to whom they have been called just in time to save life, strike a terror in the mind of the suffering woman, which confirms her in the determination, no matter how repulsive to her delicacy, to employ none but doctors. These tales are told, of course, in presence of the attendants of the woman in labor·

and most commonly perhaps the individual whom the doctor has so fortunately rescued from such great peril, was at the same time in the hands of a female midwife, who, however skillful, was unable to render the needful assistance. The frequent repetition of these stories in the presence of the same women, with the affected mystery in which the transaction is enveloped, make a serious impression on their minds, and fill them with the most awful apprehensions; and they, in turn, employ the same individual, feeling themselves safe in the hands of no one else, unless it be some other physician who can tell equally marvelous tales.

We are truly sorry for poor human nature, that professional men are obliged to resort to such miserable shifts and criminal subterfuges, to secure to themselves a lucrative business, for which *by nature they were never designed.* And we are equally sorry to find ourselves under the necessity of thus exposing them and their artifices, in proper colors; in doing which we beg leave to say, that we are not actuated by malicious motives, but by a sense of the impropriety, impolicy, and immorality of the practice, and by a sense of duty to the female community and to the world. We will take this occasion also to observe, that we wish not by this honest expression of our sentiments, to wound the feelings of any who are not justly obnoxious to reproach. Some physicians who practice midwifery, do it more in compliance with common custom and the prejudices of those amongst whom they reside, than from the desire of retaining the business, or from a belief in the propriety of its being wrested from the hands of women. A few authors, too, have nobly stept forth as advocates of the insulted rights of female midwives, amongst whom Dr. BARD and Dr. EWELL stand pre-eminently above the rest. But how has their devotion been appreciated, and their toil repaid? We are informed that professional opposition has so retarded the sale of EWELL's *Family Physician*, that the author remains unremunerated for his labor and expense; and Bard's excellent Midwifery, probably from the same cause, has passed through only a single edition. By a perusal of these authors we have been largely profited ourselves, and have made copious extracts from their works for the benefit of the readers of our own.

We have heretofore alluded to the marvelous tales of physicians to frighten women to a belief in the necessity of employing them at child-birth. The following, from Dr. EWELL, seems to have reference to this circumstance; "A *thousand times* you are told of *one* irregularity of nature; but seldom hear of her almost undeviating correctness in operating." Of the truth of this you may all satisfy yourselves, with only a little reflection. Even if you hear a long list of unfortunate cases related, with which all books more or less abound, remember that these are

gathered from all quarters of the world, and do not constitute, perhaps, one in a thousand. "Provident nature," says Dr. Bard, "is wonderfully kind to pregnant women; and when she is properly consulted, attended to, and obeyed, from the beginning—not weakened by excess, nor thwarted by preposterous management—will, nine hundred and ninety-nine times out of a thousand, carry her votary safely through all the wonderful changes of this eventful period."

"A thousand times," says Dr. Ewell, "you dwell upon the miseries of one sufferer, without thinking upon the millions who happily and healthily pass the period of parturition. Away with your forebodings! Believe the truth, when pregnant, that, in all human probability, you will do perfectly well; that the most ordinary women can render you every needful assistance, without the interference of men midwives. *Their hurry, their spirit for acting, have done the sex more harm than all the injudicious management of midwives, of which they are so fond of talking.* This, Dr. Denman, Dr. Buchan, and many other really great physicians, have long since remarked."

Why then, let us seriously ask, will you continue the practice of employing physicians, since it is asserted, even by themselves. that they do more injury than midwives of your own sex? You ought certainly to know that "the simple process of child-bearing is performed by yourselves, and not by attendants' hands—by the resources of nature, and not by the powers of art." But of these facts, physicians, as well as too many midwives, have criminally kept you ignorant. They have clothed the operation of child-birth with so much mystery, which is the very ground work of deception, as to make you suppose that midwives always render essential assistance; when, in fact, in almost all cases, it is completely out of their power to do it, or if they are so ignorant or impatient as to attempt it, they are sure to do an injury. Figure to yourselves, for a moment, the condition of child-birth. The head of the child presenting, is driven forward by the contractile force of the womb, in the same manner that the urine is expelled by the bladder, only that the pains of labor are not under the control of the will. The head fills completely the whole passage, and very greatly distends it beyond its natural size.

We would now ask, what can the midwife do to assist the mother in the expulsion of the child? Can she lay hold of the head and drag it forcibly away! By no means: it is impossible; and should she be so ignorant or presumptuous as to attempt it, would certainly repent her folly and rashness. Well, what then can the midwife do? Why, at the most, in cases of wrong presentations, she may, by careful and discreet management, assist nature in rectifying those errors; but beyond this, she can do nothing more than to receive the child when it

comes into the world. And what woman could not, what woman would not, nay, ought not, when necessary, to perform this simple office?

In confirmation of these views, we will introduce some sen sible remarks from an anoymous publication by a female writer and midwife:—

"What arguments shall I use to convince you that it is out of the power of either midwife or physician, with safety to mother or child, to offer any assistance, even in the last stage of labor. Every woman who has borne children, knows, or might know, that in this stage, nature is so pressing that it would require a great resistance to restrain the child from coming forth, that is if there had been no mismanagement. I have seen this acted out by many, whilst they were waiting with fearful expectation, lest the birth should take place before the physician arrived.

"I am aware that many women may object to this proposition, thinking it was never so with them; but this is for the want of proper information. I recollect very well, that soon after I entered into this practice, a certain woman whom I had visited a second time, exclaimed immediately after the birth of her child, 'I know that I could not have a child born without assistance.' The fact is, she was not assisted; but because of the custom of the times, I thought best to pacify her by deception, as Dr. DENMAN justifies. I practiced in this way for a number of years, till a reproachful conscience bade me advance this light; though not without fears that some inexperienced female may consider this doctrine disheartening."

Here is the frank and candid confession of one whose conscientiousness and moral honesty impelled her to disclose the light of truth, which has been too long kept hidden from the view of the world. And what a melancholy picture does it exhibit of the depravity of those practitioners who are insisting upon the propriety of employing men-midwives, and who have themselves disclosed nearly as much as the lady to whom we are indebted for the foregoing extracts. But we will omit our own remarks, and hasten to another quotation from the same author, which at the same time that it exhibits her very correct knowledge of human nature, also displays her exalted views of Deity, and a rational confidence in his wisdom.

"Therefore," says she, "when your labor commences, be not afraid with any amazement, though a mother or any kind friend should insist on sending immediately for help; which we know is frequently done, but generally not without a bad effect, as it produces affright or embarrassment, which only retards the operation of nature: But let such know, (at least if you are a child of God,) that your trust is in your Creator, and that he

who appointed to the female this destiny, has also formed her equal to the task."

How much the embarrassment alluded to in the foregoing extract is increased by calling in *male* assistance, we must leave for females themselves to judge; as, indeed, too many of those who have become mothers know its extent from mortifying and painful experience. We beg the privilege here of introducing a remark of Dr. EWELL upon this subject. After speaking of the distress and disgust which husbands feel at the exposure of their wives to doctors, at child-birth, he says:—"But the opposition, the detestation of this practice, cannot be so great in any husband, as amongst some women. The idea has driven some to convulsions and derangement; and every one of the least delicacy, feels deeply humiliated at the exposure. Many while in labor, have been so shocked at the entrance of a man in their apartment, as to have all their pains banished. Others, to the very last of their senses, suffering the severest torment, have rejected the assistance of men. There have been many of this description in all ages! Virtuous sainted souls—they preferred dying in all the agonies, the throes, and the convulsions of fatal labors! They did err on the side of delicate feeling, but their errors shall be blotted out forever! To be instrumental in relieving one of this truly interesting cast, will be a heavenly consolation to all who can be alive to the pleasures of serving the virtuous."

Can it be possible that it is a part of the wise plan of Deity, to subject the delicate, the modest, the virtuous feelings of women, to such agonizing emotions as these? No! never! It may possibly be said that the cause of all this distress, is the improper indulgence of a false delicacy—that child-birth is an extraordinary occasion, and it is the duty of women, at such a time, to conquer those feelings. But we must confess that we have no ear for philosophy like this. This sense of delicacy was given them by the all-wise Creator, for a noble and valuable purpose; and as well may we be told that hunger is a false deceptive feeling which should be overcome, as that the delicacy of women should be so far conquered as to admit, without emotion, the interference of physicians at child-birth.

The case then is clear, that none but women, excepting the husband, should in ordinary cases, be permitted to be present or officiate as a midwife at child-birth. But if nothing will satisfy but male assistance, let the husband be the accoucheur—the midwife; there is surely more propriety in this than in employing another, and it is certainly more natural, and, to the wife at least, must be far more agreeable; whilst it wants nothing but custom to make it consistent with popular sentiment. Let the feelings of none be shocked at the

idea of husbands waiting upon their wives in the capacity of accoucheurs; many have done it with the best success, and no one, that we know or have heard of, with any misfortune. Some have even declared their own husbands to be superior to all others. And who indeed can have more tenderness of feeling for both mother and child, than an affectionate husband? And truly, if physicians and midwives would but generally acknowledge the simplicity of most labors, it would be manifest that in ninety-nine cases out of a hundred, the husband would do in every respect as well as the most experienced doctor.

Did physicians really possess that sympathy for female suffering which many of them profess, together with that nice sense of delicacy of which they are certainly not devoid, they would assuredly pursue a very different course from the one that has marked their conduct during the last thirty years. Instead of intruding themselves upon the sex as accoucheurs, whereby the feelings of all women are more or less shocked, and many of them most keenly distressed, they would endeavor to instruct and encourage prudent, sensible females, in the art of midwifery, and withdraw themselves from such an indelicate and, in some sense, immoral practice.

But the prevailing idea that none but men can be relied on in bad cases, has become so fixed in the minds of most women, that if a woman even consents to trust herself in the hands of a female midwife, and the labor prove tedious or severe; the assistants become alarmed, to which the prejudices of the day render them exceedingly prone, and nothing will satisfy them but calling in a physician. It is no matter whether the case be really difficult or not; the statements of the midwife avail nothing where prejudice is so strong in favor of midwives of the other sex. We have known many cases of this nature, and we can conceive of no surer means by which the best midwives are liable to lose both their reputation and business.

The doctor comes; makes a great display of affected knowledge; discovers something wrong, which however, by his superior skill and experience is soon set right; the patient and attendants acquire confidence, and, no matter whether difficulties, real or imaginary, exist or afterwards occur, the woman is delivered, for which the doctor is applauded, whilst the unfortunate midwife is silently condemned; when at the same time too, she would in all probability, have delivered the woman sooner, easier, and better than the doctor who is thus supplanting her in reputation and business on which perhaps she may be dependent for a precarious subsistence. It too often happens in cases like those of which we have been speaking, that the judgment of the midwife is not permitted to have any weight. Although she may give assurance that all things are right, and protest agains

the necessity as well as propriety of calling in a physician, it is frequently presumed by surrounding and sympathizing friends that she does not, or may not, know the true condition of the patient. The patient, too, is probably suffering much pain, and being flattered with the idea that the doctor can relieve her, she consents that he shall be called. The husband, also, ignorant of the real state of the case, being moved by the solicitude he feels for a tender companion, is compelled to post off for a physician to violate his own delicacy in the person of his wife!!

Scenes similar to what we have endeavored to describe, have been acted again and again, whereby the practice of midwifery has become almost exclusively engrossed by the physicians, in which condition it seems likely to remain until women assert and exercise those prerogatives and powers with which they are endowed by Deity, and which they owe to their dignity and duty to claim.

And what, let us inquire, will be the effect upon society of employing men instead of women to perform the offices of midwives? Who is there that cannot, by a little reflection, perceive the immoral tendencies of such a custom? What is the natural consequence of those familiarities that are and must be taken by men, in the discharge of the duties of a midwife? Is it not to obliterate that delicacy of sentiment, and remove those salutary restraints, by which chastity of feeling is preserved, and immoral familiarities, and undue liberties prevented? Most assuredly such are the natural consequences; and we are not alone in these sentiments.

"Several observing moralists," says EWELL, "have remarked, that the practice of employing men midwives has increased the corruption among married women. Even among the French, so prone to set aside the ceremonies among the sexes—the immorality of such exposures has been noticed. In an anecdote of VOLTAIRE, it is related, that when a gentleman boasted to him of the birth of a son, he asked who assisted at the delivery; to the answer, a man midwife, he replied—then you are traveling the road to cuckoldom."

"The acute observing Count BUFFON, (on puberty,) observes, 'Virginity is a moral being, existing solely in purity of heart. In the submission of women, to the unnecessary examinations of physicians, exposing the secrets of nature, it is forgotten that every indecency of this kind is a violent attack against chastity; that every situation which produces an internal blush, is a real prostitution.' It is very certain, where these exposures have been most common, as in large cities, there adultery has been most frequent.

"Be it folly, or prejudice, or not, there is a value in the belief that [illegible] are to have access to his sacred

wife. Break through this prejudice, if you please to call it so, but for once, unless powerful reasons command it, the rubicon is passed; and rely upon it, the barriers, on future emergencies, will not be so insuperable. Time and opportunity to press on a grateful heart, for a favor in regions where magnified favors have been conferred, have been used and more frequently desired. To convince you of this, you will not require me to enter into the secret history of adultery. Many of these modest looking doctors, inflamed with the thoughts of the well-shaped bodies of the women they have delivered, handled, hung over for hours, *secretly glorying in the privilege*, have to their patients, as priests to their penitents, pressed for accommodation, and driven to adultery and madness, where they were thought more innocently occupied."

Such, reader, is the picture drawn by an individual whose experience and powers of mind enabled him to portray, in its true colors, the temptations and vices consequent on the unwarrantable custom of employing men instead of women in the practice of midwifery; and dare any physician deny its correctness? We think not. It may possibly be thought to exhibit female chastity in a disparaging light; but whilst all admit that women, in common with the other sex, are the subjects of temptation, it is to be hoped that both our quotations and remarks will not be regarded as an indignity, but rather as an attempt to guard females as well against seduction as unjust suspicion. We can also most cheerfully admit, what truth will not allow us to deny, that in point of virtue, the female sex is superior to our own; and, moreover, that in the particular case under consideration, the latter are, in every sense, the original transgressors. They were, in the first place, the active and principal agents in producing those unnatural and unjust prejudices which have obliged females to submit to the interference of male midwives; and they stand in the same connection with regard to the crimes which grow out of this practice. And however few may be the deviations on the part of females from the path of strict rectitude, they nevertheless owe it to their moral character, as they would be above both temptation and suspicion—to their delicacy, as they would be released from the scrutiny of males—to their independency, as they ought not, in this particular, to be under any obligation to the other sex—to their own powers which Deity has endowed them with, as they are capable of rendering to each other all the assistance usually necessary at child-birth—to each and all these circumstances, we repeat, females owe it to encourage the employment of women instead of men as midwives at child-birth.

And we ought not to be satisfied by believing that our own wives are above the temptations, or beyond the dangers of which

we speak. The prevalence and increase of the custom of employing men midwives, as it adds to the number of those immoral familiarities, very naturally has an extensive and powerful influence over the prevailing character of the age. "The interest, the affection, the duty, of all, require that every effort should be made to preserve women delicate and virtuous; to keep them out of the way of temptation, as well for the present as for succeeding societies. Nothing," continues Dr. EWELL, "can be more certain, than that in defiance of our wishes and expectations, our own daughters will partake more or less of the prevailing manners of the times—will be pure and refined, or indelicate and unprincipled, according to their associates. It is therefore obvious, that by assisting in the establishment and preservation of good practices in the community, we assist in perpetuating them among those dearest to our hearts."

Some, no doubt, may conclude that our remarks on the immorality of employing men midwives, are unsupported by facts. To such we can only say, that if you are indifferent as to the importance of a high-toned moral standard in the community, you will not give yourselves the trouble of investigating the causes by which this standard is depreciated; for all who feel an interest in this matter, we think, will find sufficient evidence in the arguments we have adduced to satisfy them of the correctness of the position which we have taken. We well know that the subject upon which we are writing, has hitherto excited but very little attention; but does it follow from this fact, that the custom of employing men midwives has not had a demoralizing influence? We think not. Many things, although little seen and perhaps still less known, are, nevertheless, exercising a sway over the moral constitution of society, the effects of which it is much to be feared will, sooner or later, disclose themselves in the mutual and extensive corruption and degradation of both sexes and all classes in the community. It is not at all improbable that we may be censured as holding and inculcating uncharitable sentiments respecting the present and prospective state of social morality; but if the practice of employing physicians as midwives continues and becomes universal, as it seems likely to, we shall feel perfectly willing to abide the decision of discerning moralists who live fifty, nay, but thirty years hence.

But however important may be the consideration of the demoralizing influence upon the community, of employing men midwives, this is not alone the serious object of our present solicitude. "It is," in the language of Dr. EWELL, "to wrest the practice of midwifery from the hands of men, and transfer it to women, as it was in the beginning, and ever should be;" and to this object we most earnestly request the attention of every female in the community. Your good sense, your deli-

cacy, your virtuous feelings, all must approve what we are endeavoring to accomplish. And permit not, we entreat you, any childish affectation of feeling to induce you to say or to think the knowledge of this subject is too indelicate for you to acquire. How inconsistent is such an idea with the exposures which your ignorance and your prejudice make necessary, by the employment of men to perform a simple office which properly belongs to yourselves.

"Indeed," says Dr. EWELL, "it is on account of your delicacy, that I entreat you to acquire valuable information respecting your own structure. Nature has given you functions to perform, and every body knows that you perform them; and can you seriously think there is as much indelicacy in endeavoring privately to acquire accurate information, as there is in your neglecting to do it rendering it almost indispensable to expose yourselves to the hands and eyes of strangers?"

We do not expect all to become midwives; but we wish all to acquire a correct knowledge of the simple process of childbirth. This knowledge will have the most powerful tendency to dispel those anxious fears and gloomy forebodings so common to pregnant females, and which is a source of more misery, and of more disasters, than labor itself. But do not suppose that the idea rests upon our assertion alone. It is the opinion of observing writers, deliberately formed and candidly expressed, not for selfish purposes, but for the benefit of the world. By acquiring a correct knowledge of the simple process of childbearing, what consoling influence might you possess and exercise over the minds of many a tender timid woman, in those painful scenes through which the greater part of you have to pass—a consoling influence which perhaps you all need, at times, the benefit of yourselves.

"Many times," says the anonymous female author whom we have before quoted—"many times has a house been set in an uproar, without any ground for alarm, and the unhappy patient driven to despair and thrown into fits, when all might have remained in peace, if those present had properly understood the case, and been properly enlightened." How important it is, on such occasions of alarm, that the husband should be competent to direct the proper measures, and thus prevent premature trouble and unnecessary panic.

We cannot dismiss this part of the subject without introducing a quotation from Dr. EWELL, which is directly in point. "It requires," says he, "but little understanding of this subject, to enable you frequently to prove of great service in removing the fears and forebodings of many ignorant sufferers, who imagine that only professional skill can afford relief. Many such objects of commiseration have languished day after day, solely [illegible]

want of a little information in one of the attendants; all unnecessarily lamenting that physicians cannot be procured."

Indeed, in whatever light we view the subject of midwifery—a branch of knowledge, simple as it is, of the highest importance to the whole community—decency, delicacy, reason, morality, all conspire to sanction the propriety of restoring it back to women, as it was in the beginning. Every woman knows with how much more confidence she can unbosom herself to a female than to a male, and how much more freedom she feels in the presence of a midwife of her own sex, than of the other; and that nothing short of the most exquisite suffering can make the presence of a physician even tolerable.

Most women also know, not only from the general habits and temper of men, but also by experience, the impatience of doctors in those protracted, tedious cases which sometimes occur in child-birth; and hence the disposition too often indulged in, by physicians, of hurrying on the birth, to the great and frequently irreparable injury of both mother and child. On the other hand, how well do the retired occupations of women fit them for that patience of attendance which it is well known they possess; and how well does their own experience in similar circumstances qualify them to sympathize with the sufferer, and extend to her that encouragement and consolation which she so often needs. And are not women qualified—have they not the capacity to perform the common office of midwives? Most assuredly they have.

"Every day," says EWELL, "shows that the practice of midwifery requires no particular skill, no superior knowledge, no slight of hand, nothing beyond the most common sense and observation, to do all that is required with perfect success. Nature has so wisely provided for the birth of the young, that even the extensive practice so highly rated among ladies is not necessary for the discharge of all the duties required from attendants. The male practitioners who in general from accidents have got into great repute, received their first impressions from books, from directions which any one in the country can comprehend."

"At Athens," observes EWELL, "a law was passed forbidding women to practice; but from perseverance among the delicate, preferring death to exposure, the law was speedily repealed. Since then no government, it is believed, has been so ridiculous as to compel such unnatural interference. In consequence, the practice has been confined to women, until within a few years, in some European countries and their colonies."

As a contrast to the indelicate and ungallant spirit of the Athenians, however, we cannot well omit noticing the liberal, elevated, and more refined views of a few nations of more modern date. "The Danish government," says EWELL, "viewing the employment of men midwives, in natural labor,

as highly improper, established schools for the instruction of women in the principles of midwifery. Several of the German states have imitated the example."

But with all the advantages of light and knowledge which it may be supposed the people of the United States possess, there are few countries in which the anxiety, nay the folly, of employing men as midwives exceeds ours. And yet it is an undeniable fact, admitted by BUCHAN, DENMAN, EWELL, &c., that men midwives have done women more harm by their hurry, their spirit for acting, and we will add, curiosity, than all the ignorant and injudicious management of female midwives "about which the doctors are so fond of talking."

Many cases of the most wretched, inhuman management of midwifery might be detailed in proof of these assertions. Two cases of this character came under our own observation, in which the physician inhumanly introduced his hand, which was of unusual size, to extract the after-birth, without waiting a moment for the powers of nature to do it in the only proper manner.

In one of these cases the woman lingered out a wretched existence for a few months, and died. The other suffered much, and did not long survive. Our recollection is still often haunted by the sensations which the bare recital of one of those cases produced in our mind—the tears, the groans, the shrieks, and the earnest entreaties to be spared the torture, were such as one might think would ring in the imagination of the guilty practitioner to the end of time! The coloring of this picture is not heightened above the reality; and it would no doubt apply with equal force and propriety to thousands of cases.

A variety of the most shocking circumstances might be given from various sources; some, of doctors forcing deliveries when in a hurry, and from no other earthly cause; some, of their exhausting all their skill to produce such a result, and after being obliged to desist, nature has done her work in her own way and in her own time; some, of the mutilation or entire destruction of children, to say nothing of sudden or lingering deaths, and many other painful occurrences of minor importance. But time would fail us in collecting and rehearsing the sickening catalogue; and moreover, we wish rather to convince the judgment than to excite the fears of our female readers. Truly there has been enough to create alarm; but the greater part of the really bad cases have been made so by art and not by nature—by improper interference, instead of patient acquiescence; and instances of this kind have been full as frequent in the practice of physicians as of the most ignorant women. Nature is, in general, competent to perform her own work, and cannot be meddled with only at immense hazard.

Dr. DENMAN, in enumerating the causes of difficult labor,

observes: "There is one much more frequent than the rest, which is the derangement of the order of labor by an officious interposition, or by improper management. Upon this subject," continues he, "it would be unpardonable to make an assertion, which is not supported by experience; but I am now fully convinced, that the far greater number of really difficult labors to which I have been called, (and I must not conceal the truth on this occasion, that many of those which have been originally under my care,) were not difficult from unavoidable necessity, but were rendered such by improper management, in the commencement or course of labor." There is certainly a great deal of candor in this acknowledgment of DENMAN's; more, we fear, than often falls to the lot of professional men. Indeed candor and honesty seem to be diffused through the whole work of this eminent individual; evincing that he wrote for the benefit of the world, rather than the selfishness of the profession.

It is agreed, we believe, by the best authors, that natural labors do not come within the scope or purview of the art of midwifery, which can only be properly applied to those cases which need assistance. The great object, therefore, of the works upon this subject, is to instruct how to manage difficult labors; and hence, the bare contemplation of what these works contain, strikes the mind of the inexperienced with alarm and terror. Indeed, but few persons, we presume, excepting those who are accustomed to the practice, could cast their eyes over a ponderous volume, and find it contained little else than details of cases the most desperate, or operations the most painful and horrible, without concluding that child-birth is a scene of hazard from which scarcely one could escape with life.

But should these same books contain general registers of all cases indiscriminately as they actually occur in midwifery practice, the *unnatural* interspersed amongst the *natural*, those desperate and alarming ones, so much the objects of dread and terror, would be so "few and far between," that child-birth would be stripped of almost all its terrors. And when from this number we deduct those cases which are rendered difficult by malformation, or by improper management of either mother or midwife, the simple though painful process of parturition, would be found to present much less cause of alarm than is commonly attached to it. And why is it, we will ask, that popular opinion has become impressed with such sentiments of terror at the consequences of labor. We answer — in part, because of the mystery which has designedly been thrown about the process of delivery; and partly because of the high colored tales of difficulties and dangers which practitioners of midwifery too often represent themselves as having been the means of dexterously or miraculously removing.

But to correct the false impression which the affected knowledge and dexterity of those trumpeters of their own fame have so injuriously made upon the public mind, we are happy in having it in our power, from registers or tables, to set the thing in its true light before the reader. These registers are derived from different practitioners, both male and female, and from different countries. The following is a condensed result of them, obtained from a late work on Midwifery, by a French author:*

MERRIMAN gives, as the result of 1800 cases of midwifery, 1746 natural or spontaneous labors, to which may be added 23 more that were regarded as unnatural only because there was more than one child, making in all 1769 natural, and leaving only 31 unnatural labors in the whole 1800 cases.

At the Maternite, at Paris, out of 20,357 labors, 20,153 were natural, and 204 only unnatural.

Under the superintendence of Dr. BLAND, out of 1897 cases 1860 were brought to a conclusion by the hand of nature.

"Madame LACHAPELLE, in her new tables, divides the labors that have fallen under her notice into two periods; the first, extending from the 1st Germinal, year IX, to the 31st December, 1811, comprises 15,662 cases; of which 15,380 were spontaneous, and 272 were difficult: the second, which extends from the 1st January, 1812, to the 31st December, 1820, comprises 22,243 labors; of which 21,974 terminated without any artificial assistance, and 269 by the assistance of art."

In Dr. BOER's statement of cases at the Obstetrical School of Vienna, out of a total of 9,590, only 102 were difficult or unnatural.

It would also seem probable, from a comparison of different presentations, by VELPEAU, that another French lady, Madame BOIVIN, had been equally fortunate with LACHAPELLE. He cites, in one 20,357 cases, and in another, 20,517 under the practice of Madame BOIVIN; almost all of which, from the mode of presentation, must have terminated without aid.

The cases which we have selected are, we freely acknowledge, from amongst the most favored practitioners. But as these often very justly accuse those who are less fortunate than themselves, with injudicious management, may we not also suppose that even those most favored might also have the same charge applied in a less extended sense to themselves? There is certainly too much reason to concur in the idea of DENMAN, "that the abuse of art produces evils more numerous and serious than the imperfections of nature."

We can very cheerfully admit, however, that the art of midwifery has, when rationally and judiciously practised even by men,

* See VELPEAU's Midwifery, p. 283.

been the means of saving some lives; but when we compare the small amount of good done in this way, with the vast amount of evil which has resulted from the haste, the impatience, the inquisitiveness, and the want of caution, too frequently predominant in men midwives, we shall very probably arrive at the conclusion, that it would have been better for the world, had men never interfered with the practice. We wish, in making this suggestion, to be correctly understood. We believe that ninety-nine cases in a hundred will terminate without any aid *from art whatever;* leaving but one case in a hundred requiring assistance. Of this number, probably nine-tenths could be delivered by the ordinary female midwives; the other tenth—suppose they die, the mortality would be far less than it now is. Hence we infer that the custom of employing men midwives is productive of more harm than good.

We do not wish to be understood as attempting to give the exact proportions of difficult cases occurring in practice, though perhaps it might not be far from the truth. But we are morally certain that with judicious female midwives, and the use of such botanic medicines as act in harmony with the laws of life, many of the most alarming difficulties attending the practice of midwifery may be removed and the number of deaths very much lessened.

The dangers attending, and evil consequences following, the incorrect or improper treatment either of diseases arising during pregnancy or of difficulties occurring at the time of child-birth, are acknowledged as well as justly deplored by all humane physicians. And these consequences are not only more liable to take place at the times alluded to, but they are also liable to be far more serious than at other times and under other circumstances. And why is this so? We ask this question in allusion to the mineral practice. The answer, to us, is obvious: It is because the remedies employed act contrary to the laws of nature, perverting the very order they are designed to restore!

In the progress of pregnancy, and during the process of child-birth, a greater number of organs are brought into play than at other times, which are acting a new part in the grand machine. Hence the machinery being more complicated, is more easily affected and more extensively influenced by the same causes, than at other times. Therefore, if any mode of treatment adopted be wrong, the evil consequences will be more immediate, and more extensive, and the effects more sensible. These we conceive to be the true reasons why more difficulty and more danger attends the administration of improper medicines at or during those periods of which we have been speaking, than at other times.

But in the employment of innocent botanic remedies, which act as medicine should always have acted, in unison and har-

mony with the laws of nature, these difficu.ties are all avoided. The machinery, however complicated, or however deranged in its action, may, with such medicines, be restored, if its structure be not too much injured, or its powers exhausted, without the uncertainty and hazard of doing it an injury instead of a benefit. This is the plain and distinguishing difference between the botanic system and the too common practice of bleeding, physicing, refrigerating, and starving, so much relied upon by the medical faculty.

In every point of view then, it is most proper, most rational, most correct, and most agreeable to both husband and wife, to have the practice of midwifery restored back again into the hands of women and of nature. Although we do not expect all women to become midwives, yet we wish them generally to become acquainted with the simplicity of natural births, which, as we have heretofore said, constitute at least ninety-nine hundredths; and no doubt, with proper management, might far exceed that proportion. This knowledge would enable any woman to act on any ordinary occasion, when no professed midwife was at hand, as very frequently happens in remote situations. And if women possessed this information, and would teach it to their daughters who are about to become mothers, how much painful anxiety would it save? how much distress and anticipated trouble and pain of mind would it remove?

We beg leave once more, in these introductory remarks, to employ the language of Dr. EWELL. "If the difficulty," says he, "of obtaining doctors at the proper time—if the indelicacy and tendency to immorality of having them in any but the critical and unnatural cases—if the propriety of giving to helpless women proper employment and support—if the salvation of many women, who, shocked at male interference, have their pains vanished and their minds deranged, and who sometimes prefer death to exposure—if the salvation of many children, born almost without warning—if the prevention of the destructive interference of ignorant attendants, cannot, united, induce you to attend to this subject, the mechanical advantage between a man's and a delicate woman's hand, ought to command your decision in favor of employing and encouraging female assistants. Such is the confined organization of the parts for our birth, and such the large size of men's hands, that I verily believe *as much mischief as good has been done by them*, as has been stated by more extensive observers than myself."

"The rule," continues he, "that I would prescribe for the females for whom I felt the most affection and solicitude, would be that which I now urge—on no account submit to the interference of men in common labor; but do it most readily in the uncommon cases, when a nurse, under the direction of a physi-

cian, cannot afford relief. I will venture to add, that there is not a physician, disinterested, of sound sense who would not approve the rule. The best authors on midwifery decidedly recommend it."

We have already extended this introduction to a great length, hurried on by the high importance of the subject under consideration; but we cannot yet dismiss it without an appeal to every feeling of the female breast which repels the idea of employing male midwives. And you all know that these feelings are strong: they are modesty, delicacy, and a sense of moral and conjugal propriety, over which nothing can, or ever has predominated, but the pains of child-birth, joined to the mystery under which this process is designedly cloaked; together with the thousand changes which have been rung upon the few cases of difficulty and danger which have occasionally occurred in the practice of midwifery. No! nothing else than what we have enumerated has driven women to the unpleasant—the unnatural dilemma, of calling upon men instead of women to act as midwives. Away, then, with all these false ideas; satisfy yourselves of their absurdity; inform yourselves that nature is simple—her operations simple, and that in almost all cases she is adequate to their complete performance, whilst interference can only be offered at the certain hazard of doing an injury.

And to husbands we beg leave to tender the same advice Make yourselves acquainted with these things; they are matters of high moment to you, as well as to your wives; they are susceptible of your complete comprehension; and your love for a tender wife, and your duty to her and to your children, alike impel you to the task. Let no false delicacy nor "mock modesty," we anxiously intreat, deter you from it. Your wives, by your means, bear children; they contribute alike to your happiness as well as hers; and you ought to neglect no opportunity of acquiring every information by which you might be of service to her during the tedious months of pregnancy, or in the painful hour of labor.

Satisfy yourselves, we beseech you, that the difficulties and dangers of child-birth are very much, and no doubt designedly, magnified—that they are scarcely to be dreaded, when compared with the happiness and high duty on the part of wives, of being mothers. Teach them the simplicity of the process so fearfully anticipated, and that whilst one is destroyed by it, hundreds pass safely and without difficulty through it. Nor let that kind of delicacy which forbids men to inquire into or understand the art, or the situation of their wives when in labor, deter you from this important duty. If, by this knowledge, you are, as you might on some occasions be, able, by preventing officious interference, to save the life of wife or child, or perhaps both, it

would be an ample, a more than equivalent compensation, for any sacrifice of delicacy which you might feel compelled to make. Indeed what has delicacy—false delicacy—to do with a matter of such deep interest to the husband?

Nay, with but little qualification, you might be enabled, in cases of emergency, to act as midwives yourselves, or if you chose, you might, as many do, perform at all times this office for your wives. There is no immorality, immodesty, nor in decency in it. And how infinitely more natural, more proper, and more consistent with morality, than to employ a physician at the sacrifice of so much delicacy of feeling on the part both of yourselves and wives? These feelings were not given to be violated—to be thus wantonly trifled with. They are a part of that law which the Creator has ordained for the regulation of the creature, and cannot be violated with impunity. There is a punishment annexed to the transgression; and in this case seems doubly severe—it is a tax upon the delicacy of your own and your wives' feelings, with the frequent loss of them and your children.

CHAPTER I.

OF CONCEPTION AND PREGNANCY.

We deviate no less widely from other writers, in the arrangement of this part of our work, than we do in the general method of treating disease. For this deviation we have no apology to make, nor concessions to ask. We have adopted the plan which we here present to the reader, because we think it most natural, and the most readily understood by the uninformed; which is the only advantage of a systematic arrangement in any science whatever.

It may not be amiss, however, to offer a few remarks in explanation of the reasons which have induced us to deviate from other writers on midwifery. Almost all authors, especially late ones, commence their works with a description of the pelvis; whereas we have deemed it better to begin with whatever it is proper to notice with regard to conception and pregnancy. By doing thus we place the description of the pelvis, the knowledge of which is so necessary to the correct understanding of the mechanism of child-birth, in immediate contact with the chapter on labor. This arrangement seems to us to connect the different parts of the science of midwifery, in the manner in which those who are unacquainted with it would naturally expect to find it. We first treat of conception and pregnancy; then of those parts, both of mother and child, which are principally concerned in child-birth; and close with an account of labor.

We may further observe that we embrace the common privilege of all writers, to borrow the language of others whenever we find it convenient. Indeed, in treating upon midwifery, like all other sciences, there is a difficulty at this day, in making a purely original work. We should not, however, have deemed these remarks necessary, only that we are disposed not to trouble ourselves with too many quotations and references to authors, which can be of little use to readers in general.

SECTION 1.

OF CONCEPTION.

Conception is the process by which, after the sexual intercourse or coition, the womb acquires the means or capacity of fulfilling its ultimate destiny, the production of another

being. Various theories have been suggested by the most penetrating minds, to explain this amazing phenomenon; but nothing has been hitherto elicited that appears every way satisfactory. The theories which have been offered, appear too complicated, as we think, to be entitled to full credit. We do not make this suggestion, however, because we have any thing better to offer; but we ground it upon the well known simplicity of all the operations of nature.

But as all, perhaps, feel a laudable curiosity in knowing something about the peculiar method by which the species is propagated, we are disposed to offer a few remarks upon this interesting subject. The reader will recollect that we have heretofore described, with some degree of accuracy, the female organs of generation; but in order that our remarks on conception may be more fully understood, we will subjoin a more general description of them here. The vagina and womb may be compared to a small sack or bag with a string tied around it, nearer the bottom than the top; the mouth of which would answer to the external opening of the vagina, and the bottom of the sack below the string, would answer to the womb. It must be remembered, however, that the bottom or closed end of the sack, comparable to the womb, is upward, and the open end or mouth, comparable to the vagina, is downward. Now, if we suppose that part of the sack between the string and the mouth to be enclosed within something else, as the vagina is in the cavity of the pelvis, and adhering to all its sides by which it is confined, whilst the bottom or closed end of the sack lies loose above it, we shall have a tolerably correct idea of the situation and shape of the vagina and womb.

The string around the bag, closing its sides together, forms the mouth of the womb, and as the womb lies loose in the pelvis above the open part of the sack or vagina, and is somewhat heavy compared with its bulk, we may easily imagine that it will settle a little into the sack or vagina, as the mouth of the womb actually does. *(See plates* 8 and 9.*)*

We will next observe, that just above the mouth of the womb, on either side of its neck, upon the external surface, are situated the ovaries or female testicles; and from the upper part of the womb, on each side, issue the fallopian tubes, which are hollow throughout; one end opening into the womb, and the other into the abdomen, the abdominal ends terminating in a number of elongated fringe-like portions somewhat similar to fingers. These tubes extend in a horizontal direction a short distance, and then form an elbow, the ends dropping down nearly in contact with the ovaries. *(See plate* 2.*)*

Although there have been a great many hypotheses invented by which conception is said to take place, yet they may

all be arranged, says DEWEES, under a few general heads. 1. Those which suppose the male semen or seed to be conveyed directly to the ovaries, through the womb and fallopian tubes. 2. Those which represent that the semen, after being deposited in the vagina, is absorbed and carried to the ovaries by or in the blood. 3. Those which conclude that the semen makes an impression upon the vagina or uterus, and the ovaries sympathizing with this impression, produces conception. 4. Those which suspect the existence of a set of vessels, whose whole duty it is to take up the semen from the vagina, and carry it to the ovaries.

We cannot pretend to point out the relative merits or absurdities of those different hypotheses; it would be foreign to our object so to do; but the reader will perceive that all refer the ultimate effect of the lodgment of the male seed or seminal fluid in the vagina to the ovaries of the female; without which effect conception cannot take place. But how the seed of the male, or even its influence, can be conveyed to these organs, is a difficulty sufficiently evident from the contradictory theories which have been offered to account for it.

We have before remarked that the ovaries contain the seed of the woman; which consists in minute ovules or eggs arranged on the surface of the ovaries, being merely covered by a thin membrane or skin. One of these eggs, after a successful intercourse of the sexes, begins to enlarge; but why one should enlarge instead of another, or all the others, has not been explained. We would suppose, however, that the sexual embrace stimulated the fallopian tubes, and induced them to draw their ends in contract with the ovaries, to which it is admitted they are sooner or later attached by means of the fringes acting as fingers. This attachment, if the end of the tube happen to fix itself upon one of those eggs, it seems probable, so acts upon it as to produce the enlargement; and finally, when it becomes so large as to burst the skin by which it is covered, it is received into the fallopian tube through which it is conveyed into the womb, where it lays, as it were, the foundation of a new being. If each tube happen to fix itself in contact with an egg in the ovaries, the consequence is the conception of twins. But if the tubes attach themselves to parts of the ovaries where no ovules are located, no conception will take place.

How the ovum or egg is propelled along the tube to the womb, is to be ranked among the many other inexplicable phenomena of the animal machine; but that such is the fact, experiments and dissections have pretty clearly proved.

When conception takes place, the organs concerned in the generative process experience important changes. We have already alluded to the fecundating of the ovum or egg in the

ovary, its separation therefrom and passage to the womb. How long a time this process requires is not precisely known. Dewees says, in summing up all the evidence the subject affords, it would seem to be about twenty days. Others, however, have made the time much shorter.

The changes which take place in the womb, are also as extensive as those in the ovaries and tubes. It has been ascertained, that so soon as the egg in the ovary becomes impregnated by the male semen, the womb forms a thin membrane extending over nearly the whole of the internal surface, which appears to be intended as the connecting organ between the appendages of the child and the mother.

SECTION 2.

OF PREGNANCY.

Hitherto we have been speaking of what takes place previous to the arrival of the ovum, or egg, in the womb, which we have considered as belonging to the process of conception. But the ovum having arrived within the womb, pregnancy has now commenced. Borrowing the ideas of Buchan, nature has now entered upon her grandest work.

Still greater changes now take place, not only in the womb, but also in other parts of the system The generative organs have to provide the means of sustenance and growth for a new being. Menstruation ceases, and a new order of things arises; whilst almost every part of the system experiences more or less the effects of these important changes.

In order to supply the embryo, as it is now called,* new organs are formed either for its nourishment or protection, respecting which it will be necessary for us to speak somewhat particularly. These are the placenta or after-birth, the membranes, and navel-string or umbilical cord.

The placenta or after-birth is attached to some part of the womb, generally the upper part which we have compared to the bottom of a sack, though it may be to any other, even over its mouth; in which case dangerous floodings may take place

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* "At present," says Velpeau, "it is generally agreed to give to the germ, when without its membranes, the name of *embryo*, until the third month of pregnancy; or according to some, until its several parts can be distinguished from each other: it is afterwards called *fœtus* as long as it remains in the womb; and the term *child* is not applied to it until after its birth. Although this division is entirely arbitrary and difficult to justify, I feel bound partially to conform to it in this work."—*Velpeau's Midwifery*, page 188.

at the very commencement of labor; though attachments of this kind are extremely rare. The navel-string adheres at one end to the placenta, commonly in its center, and the other end to the belly of the child. The membranes are a thin delicate substance, continued from the edges of the placenta, and forming a sack in which is contained the fœtus or child, and a peculiar fluid called the liquor *amnii;* and from this circumstance is usually called, at child-birth, the bag of waters.

The placenta is of a spongy appearance on that side which is connected with or attached to the womb; is about six or eight inches in diameter, flat and round; generally thinner at its edges than in the center, resembling a cake; whence its name, placenta; often also vulgarly called the cake.

The umbilical cord or navel-string, is of various lengths, but almost always sufficiently long to admit of the birth of the child without pulling upon the placenta. It is composed of two arteries and a vein, which are generally so twisted as to resemble a rope. The blood from the mother, passing through the womb, enters the placenta, whence it passes through the umbilical veins, as they are called, to the child, and after having fulfilled its purposes there, passing the rounds of the circulation, it returns through the umbilical artery to the placenta, and thence again to the mother.

The membranes, as before observed, with the placenta, form a sack within which is included the fœtus or child, the umbilical cord or navel-string, and the liquor amnii or waters. Hence it may be understood, that the young being is enclosed not only in the womb, but in another sack or bag, one side of which, the placenta, is attached to the womb, by which the fœtus is nourished and its growth supported, until it has acquired sufficient perfection of organs and firmness of structure to bear the vicissitudes of another mode of existence.

As a matter of curiosity to the reader, rather than as being intrinsically valuable, we give a condensed history of the gradual development or growth of the fœtus, from VELPEAU's Midwifery.

Previously to the end of the first week, it is a curved body, forming nearly a complete circle, of not more than one-sixth or one-fourth of an inch in diameter. One extremity is bulbous and rounded, whilst the other terminates in a point. This curved body being hollow and semi-transparent, seems to be filled with a limpid fluid, in the center of which may be seen, even with the naked eye, a white or yellowish line, which represents the back-bone.

Numerous observations made on very young embryos, seem to prove that the spine or back-bone is the first production in the formation of the body, existing for a considerable time alone. For twenty days, or a little longer, it remains curved or crooked,

the head and neck constituting at least one half of the whole length: as it continues to grow or increase in size, it becomes more straight, the external part of the ring or curve being the back, and the internal part containing or producing the bowels and other vital organs.

The different portions of the body successively make their appearance upon the inside of this ring—first the face, then the limbs and abdominal and thoracic viscera, that is, the intestines and liver, lungs and heart, &c. It might, indeed, be called a real vegetation; the lower jaw, the limbs, the mass which is to occupy the abdomen and breast, increase and come forward like buds springing from the branch of a tree.

The circle thus fills up progressively, and as it fills, gradually forces the spine or back-bone more and more straight. The head, however, still remains inclined upon the breast, and is much larger in proportion than the other parts of the system. It even retains this over-large proportion long after birth. As neither the face nor chest exist at first, there is in fact no neck at the commencement of embryo life. At five weeks, the face is very distinct from the cranium or top part of the head, in which most commonly may be seen the general arrangement of the brain.

The mouth is amongst the first organs of sense that can be perceived. "I have found it," says VELPEAU, "in the youngest embryos that have fallen under my notice; consequently, it exists at the twentieth day." At thirty days, the nose is often perceptible by its round openings situated immediately above the mouth, look directly forward, and resemble two dark spots.

The eyes appear about the same time with the mouth. They have been seen in embryos not exceeding one-third of an inch in length, and may always be found in those which have mis carried during the fourth week. But instead of being directly in front, at this period, they are, as in most animals, turned very much to the sides of the head.

The ears will make their appearance in the form of simple openings, without any trace of the auricuta or external ear. The limbs also make their appearance, and between the thirtieth and fortieth day, the fingers begin to show themselves; an at forty-five or fifty days, the heels ar d knees; and at six or seven weeks, the whole mass is rapidly approaching a completion of its form and organization. It, however, requires the term of forty weeks for the fœtus to acquire such a state of perfection as to be capable of existing without this intimate connection with the mother. At the conclusion of this period, by the action of a law which seems peculiar to itself, the womb commences its contractions for the expulsion of the child, which constitutes what is termed labor. The description of this pro-

cess would seem naturally to follow this section; but as there are other important circumstances requiring attention, this must be deferred until after the description of the parts principally concerned in child-birth.

SECTION 3.

OF THE SIGNS OF PREGNANCY.

The certainty of the existence or non-existence of pregnancy, is a matter in which females usually feel much interested; and women in general have little or no difficulty in making a decision, especially after a first pregnancy. The signs are commonly so certain and conclusive, that in ninety-nine cases out of a hundred no one will be mistaken. But still, as many diseases to which women are liable, produce the same symptoms that occur in pregnancy, there is often cause to doubt the certainty of many of the early signs of this state of the system.

In common, the first symptom of pregnancy is a failure in the return of the menses or courses at the proper time, or sickness at the stomach, or perhaps both may occur about the same period, attended sometimes by cramp in the womb. The eyes lose their vivacity, assume an expression of langour, and seem to sink in the sockets; the eyelids turn dark, and are surrounded with a leaden colored circle; the face becomes pale, and the features sharp; though sometimes the countenance grows more bright and expressive of health; but occasionally it appears darker, or assumes a dead whitish-yellow, and often spotted with freckles of a reddish brown color.

The waist frequently grows slim and lank, continuing so for some time; whilst the neck swells and becomes softer. The woman is often faint, languid, and feeble, and unable to go through with her accustomed avocations, and is frequently under the necessity, though much against her inclination, to lie down for rest. Sometimes she has strange and indescribable sensations. With most women, spitting is a very common and disagreeable attendant on pregnancy; and when it occurs, is a pretty certain symptom.

The breasts also enlarge; and the rose colored ring around the nipple becomes dark; this symptom, however, is most observable in a first pregnancy, as after this the ring never returns to its former color. The appetite is often very capricious; sometimes being entirely lost and at other times voracious, and then again desiring for food the most singular and disgusting objects. Animal food, however, seems in general less desirable to pregnant women than a vegetable diet.

Some women become dull, gloomy, peevish, or fretful; whilst others are more lively, witty, good-natured, and agreeable. Tooth-ache, head-ache, palpitations of the heart, colic, heartburn, diarrhea, dizziness of the head, vomiting, sourness of the stomach, frequent disposition to make water, protruding of the navel, and swelling of the abdomen, are all symptoms of pregnancy; and without some, or all of them, it never does exist. Yet they may any, and even all of them, occur, and still the woman be not pregnant. Hence these symptoms are called *equivocal* symptoms or signs of pregnancy, because they do not indicate to a certainty that this condition actually exists.

One of the most certain, but not positive signs of pregnancy is, the failure of the monthly courses to appear at the proper time, when the woman has been enjoying good health. Under such circumstances, and especially if there be sickness of the stomach and vomiting, capricious appetite, and other common symptoms, there need, in general, to be but little doubt of the existence of pregnancy. But the only certain sign of this condition of the female system is, the motion of the child, which is usually perceived about the fourth month, or between the sixteenth and twentieth week, and is termed quickening.

The first movement is commonly only a weak kind of fluttering, though sometimes it is a sensation of a strong motion, as of a hand or a foot. These motions become stronger as the fœtus or child acquires strength, so much so sometimes as to be unpleasant to the mother. Previous to the time of quickening, the fœtus lies in the pelvis; but at this period it has become too large to remain there, and rises into the abdomen, which now begins to swell or enlarge, which it continues doing until the birth of the child.

SECTION 4.

DISPLACEMENT OF THE WOMB, COMMONLY CALLED RETROVERSION OF THE WOMB.

This difficulty, perhaps, should have been treated of in the first part of this volume; but its intimate connection with midwifery induced us to omit it in its proper place there, and give it an introduction here. It is not exclusively a complaint of pregnancy, as it has sometimes happened in the unpregnant state.

By reference to plate 8, the reader will perceive the situation of the womb in contact with the bladder in the pelvis, which will give a more correct idea of it than can be conveyed by writing. A retroversion of the womb consists in its falling backwards, with its upper part resting against the rectum, and

its mouth pressing against the neck of the bladder, as represented in plate 10.

If retroversion of the uterus or womb takes place, it occurs between the second and fourth months of pregnancy, after which the bulk of the womb prevents the possibility of its turning down from the want of room in the pelvis. This complaint is caused by whatever has a tendency to overset the womb; such as blows, pressure, sudden exertions, violent efforts in vomiting or coughing, but most commonly, perhaps, a distended bladder. By a reference to the aforesaid plates 8 and 10, it will be readily perceived that a very full bladder has a strong tendency to overset the womb by pushing it backwards, and when in this condition, if one of the circumstances just enumerated should occur, a retroversion might more readily happen.

The symptoms produced by this unnatural situation of the womb, may be more or less violent, according to the size which the womb has acquired, or as the displacement may have been suddenly or more slowly produced. When suddenly induced, the symptoms are violent and alarming—such as an immediate suppression of the urine, or of the passage of the stools; alternate pains, accompanied with a great forcing and bearing down; a disposition to fainting; and it is sometimes followed by extensive inflammation of the neighboring parts.

Retroversion of the uterus appears to have awakened but little attention until about the middle of the eighteenth century, when a fatal case occurred in London, which excited the special notice of Dr. William Hunter. Since then, it has been much written upon, and was for many years, and is even yet by many practitioners, considered as a very fatal disease. But by Dr. Gooch, who is the latest writer on this subject, it appears to be viewed in a different light. He says: "This disease when first known, was fatal; but now if you are called in early to a case of this description, the death of your patient will perhaps be the death of your reputation."

In all cases of retention of the urine, occurring about the third or fourth month of pregnancy, we will have reason to suspect a retroversion of the womb; though a retention is not always produced by this cause. This may be determined, however, by an examination. If the course of the vagina be found upward and forward, with a tumor or swelling behind it, instead of its being upward and backward, the evidence will be conclusive that the womb is retroverted, having its upper part or fundus turned down between the vagina and rectum.

We cannot better describe the method of attempting the reduction of the womb to its proper place, than by copying the following from Dr. Gooch's Lectures on midwifery:—

"In the treatment of this complaint there are three principal

objects: The first is, to restore the displaced uterus, if possible, to its proper position; if this should not be practicable, the second is, to keep the bladder free from distention, by the use of the catheter, as often, and for so long a period, as may be requisite; the third is, to guard against inflammation of the bladder or contiguous parts, by" the proper use of means to promote perspiration, and keep up a healthy action in the circulation, by administering the diaphoretic powders, cayenne, the black root as a cathartic, anodyne drops, and the application of hot bricks, the use of the vapor bath, and if necessary a full course of medicine.

"Before any attempt is made to restore the womb to its place, the bladder should be emptied by the catheter, and the rectum by an injection; then place the patient on her hands and knees, introduce the finger into the rectum, and make a pressure against the womb." The object in placing the woman on her hands and knees must be obvious. It raises the hips, and the higher they are raised the better, so that by a little pressure against the womb it may the more easily and readily fall back to its natural position.

"The womb is sometimes so low that the finger passes beyond it, and an ill-directed pressure from the rectum may force it down still lower; therefore first push it upwards by introducing a finger into the vagina, and then endeavor to complete the reduction by pressure on the womb from the rectum, not directly upwards, as the curve in the back bone will be an obstacle, but rather to one side or the other of the center where there is the greatest space, and then upwards. The degree of pressure employed may be pretty considerable, and it may be continued for ten minutes; if the womb is once felt to move from its preternatural position, it rises easily into its proper place.

"We will, however, suppose that an adequate pressure has been made for a sufficient length of time, but without success; it will then be necessary, in order to prevent distention of the bladder, to draw off the urine with a catheter three times in every twenty-four hours. Thus will be obviated the principal danger; and as pregnancy advances, the womb will rise spontaneously out of the pelvis, in this way accomplishing a natural cure. In addition to the regular employment of the catheter during the state of retroversion of the womb, the bowels which, from the pressure of the womb, would otherwise suffer from the accumulation of fæces, must be kept constantly relieved by gentle laxatives." We would, however, recommend a close attention to diet, endeavoring by this to keep the bowels loose, which should also be aided by the daily use of injections. The woman should also confine herself mostly to her bed, until the womb has regained its natural position.

"The womb when reduced by pressure, frequently again becomes retroverted. It must be again replaced, and a sponge pessary must be introduced, which will effectually prevent a similar occurrence.* The uterus, in the unimpregnated state, may be come retroverted, perhaps two or three days after delivery, or even in a woman who has never been pregnant. When the uterus is enlarged by disease, it is also liable to this displacement, attended by its usual consequences. I was lately requested, by a young practitioner, to see a woman who had been delivered three days; he said she had retroversion of the uterus. I thought he meant inversion, but on examination I found his designation correct. My finger passed upwards and forwards; there was a tumor at the back of the vagina, between it and the rectum; she had retention of urine, and a difficulty of passing the fæces, together with pain in the pelvis. This, I said, will have a natural cure: the uterus will be daily getting smaller; therefore take care of the bladder, and let the uterus take care of itself. The urine was regularly evacuated by the introduction of the catheter twice or three times a day; in about a week all the symptoms vanished, and on introducing the finger into the vagina no symptoms of the complaint could be discovered."

"The treatment of this complaint is the same in all cases, and may be thus summed up:—Reduce the retroverted uterus if practicable; if you fail in this attempt, draw off the urine twice or three times in every twenty-four hours;" evacuate the bowels every day; and if any degree of inflammation is indicated by tenderness on pressure, employ the proper means to remove it, as heretofore directed. It may, however, be remembered, that this complaint very rarely occurs.

* Note.—See the preceding remarks on pessaries chapter 5, section 4, and also see plate 1.

CHAPTER II.

OF THE PARTS PRINCIPALLY CONCERNED IN CHILD-BIRTH.

It becomes necessary to have some correct notion of the parts immediately concerned in child-birth, in order to understand its mechanism. Under this head, are included parts of both mother and child. The parts of the mother are the pelvis and womb; of the child, the head and shoulders. We shall, however, devote distinct sections only to the pelvis, womb, and head of the child.

SECTION 1.

OF THE PELVIS.

The term pelvis, properly speaking, means the cavity contained within the bones of the pelvis, which form, as it were, a bony girdle or frame around the lower part of the body.

The bones of the pelvis consist, in the adult, of four pieces, all connected together; which are, the *os sacrum* behind, the *ossa innominata* on each side and joined in front, and the *os coccygis* below. As an anatomical description of these bones can be of little use to the reader, we will content ourselves with merely giving them their awkward and inconvenient names, with whatever may be necessary to convey a correct idea of the cavity of the pelvis.

The shape of the pelvis is very irregular and difficult to describe, though it has been compared to a bason, without a bottom; one side of which, however, the front, is very shallow, and the back part deep, forming a kind of circle of which the front bone, called the os pubis, is the center. This will be the better understood by reference to plates 3, 4, and 5.

The pelvis is divided into two regions, called the superior and inferior straits. This division, however, is only imaginary, but seems necessary in order to describe the cavity with the most ease and accuracy. The superior or upper region is of an oval shape, being longest from hip to hip, and narrowest from pubes to sacrum, that is from front to back. It is in this region that the womb lies when not impregnated, and also during the first months of pregnancy.

The inferior or lower region of the pelvis, on the contrary, affords more room from front to rear, that is, from the pubes to the sacrum. This peculiar form of the pelvis is very important to recollect, in order to understand the mechanism of child-birth.

There is also another circumstance connected with the description of the pelvis, which it may be necessary to notice; that is, what is termed the axis of the pelvis, which in the two regions do not correspond. By the axis of the pelvis is meant an imaginary line drawn through its center, in the direction which the child passes at birth. Hence the axis of the superior portion of the pelvis is in a direction, in descending from the abdomen, backward; whilst the axis of the inferior portion of the pelvis, is forward. This description may be more conveniently understood by an examination of the plates, by which it will be seen that the direction of the child's head, at birth, is first backward, and then forward, following the axis of the pelvis. [*See plates XIII. and XIV.*]

The pelvis is sometimes distorted, as it is called; that is, grown out of its natural or proper shape, which gives rise to difficult labors. The pelvis is said to be deformed when it is either above or below the common size, though the difficulties which arise from its deformity are principally caused by its too small size, in which case it does not admit of a free passage of the child's head. In most instances, however, this inconvenience is overcome by time and patience. Indeed it is wonderfully surprising how nature is adapted to accommodate herself to every difficulty.*

The upper strait or region of the pelvis is the part most usually distorted, which is caused by a projection of some of the surrounding bones into its cavity, and almost always from the back. [*See plate VII.*] This mostly arises from the rickets softening the bones in infancy, by which they are rendered incapable of sustaining the weight of the body, which continually resting upon the pelvis, presses it out of shape, and thus produces a distortion.

SECTION 2.

OF THE WOMB.

It seems scarcely necessary to submit any further description of the womb, although it appears proper to give it a separate

* Dewees and James both declare, that they have not met with a single instance in American women of deformity of the pelvis, to such an extent as to render labor "impracticable by the natural powers," though they had in European women.

consideration, on account of the important function or office which it performs during labor.

We have before observed, that the unpregnant womb was comparable in shape and size to a large pear, the cavity of which will scarcely contain a quail's egg. [*See plate VIII.*] When it becomes impregnated, the cavity enlarges, and continues to increase in size until the completion of the term of gestation or pregnancy, [*see plates IX. and XI.*] which has been variously stated by different authors, at from thirty-nine to forty-two weeks; but by a majority of authors, we believe, it is computed at forty weeks. The fœtus or child has now become capable of existing in the external world, and the *body* of the womb, from some unknown impulse, begins to contract, whilst the *mouth* expands to make room for the passage of the child. These contractions of one part and expansions of another almost always produce pains, and these are termed labor or travail pains. These contractions are not from the circumference to the center of the womb, but from the fundus or upper part downwards, in the proper direction for forcing the child through the mouth of the womb and vagina.

As these contractions continue, or as it is said, as the labor advances, the child is forced onward, until it is finally expelled from the womb through the vagina and external orifice into the world. The womb still continuing its contractions, the placenta and membranes, commonly called the after-birth, are expelled, and the womb gradually in a short time returns to its former state, size, and situation in the pelvis.

SECTION 3.

OF THE CHILD'S HEAD.

The shape and structure of the child's head is a matter of more importance, if possible, to understand, than that of the pelvis. It is composed of several bones loosely connected together by seams, or as they are termed, sutures. One of these seams passes over the head from front to back, and another crosswise between the forehead and crown, as may be seen in plate VI.; the dark spots in the same being the openings in the skull, called the fontanelles, one of which has four and the other three sides. The four-sided one, it must be borne in mind, is towards the forehead, and the three-sided one at the crown or back part of the head.

The seams or sutures are so loosely connected in the skull of a child as to admit of easy separation; which is a provision of

much consequence, as it admits, in case the head is large or the pelvis small, of these bones overshooting each other, by which the size of the head is much lessened and enabled to pass more easily through the pelvis. This overshooting of the bones seems to be attended with no serious difficulty or danger to the child, as they soon recover their proper position. The fontanelles also appear to be calculated to facilitate this beneficial movement of the bones, as without these openings they could scarcely slide over each other to such an extent as is often necessary for the passage of the head.

A correct knowledge of the fontanelles is a matter of importance to the midwife, as by these and the course of the sutures, she can determine the situation and mode of presentation of the head. We will, therefore, give a more minute description of them. The front opening or fontanelle, though it varies as to size in different fœtuses, always possesses the same shape, having four angles or corners, and of course four sides, the edges of which are tipped with a yielding and smooth cartilage, and may be easily distinguished by the point of the finger, but should by no means be pressed hard against.

The back opening or fontanelle has but three corners or sides, and is less in size than the front opening. Its edges, instead of being cartilaginous, are bony, and often present to the point of the finger a rough edge, resembling bony teeth; a circumstance which is never met with in the front fontanelle, and by which they may with great certainty be distinguished.

The shape of the head is also a matter of importance, as i appears very nicely adapted to the form of the pelvis through which it must pass. In considering this circumstance, we shall regard the head as presenting three principal diameters:—1st. From the chin to the crown. 2d. From the forehead to the crown. 3d. From one side of the head to the other. Of these diameters, that from the chin to the crown is the longest, and that from side to side the shortest. Hence it will be seen, that in order for the head to accommodate itself to the shape of the pelvis whereby it will meet with the least resistance in its passage, the crown must present at the mouth of the womb, the forehead to one side, and the back of the head to the other side of the pelvis, as in fact it actually does in almost all cases. [*See plates XII. and XIII.*] This presentation of the head is called the natural one, not only because it is the most frequent, but because it is the best mode in which it can present, in order that its shape may correspond in the best manner with the form of the pelvis. The longest way of the head is from the crown to the chin; now in order that the crown should present, the chin must rest upon the breast; hence we may see that the longest way of the head is in a line with the *axis* of the upper strait of

the pelvis. The next longest way of the head is from the forehead to the crown or back part of the head; hence to correspond with the shape of the upper portion of the pelvis, which is longest from hip to hip, the forehead must present at one side, either right or left of the mother, whilst the back of the head will be at the other side. This brings one side of the head or the ear to the pubes or front, and the other to the sacrum or back of the mother, which is both the narrowest way of the pelvis and the child's head.

But this description of a most astonishing adaptation of the parts only applies to the superior strait of the pelvis; for in the lower strait the dimensions are directly reversed; the largest way of the pelvis being from front to rear. And how admirable! how necessary is this! The head, in order to accommodate itself to this reversion of shape in the passage, must turn half round, which fetches the shoulders in the proper position for passing through the upper strait. But in order to have the child in every respect to correspond with the formation of the pelvis, so that all parts may, in the best possible manner, accommodate each other, and make the birth the most easy to both mother and child, the face must turn to the sacrum or back of the mother, which fetches the crown to the external orifice of the vagina, which, astonishing as it may be, almost always takes place. [*See plate XIV.*] Does not all this go to substantiate our remarks in the observations introductory to midwifery? Such is the wonderful provision of a kind Providence for the birth of the human species! and who can view it and believe it the work of chance? Does it not afford the clearest evidence of the wise design of a Being possessing superior intelligence?

CHAPTER III

OF LABOR.

Labor is the last process of the womb in performing the function of reproducing the species; and consists in expelling the fœtus or child from the organ of generation. This is purely a natural operation, though it rarely takes place so suddenly or silently as not to present a very marked train of symptoms, some of which, at least, appear to be essential to its well performance. Some of these are local, being confined to the organs immediately concerned; and some are general, affecting the whole body.

Labor has been divided, by different writers, into a variety of classes, from three to seven; but we propose no more than two, which we shall denominate *natural* and *preternatural* labors. We design, however, first to devote a section to the symptoms of labor.

SECTION 1.

OF THE SYMPTOMS OF LABOR.

Various symptoms precede as well as accompany labor. They are, however, not uniform in different women, nor indeed with the same woman at different times. There is, nevertheless, so much similarity that they are not very often mistaken, though this sometimes happens.

Shiverings or tremblings are often a first symptom of the approach, or they may arise in the progress of labor. In some instances this symptom is violent, so much so as to produce alarm, though no bad result has ever been traced to a connection with it. Shiverings also sometimes occur immediately after delivery; but they seem to be as innocent when they take place at this time as before labor commences. They appear to be wholly a nervous sensation, as there is no feeling of coldness attending them.

A disposition frequently to void the urine is another circumstance attending labor, and should always be gratified, thus keeping the bladder as empty as possible. If there be a difficulty in voiding the urine, amounting to a suppression of it, the catheter should be used, especially in tedious labors. [*See plate XVII.*] A disposition also to go to stool is another attendant

symptom, which, like the last, ought always to be indulged, and if necessary, should be promoted by an injection, which as a general rule ought always to be administered several times, especially in tedious labors.

A few hours, and sometimes days, before labor actually commences, the abdomen sinks, and consequently the waist becomes smaller; the woman feels light and active, and hence many females prognosticate their labor a day or two beforehand, from their feeling unusually well. This sinking of the bowels is caused by the womb or its contents settling down into the pelvis, and is considered as indicating a healthy state of both the womb and the pelvis.

A secretion and discharge of mucus from the vagina is another common symptom of approaching labor, though sometimes there is little or nothing of it until labor commences, and may even then be in small quantity. This discharge seems to depend upon the relaxation of the soft parts* through which the child has to pass, and is hence always in proportion to the relaxation. Therefore, the more of this mucus there is secreted and discharged, the more the parts are relaxed, and the easier in all probability will be the birth. From this circumstance may be inferred the injury of frequent examinations (called *touching*) of those parts at the time of labor, which produce inflammation and check the secretion of mucus. And hence too may be estimated the value of the vapor bath in tedious labors, or in cases of unusual dryness of those parts. The mucus also acts as a lubricant to moisten the passages, whereby the head of the child moves with greater ease through them. When this fluid is tinged with blood, it is called the *show*, and is regarded as an almost infallible evidence that the woman is in labor.

The symptoms which we have thus far enumerated may take place without any pain being perceptible, though it is not common; we will now notice this circumstance.

The pains of labor, or rather those which are generally considered as preceding active labor, commence in various ways; but most usually they are in the back, or bowels, sometimes extending from the back forward round the abdomen, and then down the thighs. At other times they extend upward to the stomach, and even to the head. Sometimes the pain is confined to the bowels, and resembles colic; at other times the back is the only part complained of; and some women even affirm that the first sensations of pain are in the head, the teeth, the stomach, the thighs, or the feet.

The pain, in whatever part or manner it may occur, continues only a short time, when it is succeeded by an interval of ease.

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* The muscles or flesh are thus called, in contradistinction to the bones.

This interval of ease is extremely various in its duration; but usually, as labor advances, it becomes shorter and shorter; whilst the pains, thus rendered more frequent, also become more severe. The pains are the effects of the contraction of the body and relaxation of the mouth of the womb for the expulsion of the child; and are mild or severe according to the size of the child's head or of the pelvis, or the lesser or greater difficulty in the dilatation of the soft parts. They, therefore, seem almost a necessary consequence of child-birth though not strictly so, as children, in a very few instances, have been born without pain

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SECTION 2.

OF NATURAL LABOR.

By natural labor, we mean a labor in which nature does all that is necessary, without any interference which is dignified with the name of assistance; and what we say of this will be, therefore, nothing more, than simply describing a healthy process of the organs of the female system, and will apply to at least ninety-nine cases in a hundred where nature is left free to act for herself.

By almost all writers, labor is divided into three different stages:—1st. The period during which the mouth of the womb is becoming dilated sufficient for the passage of the child's head. 2d. The period in which the complete expulsion of the child is accomplished. 3d. The period required for the expulsion of the after-birth. We are, however, not capable of perceiving any advantage in this arbitrary division of labor into distinct periods. The whole process is conducted by the natural powers of the system, without any obviously marked stages, excepting the period between the expulsion of the child and that of the after-birth; and we, therefore, deem it improper to retain those unnecessary distinctions.

The commencement of labor is announced by pains in the back, and short and slight colicky sensations in the bowels, returning at short intervals. The external parts of generation become moist, and when the pains are present, the womb will be found on applying the hand to the abdomen, to harden, become more round, and sink lower in the pelvis.

If an examination be now made, the mouth of the womb will be found to be opening, and its lips or edges growing softer and thinner. By introducing the finger into this opening, the membranes may be felt, endeavoring at the return of each pain to find a passage through it. But it should be remembered,

that these examinations ought seldom to be made at this stage of labor. The softest hand, when compared with the delicate texture of those parts, is rough, and hence liable to produce inflammation, which, as we have before stated, dries up the juices and prevents the parts from relaxing. Moreover, there is danger of rupturing the membranes, without great caution, and thus letting the waters discharge—a circumstance always to be deplored at this early stage of labor.

Sometimes, however, on making an examination of this kind, the opening alluded to will not, at first, be discovered; instead of the orifice of the womb, or its hardened lips, there will be nothing perceptible but a large, roundish, uniform mass, the mouth of the womb being turned backward and upward. An occurrence of this kind might be a little embarrassing to an inexperienced midwife; but she need not be disheartened nor alarmed; the orifice may always be reached by a further introduction of the finger. The pains, in this case, will be mostly at the back, and the woman may be afflicted with them and with unpleasant sensations in consequence of this unnatural position of the womb, for many days before labor commences. This difficulty can at any time be removed, by gently drawing the mouth forward to its natural position; though it is sometimes very troublesome, in consequence of its disposition to reassume its unnatural posture. To reduce it to its proper place, nothing more is necessary than to introduce the end of the finger over the edge of the mouth of the womb, and gently draw it down towards the external orifice. If it be out of reach, two fingers of the same hand must be used, by which it may be gradually drawn, first by one and then by the other, by almost imperceptible degrees, until the finger may hook itself into the orifice of the womb.

At this stage of labor the woman is perhaps distressed with gloomy forebodings, becomes low spirited, loses her courage, is overwhelmed with sadness, and indulges in great despair. She is often afflicted with hysterical affections—weeps, is much agitated, or perhaps remains silent and motionless. This is a time when women need comforting—need encouraging, if any comfort or encouragement could be given—but this is rarely the case. Those feelings arise from a peculiar sensitiveness of the nervous system, and human consolation is often of little avail. Nevertheless, she must not be allowed to despair: rational means should be employed to rouse and keep up her drooping mind.

The pains gradually increase in strength and severity, and at the same time become longer and more frequent. The mouth of the womb gradually becomes more and more open with each returning pain, at which time also the membranes, commonly

called the bag of waters, are forced through it into the vagina. As the pain goes off, however, the bag of waters recede; but when the pain returns, the waters are again, by the contraction of the womb, forced through, and fill the membranes in a manner resembling a bladder.

As the pains grow more severe, the woman sometimes be comes cross, touchy, and impatient of control, and is often restless and dissatisfied with every body about her. With very irritable women these symptoms are vastly increased, whilst with many others they fall short perhaps of our description, or may not even be apparent. Sickness of the stomach and vomiting also often take place, but are regarded as favorable symptoms. When the pain goes off, every thing returns, as it were, to its natural position or state; the restlessness ceases; the membranes retire within the womb, the mouth of which, during a pain, is thin, hard, and sharp, now is thick, soft, and round.

Each pain produces the same series of symptoms, and is succeeded by remissions which become more and more complete or free from all pain, and at the same time grow shorter and shorter, as labor advances. The mouth of the womb is more and more dilated or opened by each succeeding pain, until finally it can no longer be distinguished from the vagina, and this passage and the womb become one continuous sack. This terminates, agreeably to most writers on midwifery, the first stage of labor.

But there is no intermission here—no abatement of the pains—they go on still increasing in severity and duration, with intervals becoming shorter and shorter, but of more perfect ease and quietness. The courage has now returned, the sadness dissipated, and the woman only thinks of the accomplishment of her labor. Some women, oppressed with fatigue and want of rest, will often sleep soundly during the intervals of ease, from which they are only aroused by the recurrence of their pains.

As the labor progresses, and the head of the child settles in the pelvis, a sensation is experienced which induces the woman to assist her pains by pressing down, and almost in spite of herself she is compelled to do it. Some writers strongly urge the necessity of the midwife's advising the patient to refrain from this; but in our opinion she might almost as well be urged not to get hungry or thirsty. She is impelled to these efforts by instinct and not by reason:—She is influenced by a sensation over which she has no control, originating in the parts concerned in parturition, and which is no doubt designed for a useful purpose. It is seen in animals, and experienced by the savages of the forest, alike as by those who are found in the walks, and enjoy the blessings, of civilized life. We think it, therefore, not only idle, but we think it useless and even in-

jurious, to advise women in the last stages of labor, when there are no difficulties in the way, to refrain from thus instinctively assisting or bearing down with their pains.

The membranes, or bag of waters as they are usually termed, still continuing to advance, at length, during a violent pain, burst, and the waters gush out. There are cases, however, sometimes occurring, in which the waters are discharged before the labor has progressed thus far, and occasionally they begin to discharge two or three days before labor commences. Under circumstances such as these, the labor is apt to be tedious, although it may in other respects be perfectly natural.

The waters being discharged, there is a longer intermission previous to the succeeding pain; and if an examination be now made, instead of finding the bag of waters, a hard substance may be felt, which is the child's head. The pains, however, soon return with increased energy, and succeed each other with greater rapidity than before the breaking of the waters. During the intervals between them, however, the woman enjoys perfect ease, and in the hope of speedy relief, she feels a satisfaction in every succeeding pain. Each one is ushered in by a general kind of shiver, and often seems in some sort to be double; first a mild one, and then, with only a momentary kind of intermission, a severer one following immediately after it. At other times the pains will alternate with each other, first a strong and then a weak one, at regular intervals. Now, when the pains come on, the woman seizes any thing within her reach; the sides of the bed or bedstead, chairs, or persons around her, and placing her feet in a suitable position, presses down upon them; then she draws a long breath, and all the fibers of her system being thus prepared, she contracts, with all her powers, the muscles of the belly; whilst the diaphragm, with every muscle of the body, act with the same energy: the neck and face swell, are engorged with blood, and sometimes become purple or livid; the veins of the neck are enlarged, and the arteries beat violently; the eyes sparkle; and at length, when the contraction or pain is about to cease, the woman involuntarily utters rapid sobs, which are soon followed by a most perfect calm.

Very soon, however, another, pain returns, attended by the same round of symptoms. As the head of the child continues to descend towards the external orifice of the vagina, and pressing upon the rectum, the exertions of the mother become redoubled, and she bears down with her pains with all her power. The head continuing to ascend, approaches the external orifice, the coccyx or lower end of the back-bone is forced backward, and the perineum and all the soft parts around the orifice are projected outward, and appear thin; at length a painful effort, which is more severe than any former one, and which is often

composed of two pains of unequal violence, for which the womb seems to have rallied all its powers, brings the head almost to the point of passing through the external orifice; but at this moment of anxiety, when but a small degree more of force would seem necessary to finish the labor—when nature has overcome all but the last difficulty—and just as she appears about to attain the object of so many exertions—and in her very last effort, she seems likely to fail—to yield to the obstacles by which she is opposed;—but she once more rallies—she only seems to have paused to collect her energies, and with an extraordinary effort, in which every muscle of the body performs its part, the head of the child is forced into the world! The great and sudden relief that is now experienced, produces in the minds of many women an overwhelming sense of gratitude, which is poured forth in an ejaculatory expression of thankfulness to Him who has sustained them thus far through the trying scene. After a few moments or a few minutes, another short, but moderately strong pain generally completes the birth of the child.

In the language of VELPEAU, the labor is finished. One of the most melting scenes—a scene adapted most vividly to affect the human heart, is now presented to the contemplation of the sympathetic mind. To those painful conflicts and mental agitations, succeeds a delicious calm, full of charms, says DESORMEAUX, interrupted only by the happy idea of being a mother. The new born child cries, and all the sufferings, for its sake so courageously endured, are forgotten; passionate expressions of thankfulness and satisfaction are substituted for those of pain; and sobs of happiness succeed the groans of distress. And this sudden transition from the most extreme dread and frightful anxiety, to the height of joy and most tender affection, in the person of a beloved wife, is a circumstance which, above all others, most endears her to the husband's mind, and entwines an additional coil of his affection around her heart! What sensible husband, we are constrained to ask, can contemplate, unmoved, a scene like this? We think none.

But do not be mistaken: we have not drawn this picture of child-birth to create unnecessary alarm in the minds of such women as have not experienced its faithful realities. Many of those who have borne children know that it is correct; whilst thousands of others have not seen one half its shades. No consideration could induce us, in treating upon this subject, intentionally to add to woman's sufferings a single unpleasant reflection. No; we know that she will have pains enough to bear, and our most anxious desire is to do all in our power for their prevention and alleviation. This is our object; and whether we succeed well or ill, we shall retain the grateful recollection that we write under feelings of moving sympathy for her in her

sufferings, as well as of good will for all mankind. O, woman! woman! tender, delicate, lovely woman—how reluctantly would we add to thy woes a single pang; and how ardently we desire to assuage thy many pains. But, remember, we entreat thee, that child-birth, although a painful process, is not near so perilous as many imagine, or as thy gloomy forebodings may lead thee to suppose. Thousands are continually passing through it without any essential or permanent injury; whilst the number that dies or materially suffers is exceedingly small. Remember that thou art in the care of thy Creator, whose superintending care is over all His works, of which man is chief, and is said to be of "more value than many sparrows," not one of which, it is declared, "is forgotten before God," or "falls to the ground" without his knowledge. Here is certainly encouragement for thee and for us all; and why wilt thou despair and unnecessarily bemoan and lament thy condition?

But, hurried on by the warmth and anxiety of our feelings, we had nearly forgotten to describe the expulsion of the after-birth; but we hope to be pardoned for the digression, as well as to be believed when we declare, that our great anxiety to serve the cause of humanity led us into it.

After the expulsion of the child, there is a remission of pain for a longer or shorter time, perhaps from five to fifteen minutes in common, but sometimes for several hours, when the pains return again but are far less severe, and the after-birth is expelled, which completes the process.

It may be proper for us to observe, that the general history which we have given of labor is far from being applicable to all women, or to all the labors of the same woman. For most women, perhaps, our account is too highly colored, but still it will be found faithful to the experience of many; whilst others more favored, give birth to their children almost without effort and without pain. The habits and customs of civilized life have a decided influence in this particular. The most refined, that is, those who depart farthest from the simplicity of nature, have the most painful labors, whilst women amongst savages suffer least, and have the shortest labors. So true indeed is it, that this kind of refinement perverts the course of nature, that even in nations which are civilized, but in which the women are accustomed to labor or exercise themselves much in the open air, they suffer but little at child-birth, compared with those who are more confined. We must now point out the offices which it is expected the midwife will perform at child-birth; in doing which, we shall of course descend more minutely into the details of labor.

SECTION 3.

OF THE CONDUCT OF THE MIDWIFE DURING LABOR.

The attention of the midwife will be principally directed to the following particulars:—

1st. to guard against all officious interference with the natural process of labor.
2nd. To the opening of the mouth of the womb.
3rd. To the formation of the bag of waters.
4th. To the proper presentation of the child's head.
5th. To the final expulsion and separation of the child from the mother.
6th. To the removal of the afterbirth.

1. With regard to improper interference, it would have been unnecessary, in all probability, for any cautions of this kind to be given, had the conduct of midwives and physicians always been open and undisguised. But the false ideas which have been so extensively inculcated into the minds of women, that midwives render essential assistance at child-birth, induces them always to expect that something will be done. Hence the midwife, whether male or female, to satisfy the woman, must do something, or pretend to do it; and in pretending to do some good, it will be well if she do no harm. The power and instinct of nature is far better to trust to than officious meddling: and in general, those women do best who give birth to their children without the assistance, falsely so called, of a midwife.

The deleterious consequences of interfering with the process of child-birth, are deplored by most authors; and yet, it would seem, if their instructions had any good effect, that this fruitful theme upon which they so much dwell, would have become exhausted, and there would be no necessity for the constant repetition of their precepts upon this subject. But they have failed to bestow their lessons upon the proper students, and have moreover neglected to enforce their precepts by their own examples. Had they taught all women verbally, instead of confining their instructions to books, that child-birth was a simple unassisted process of nature; in short, that it was performed exclusively by the mother instead of the midwife, and that, in the language of Denman, "the abuse of art produces evils more numerous and serious than the imperfections of nature," the necessity of so often and so strongly inveighing against officious meddling, would long since have ceased.

But the sentiment has been inculcated, that the assistance of a midwife is absolutely necessary at child-birth, because she

helps to bring forth the child! And the better to conceal the deception, all the mystery of Heathen mythology has been drawn around it, in order, if possible, that every clew to the knowledge of its simplicity might be cut off.

From all these circumstances combined, such prejudices have been created even in the minds of common midwives, that they appear to think something must always be done; and as this is almost always unnecessary, they are sure to do harm. And women midwives are not alone to blame in this respect. Men midwives have also been guilty of the same officious and injurious interference; though all have not been so candid as like Dr. DENMAN, to acknowledge it.

Moreover, women in labor are not satisfied without something being done; as they have been taught to believe that the midwife can assist them, by either moderating their pains or shortening their labor. But for the benefit of the female community, we could wish these false impressions done away. In the progress of labor, and when suffering its pains, you are anxious to obtain relief; but remember that nature performs the work, and not the midwife: therefore recollect, that although in accordance with custom, when your pains become severe, you may anxiously desire the midwife to offer assistance, yet, bear it in mind we entreat you, that she can do no good, but may on the contrary, do harm by attempting to do something unnecessary, and thus increase the very difficulties which she is expected to prevent.

"There is no circumstance," says DEWEES, "that so largely and certainly contributes to divert nature from her proper course, as the persuasion that art can always benefit her—hence the constant employment of ill-directed measures by an ignorant accoucheur, or midwife. And unfortunately for the interest of humanity, it requires more knowledge not to be officious, than falls to the share of many of those who pretend to practice midwifery. It is a vulgar prejudice, that great and constant benefit can be derived from the agency of the accoucheur, especially during the active state of pain; and this feeling is but too often encouraged by the *ignorant* and the *designing*, to the injury of the patient and the disgrace of the profession."

We might make extracts from many other authors on this subject, until we should prove, what we are almost ready to believe a fact, that meddling with women in labor *always* does more hurt than good, but we will let this one suffice. Indeed it is granted by some of the best authors, that the abuse of the art of midwifery has been productive of more evil than its proper exercise has done good. This is truly a melancholy consideration, and ought to be an inducement to all women to make themselves acquainted with every principle appertaining to it;

whereby each individual will be able to know for herself, as well as for others, what constitutes the midwife's duty; and thus have it in her power to prevent those disastrous consequences, which are acknowledged on all hands to have resulted from ignorance, impatience, or unnecessary interference. And you can never become fully sensible of the dangers arising from these sources until you become well acquainted with the real simplicity of nature, her capacity to perform, in almost all cases, her own operations, and the difficulty there is in distinguishing when assistance can properly be afforded. Nature can never be meddled with, but at immense hazard, as reason has taught, and experience ever confirmed, to be a fact.

It is from all these considerations, that we have entered so minutely into many subjects deemed too indelicate or offensive to converse about; and which, it is not improbable, may be offensive to some even to read about. But, although we could not by any means wish to make these things the subject of too common conversation, or that this book should be placed in the hands of children, yet we most earnestly and seriously desire that, at least married women, as well as their husbands, should make themselves acquainted with its contents. Do not, we entreat you, allow your feelings to be disgusted with a transient glance over its pages; it contains principles and instructions of the highest importance to your health and happiness. Recollect that all you may deem most offensive, and a great deal more, s contained in most works on medicine and midwifery, which re in the hands of every student and physician; and how much greater indelicacy is there in your being inspected and handled by them, than in your understanding these things yourselves, and being thereby enabled to avoid such unnatural exposure?

But we know, that with all we are capable of saying, your prejudices may, at least for a time, keep the ascendancy over a better judgment, and some of you, under the influence of a false delicacy, may be liable to reject the advantages herein offered to your acceptance; but do only for once reflect, that so long as this disposition prevails in the female community, hapless woman will be under the necessity of submitting to those mortifying exposures which we know you all so much detest and abhor. Why not renounce then, at once, those unhappy prejudices which prevent you from understanding your own selves, when you must be satisfied, by a little reflection, that this very ignorance may, and often perhaps has, subjected you to sensations a thousand times more mortifying and indelicate than can possibly arise from the perusal of this book. "It is certain," says Ewell, "that the mind, in private, with perfect purity, turns to every point," and contemplates, we may add, every subject upon which we treat; how little reason, then, for the indulgence

of that false delicacy which would prevent women from obtaining a correct knowledge of their organization, as well as of their maladies, and thus be prepared to become each other's midwives or physicians, on every necessary occasion.

But we have wandered from the subject of the present section; a digression which we think both the importance of the subject as well as the reader's judgment will fully justify.—We will now return.

We were exposing the impropriety of the frequent examinations or handlings of women in labor; which, under pretence of affording assistance or of guarding against difficulties, have become so fashionable, and are believed, though falsely, to be so necessary, that we shall be inexcusable, perhaps, if we omit taking some notice of it. By *touching*, the midwife is enabled to ascertain whether labor is actually commenced, and in general, whether the head or some other part presents; though in this there is a liability to great mistakes, even with those who have had much experience. In the language of VELPEAU, "in order to practice it with success, to avoid the gross mistakes that it may cause us to commit, to derive from it every possible advantage, it is necessary to practice it for a long time, inasmuch as practice alone can make us skillful in such an operation."

We recollect of seeing somewhere, an anecdote of a celebrated French Professor, who was examining a woman in labor, at one of the hospitals, in the presence of his students, and on withdrawing his hand, said it was a head presentation, "there could be no mistake about it," when at the same time the students were laughing in their sleeves at the evidence which the *meconium* on his fingers presented to them, though unobserved by himself, that it was the *breech*. We mention this fact for no other purpose than to show how easily even experienced *physicians*, with all their boasted superiority of knowledge, may be mistaken. There is, however, little liability to fall into so great and mortifying an error as the one just related, but still this may sometimes occur; and the only positive evidence to be derived from the touch is, whether the woman is actually in labor or not, of which we will presently speak more explicitly.

When an examination is decided upon, the woman may be placed upon the bed, either on her side or back—if on her back, something should be placed under her hips to raise her lower parts a little from the bed: or she may sit on a cushioned chair, with her bottom slipped a little off; or she may stand upon her feet having her knees somewhat separated, and a little bent, leaning upon a chair or an assistant. After being placed in one of those ways, or any other that may suit the patient better, the midwife may proceed, at the time of a pain, in the most gentle manner, to introduce either one or two fingers into the

vagina, and search for the mouth of the womb. In doing this, the fingers will be introduced along the front bone, called the *os pubis*, and then gradually pushed backward until the mouth of the womb is reached; and if labor have not commenced, it will be found closed or nearly so, with its lips feeling hard, not altogether dissimilar to cartilage or gristle: and there can be no mistake as to the part, for there is no other that resembles it, in the vagina.

The end of the finger is to be kept near the mouth of the womb until the return of a pain, when if labor be actually commenced, it will be felt to open a little; and if the finger be introduced into the opening, the membranes will be found distended and endeavoring to force themselves through the orifice. It must be borne in mind, however, that this description applies only to the early stage of labor. If the labor be further advanced, the mouth of the womb will be found more open and the bag of waters protruded, in proportion to the progress of the labor. During the time of a pain, the edges of the orifice will become thin, as if stretched, and the membranes and water be forced out into the vagina, forming a kind of bladder or bag in size proportioned to the dilatation of the mouth of the womb; and when the pain goes off, the waters and membranes return, and the edges of the womb become thick, rounded and soft, having somewhat of a spongy feel.

When the mouth of the womb has thus become a little dilated, if the finger is introduced into it, the hard head of the child may be sometimes felt, when that presents, or perhaps some other part; but this is not always the case. We are constrained, however, once more to advise that these examinations be made with the utmost tenderness and caution, to avoid injuring both mother and child. They should also be but rarely made, as inflammation of the parts will be the consequence, from which will be sure to arise tedious and painful labor. After one examination has been made, it will not be necessary to make another until the waters break. Indeed, unless it be an object to ascertain for a certainty that labor has commenced, the first examination may be deferred until this time. But since examinations have become so fashionable, it is a very rare thing that the suffering woman can be satisfied or persuaded to wait so long, from the too common error of supposing that the midwife can render essential assistance. We hope, however, that all who read this volume will, with a little reflection, become satisfied that no good can be done in this way, whilst much evil may arise from the practice, and will, therefore, have the good sense to set a better example.

Previous to the bursting of the membranes, and after the pains have become pretty severe, is the time at which women are

anxious for, and midwives liable, in accordance with popular customs, to offer, assistance. "But," says DENMAN, "it is the case, that all artificial interposition contributes to retard the event so impatiently expected, by changing the nature of the irritation thereon depending; or does mischief by inflaming the parts, and rendering them less disposed to dilate; and occasioning either present or future ill. For these reasons we must be firm, and resolved to withstand the entreaties which the distress of the patient may urge her to make, as we must also the dictates of vehemence and ignorance in the bystanders. Others may be impatient, but we must possess ourselves and act upon principle. The event will justify our conduct; and though there may be temporary dislike and blame, if we do what is right, there will be permanent favor and reputation." These remarks of the great DENMAN ought to be treasured up and remembered, not only by every midwife, but by every pregnant woman.

The pains, during the stage of labor of which we are speaking, are often very distressing, and are denominated by women as grinding, rending, or cutting pains, frequently producing great anxiety, depression of spirits, and impatience to obtain relief. It is now, in the language of Dr. GOOCH, that it "becomes a matter of importance to keep up her spirits, and maintain her confidence. This is easily done if the labor is a short one; but if it proceeds slowly, through one night—if the following day advances and still no prospect of a speedy termination, the patient begins to doubt whether she has received proper assistance, and those about her look suspiciously at you: they calculate the number of hours the labor has already lasted; they wonder it is not further advanced; and you are made to feel, both by looks and hints which are sufficiently intelligible, that your competency is thought to be rather questionable. When you find yourselves in this situation, you will not think it a remarkably agreeable one."

From the great danger, whilst the woman is suffering from those cutting, grinding pains, of something being done to her injury, we hope to be pardoned, if we dwell somewhat longer upon it. Had women always been taught that nature or their own organs expel the child, instead of the midwife, there would then have been no necessity for the many cautions which have been given; but we have prejudices so deep rooted and strong to contend with, that it becomes necessary to oppose them at every step. Nor are these sentiments exclusively our own; we also have the authority of the best writers to sustain our views. "The first observation I shall make," says Dr. BARD, "on this stage of labor is, that no skill or art of the midwife, no exertion of the woman, can in the least contribute to lessen the severity

of the pains, or shorten their duration. They are intended by nature to accomplish the necessary and important object, the complete dilatation of the mouth of the womb." "But although the midwife, during this stage, can neither lessen the patient's pain nor shorten its duration; and although she is absolutely forbid interfering in any manner with the progress of labor, her presence is now far from being useless; it is very necessary. She should inquire into the state of her patient's bowels, and unless they are perfectly free, give an injection; indeed, whenever there is time for it, it is a good rule always to do this," as well as also by all means to see that the patient evacuates her urine.

After some remarks respecting examinations, Dr. BARD continues:—"But if it be necessary to be thus cautious in respect of a careful and occasional examination, what terms shall I use to condemn, as it deserves, the abominable practice of boring, scooping, and stretching the soft parts of the mother, under the preposterous idea of making room for the child to pass. It is impossible to censure this [wicked] conduct, and dangerous practice, too severely; it is always wrong: nor can there be any one period in any labor, the most easy and natural, the most tedious and difficult, the most regular or preternatural, in which it can be of the least use—in which it will not unavoidably do great mischief: it will render an easy labor painful—one which would be short, tedious—and one which, if left to nature, would terminate happily, highly dangerous.

"I know," continues BARD, "that I have to combat the prejudices of many of my countrywomen on this subject; and tha although I may convince the judgment of a sensible midwife, she may not always be permitted to exercise it, unless she has firmness and self-possession to resist the solicitations and importunities of her patient, and mistaken friends. She will not only be importuned on some occasions of a little delay, but she will be reproached with permitting her patient to suffer without assistance, and will even be threatened with application to others, and the loss of her reputation. I speak from experience; still, however, if she values her patient's safety, and the approbation of her own mind, she must be firm, and the event will justify her conduct and establish her character."

We hope to be excused, if we make further extracts from the excellent work of Dr. BARD. The period of labor of which we are treating, demands, that not only the midwife should be armed with all the reasoning and all the authority which can be brought to her aid; but also that the woman herself should be fortified by every consideration which a correct knowledge of what is proper can bestow. And we write not for a sect—for a profession—not for the midwife alone; we write for the whole female community—for the world!

"Leaving nature, therefore," continues Dr. BARD, "to her own unassisted, undisturbed efforts, the midwife is to encourage her patient by appearing perfectly calm and easy herself, without hurry or assumed importance; by assuring her, that as far as can now be discovered, all matters are perfectly natural; by entering into easy conversation with her herself, and encouraging her to do so with her friends. She is to direct her to walk about the chamber, or from room to room; to sit or to lie down as she finds most agreeable to herself; and if she can, to sleep between her pains, which some women are much disposed to do. At the proper season, the apparatus of a meal, or of the tea-table, may serve to while away an hour, and every occasion of this nature should be embraced to lessen impatience, and to protract expectation.

"Indeed to gain time during this painful and irritable period, is an acquisition of no inconsiderable moment; for the time which uninterrupted nature requires to bring about the great changes which are now accomplishing, is always necessary: and unquestionably women in general recover better after a labor rather slow, than after such as are quick and sudden. Hence too we learn the great impropriety of directing the patient at this period to assist her pains, as it is called, by holding her breath, and exerting strength by forcing, straining, or bearing down; which inevitably will exhaust her strength now in the beginning of labor, which may be very necessary for her support at the conclusion of it. Young women in their first labor, are most apt to be guilty of this error; by which they overheat themselves, and may bring on fever; it may likewise occasion the premature bursting of the membranes, an accident too apt to happen without any such effort, when labor begins with very strong pains, and which will inevitably protract it."

Having extended our remarks upon the conduct of midwives during labor, to a length far beyond what we anticipated, we now turn our attention to the remaining particulars noted at the beginning of this section.

2. Of the opening or dilatation of the mouth of the womb.—This is a most important part of labor, but it is one, as has been already sufficiently indicated, over which human interference can exercise no beneficial control. It is during the period occupied in the opening of the mouth of the womb, that those cutting or grinding pains, of which we have spoken, take place. They appear to depend upon, or are in some way inseparably connected with, this circumstance; which not only every midwife, but every woman should know; and as they must be borne by all women in labor, they ought to make up their minds to bear them with all the fortitude, composure, and resignation of which they are capable.

It is during this period, that most women are assailed by those gloomy forebodings and presentiments of approaching danger, and need all the comfort and consolation that the midwife can bestow, and all the encouragement that a well grounded assurance of a happy deliverance can inspire. Here, too, is an ample field for the exercise of the endearing blandishments of a husband's love: and whose presence, we ask, can be more acceptable, or conversation more agreeable, or kind offices more consoling, than his, to the desponding wife? To whom can she with so much freedom, and with so much confidence, disclose her thoughts and unbosom her very soul, as she can to an affectionate companion who gives ample evidence of his anxiety to alleviate all her cares? A responsibility, in this particular, rests upon husbands, which cannot be too faithfully discharged.

But we cannot conceal the fact, which should long ago have been known, that the many fears and forebodings to which hapless woman is liable, at these periods, are vastly magnified in consequence of the ignorance in which she has been unfortunately kept, with regard to the great simplicity of the process of child-birth, or of the little assistance which ever has been, or ever can be, given to her at those times. Correct information upon this subject, we believe, would relieve women of an immense amount of bitter anxiety and wo, by inspiring them with that confidence which they cannot possibly derive from any other source, or by any other means. It is partly to convey those ideas of the simplicity of nature, and of her almost undeviating correctness in operating, and thus to inspire that confidence which women so much need, that we have ventured upon the publication of this work; and if we only succeed in this, to the extent of our desires, we shall feel amply compensated for our toil.

We are very sensible of frequent digressions from the subjects upon which we ostensibly profess to treat; but in this we must be indulged. Our object is not to present a work purely scientific, but one that will instruct and benefit the mass of mankind; and, therefore, we not only make digressions, but repetitions, whenever we find it necessary either to instruct, or to make a more forcible impression upon the reader's mind. The peculiar circumstances under which we come before the public renders this doubly necessary. No work of this kind, ever before published, was calculated or expected, so extensively and so generally, to circulate through all ranks of the community, nor of course, to be assailed by so many and so strong prejudices, as this. We must, therefore, appear before the world, armed with every weapon which the limits of our work will admit us to use, and which not only our own necessity but the reader's benefit, most imperiously requires.

But to return to the dilatation of the mouth of the womb.—This is sometimes a tedious process; it is indeed the chief impediment to natural labors, as when once this important object is effected, the labor, in general, is soon accomplished. The time occupied in this process varies in different women, and in the same woman in different labors. It may be one, two, or ten or twenty hours, or even two or three days. Some women always have short or expeditious, whilst others as constantly have tedious or difficult, labors. Most authors define a labor natural, if it terminate within twenty-four hours; and tedious, if it require a longer time.

The opening of the mouth of the womb is always slow, and often almost imperceptible, at the commencement of labor; but is effected with greater rapidity as it advances. When the mouth of the womb is so much dilated as no longer to be felt, or in other words, when it is so opened as to give the womb and the vagina the character of one continuous sack, the labor generally progresses with far more rapidity, and the child is soon expelled. But tedious delays may even now, or at any succeeding period, take place, and the labor be protracted far beyond the midwife's expectation; at which, however, no alarm need be taken. The mouth of the womb may, even at this stage, for a time, seem to contract to such a degree as to produce a belief that the labor is going backward instead of advancing. This is most usually met with in first labors.

3. The formation of the bag of waters.—This is one of the almost constant or essential phenomena attending births, though it sometimes fails; as, for instance, when the waters are discharged before labor commences; and occasionally the quantity of water is so small as to be incapable of forming a bag of any considerable size. It is a commonly received opinion that the bag of waters tends very much to open the womb by its passage in advance of the child's head; but it does not seem probable that it has much agency in this operation, as the mouth of the womb opens, though not equally as well, when the waters do not gather. But whether the bag of waters exercises any influence mechanically, that is, by stretching the parts, or not, it is very certain that its too early rupture always makes the labor more tedious. Hence all examinations should be made with the utmost care not to break the membranes and thus produce a premature discharge of the waters.

The reader will recollect that the pains of labor are at first slight; hence the contractions of the womb are also moderate: but as the mouth of the womb opens, the pains and contractions become more severe, and the membranes and waters are forced further and further into the vagina, or in other words the bag of waters grows larger and larger with every pain, until the mouth

of the womb becomes completely open; about which time, either a little before or a little after, the membranes are generally ruptured and the waters are instantly discharged. Though sometimes, as has before been observed, the waters are discharged long before this period of labor; and instances occasionally occur in which the membranes do not break until the labor is nearly completed.

4. The proper presentation of the child's head. When the waters break and discharge, as the parts are now dilated or opened, it is the most proper time to make an examination, in order to ascertain the presentation of the child, whether it be right or wrong. And to do this, the reader must call to mind the description of the child's head, and particularly the openings styled the fontanelles, and the seams or sutures, for a more correct understanding of which the reader should refer to plate 6. It will be recollected that the proper presentation of the head, is the crown; consequently the three-sided fontanelle or opening will be felt; and instead of the four seams or sutures which lead to the front or four-sided opening, there will be only three seams felt leading to it; or instead of the opening being readily found, there may be a soft tumor in place of it, but still the three seams may be felt running to it. If the four-sided opening, or any other part of the head, except the three-sided fontanelle, is felt at the mouth of the womb, the presentation may be regarded as not being natural. The only thing to be done in such cases is, to place the woman in such posture as will most favor the reduction of the child's head to its proper presentation. Thus, if the fontanelle present too high up on the front bones or pubes, the woman must lie on her back; and then during the absence of a pain, the midwife, with one or two fingers, should most gently endeavor to push the head a little back, and fetch it down by applying the other hand externally on the abdomen, until the fontanelle presents at the center of the orifice of the womb. And so, if the fontanelle presents either at the right or left side of the orifice, the woman should be placed on the opposite side, that the weight of the child's head may assist in bringing it to its proper place.

But it does not follow, however, that because the head may not present exactly right, that it is necessary to offer assistance in the manner we have directed: indeed we are not sure that it is not better in all cases of trifling deviations, not to meddle with them at all. Nature is surprisingly provident in regulating these things; and it is far better not to offer any interference at all, than to do it at the hazard of doing an injury. Cases of the very worst presentation, have been, according to DENMAN, rectified by the unassisted efforts of nature, even where it was regarded as impossible to offer any assistance, with a rational

prospect of doing good. Indeed, if women could only know the wonderful resources of nature in all cases of difficulty, and how much safer and better it almost always is to trust to her than to officious meddlings or human interpositions, they would certainly dismiss the most of their fears about child-birth, as well as discard the too often proffered assistance of midwives.

5. The final expulsion and separation of the child from the mother. This is the last act of *child-birth*, though agreeably to authors, not of *labor*. The mouth of the womb being dilated or open, so that the womb and the vagina become one continuous sack, (*see plates* 7, 14, *and* 15,) the child, propelled by the contractions of the womb, passes slowly down through the pelvis. The pains now, instead of bearing the character of grinding or rending, are forcing, pressing, or bearing down pains. The mournful depression, and gloomy foreboding, so often attendant upon the first stage of labor, now give place to very different feelings. The woman acquires new courage and energy; and instead of wishing to avoid the returning pains, as she does during the early stages of labor, she is ready to meet and cooperate with them. A disposition is now felt to press down with the pains, by which the expulsion of the child is facilitated. Some writers strongly oppose the propriety of these exertions by the mother, and urge midwives to advise their patients against it. But these efforts are instinctive; they are produced by a sensation peculiar to this stage of labor, and if nature is to be consulted, ought not to be discouraged. We have elsewhere said, that we think it not only idle, but useless and even injurious, to object to the gratification of this instinctive feeling, over which the woman has no control.

The midwife should carefully remember that nothing can be done by herself to assist the woman or forward the labor; and, therefore, she must attempt nothing. She may, however, as is customary, keep her hand, or rather her finger, to the child's head, in order to ascertain its progress through the pelvis, but nothing more. It sometimes happens that the head of the child appears to stick in the pelvis or bones, as it is familiarly termed, and the woman will have many apparently unavailing pains, during which the child does not seem to come forward at all. If the women is in bed, it may sometimes have a good effect to take another position, or if she desires it, as many women do, she may get up and walk the floor. No danger need be apprehended from doing this, as, under the existing circumstances, no fears need be entertained of any injury that might arise from the sudden birth of the child. When any such obstruction, as that of which we are speaking, occurs, nothing should be attempted, because nothing can be done, by the midwife, by which it can be removed or overcome. Nature herself is always com-

petent to the removal of difficulties of this kind, by giving her time, and to her we should always trust.

Sometimes the pains may also die away, and the woman become easy for some time. This, however discouraging to her or her friends, is by no means a cause of alarm: neither mother nor child will suffer by it, as the powers of the system will be aroused in proper time, and the labor completed. Nature knows her own laws and will execute them, if let alone, in her own way and in her own time; and, therefore, we need not—we ought not to be impatient with her delays.

The crown of the head at length presents at the external orifice of the vagina. The soft parts of the mother are protruded, and consequently, as the head is pushed forward by the pains, are more and more stretched, which, of course, somewhat increases the pain; and the resistance which is now offered is sometimes very great, especially with a first child, but less so afterwards. The labor may even be retarded for some time, which is very necessary, in order that the parts may gradually dilate or become relaxed, so that they need not be torn. The perineum, which is the part between the orifice of the vagina and fundament, is much stretched or carried forward, is very thin, and is sometimes torn. Authors on midwifery almost universally recommend the application of the hand over or around the elongated or protruded perineum at this stage of labor, as a support to prevent its being injured. There are some writers who do not even hesitate to advise, where the labor is rapid, to hold the child back for two or three pains, by the midwife placing her hand against its head. We must confess, however, for ourselves, that we are not prepared fully to believe the first to be useful, or the last proper. There are some who, with ourselves, doubt the utility and propriety of both.

We cannot satisfactorily understand how this support, given by the hand to the perineum, can oppose its being torn. It may, and certainly does, crowd the head more forcibly against the front bones or pubes, and possibly takes off some pressure against the perineum in this way. But then, a few individuals have advised to push the head backward, that it may pass under the pubes with greater ease.—Again, it has not been proved but that quite as great a proportion of women who have been delivered of their children without any assistance, have escaped accidents of this kind, as of those who have had the aid of the best midwives. Even Dr. Denman, who has labored the subject of giving assistance, and insists on the propriety of offering it, says: "when women were delivered without assistance, I have not in any case observed any considerable laceration" of the perineum. And he concludes it "reasonable to presume that the frequent

occurrence of it in the human species," "ought to be imputed to some accidental cause, or to error in conduct."

The anonymous female writer whom we have heretofore quoted, in her remarks upon DENMAN's recommendation to apply the hand to prevent the difficulty of which we are speaking, says: "I would just observe, that in the course of my practice I have not found any occasion for such kind of interference, although I have had a large portion of very rapid labors; and in every instance, the patient has been left sound. Nor have I ever known amongst a very large number of children, who have been born within the circle of my acquaintance, before a doctor could arrive, any inconvenience to follow. But I do not," continues she, "justify my practice on this foundation alone; I consider if nature forces a child forward, and I put my hand in opposition, I shall insult her order as much as if I should by violence undertake to hurry its birth."*

We now consider the subject of the propriety or impropriety of the midwife's interposition to prevent a laceration of the perineum, as fairly before the reader. In favor of its propriety, are arrayed nearly every author who has written on midwifery; and against it, are the arguments, and the evidence which we have here adduced. The midwife, therefore, so far as our opinions are concerned, is left free to act as she pleases, though we must confess that we incline against any interference.

When at length, however, the child's head is expelled from the vagina, the woman enjoys a short respite from her pains; but they soon return and the body and lower extremities quickly follow the head. In fact, with the birth of the head, the woman's sufferings may be considered as being over. A few moderate pains at most, often times one, will be sufficient to complete the birth.

So soon as the head has come into the world, the midwife should search with her fingers about the neck of the child, to know whether the navel string is not wound around it. If she finds it is, she must gently fetch it over from the back of the head to the face, and then wait for the pains to finish the expulsion of the child. And we wish this particularly to be attended

* Since writing the above, in turning over the pages of the pamphlet from which we have made these and former quotations, we have become apprehensive that we possibly may be doing injustice to the compiler, who has, with her judicious extracts from other authors, intermixed many sensible remarks of her own. The pamphlet of which we are speaking, appears, on closer inspection, to be composed of two, stitched together, instead of one, with the title page of the second one torn out; and upon this page, for ought we know, may have been the compiler's name, which we doubt not was RUTH STEBBINS. We are thus positive, because of a certificate of character and qualification published in one of those pamphlets, which appears to have been given by MASON F. COGSWELL, M. D., to the above named individual.

to, as some authors recommend the midwife, as soon as the head is born, to finish the extraction herself. But this is a bad practice, and ought never to be followed nor encouraged, unless the woman is sinking by profuse flooding. Nature is adequate to the performance, and in her own time will finish her work without hazard to child or mother.

The first important thing, after the child is expelled, is the establishment of its breathing. For the most part this takes place immediately after its expulsion from the mother; sometimes, indeed, it cries very forcibly the moment the head is in the world. But should it fail to do so very soon after it is completely expelled, immediate attention must be given to it. In the first place, the child should be received upon a warm cloth, and be kept sufficiently defended from the air, if the weather be cold. The finger of the midwife should also be introduced into its mouth to clear out whatever may be in it to interrupt the breathing. Its body may also be wet with cold spirits or cold water, by suddenly dashing on it a small quantity of either; or the midwife may take a mouthful and spurt it from her mouth. In most cases, this will be all that is necessary, as the child will generally cry immediately on applying the cold fluid.

But should these means fail, the mouth must be more carefully cleansed, and the navel-string be stripped repeatedly between the thumb and finger, from the mother to the child; and if this does not produce signs of breathing, the extraction of the after-birth ought to be attempted, by very gently pulling at the navel-string, the mother aiding at the same time by gently bearing down. If it can be obtained, it should be taken to the hearth and placed upon hot embers or coals, and the navel-string stripped, as before directed, from the afterbirth to the child. This perhaps, is the most successful manner of treating children when still-born, as it is termed, but not dead.

Dr. Thomson, in what he styles a "Supplement to his New Guide to Health," relates his having had an agency in restoring to life, a still-born child, in the way last pointed out; and leaves it to be inferred that the discovery was one of his own. We wish by no means to deprive him of any portion of his well-earned fame; but, in justice, we must say, that the plan was suggested by the mother of the woman just delivered; who, being an aged and experienced midwife, had often employed it with success, in her own practice, in similar cases. The truth is, the same method agreeably to Denman, was known to and adopted by the ancients; but, excellent as it is, has been nearly lost to the world.

But if the after-birth cannot be procured, other means must be resorted to. Some recommend blowing into the lungs, and

then press out the air and blow again. Others, however, have condemned this practice as useless. Upon the whole, it seems hardly worthy of much confidence. The mouth of the child should, however, be kept freely exposed to the air, and if the pulsation in the navel-string cannot be felt, it may after a while be cut off and tied, or tied before it is cut, no matter which, and then the child taken to the fire. It should now be gently rubbed with the warm hand, both body and limbs. The smoke of burnt linen or paper, when allowed to come in contact with the nostrils, is also valued by some and might be tried. A warm bath has likewise been used with advantage, and should be made about blood heat, into which the child may be plunged up to its shoulders. The means adopted, whatever they may be, whether any or all that we have recommended, or any other, should be continued for a long time, as children have been known to come to after being some time laid away as dead.

When the child cries either immediately or soon after it is born, it will in all probability need but little attention more than to cut the navel-cord. By some this is directed to be done without further ceremony, but we think it safest, at least it can do no harm, to wait until the pulsation in the cord ceases; which it may do very soon, though sometimes it continues for fifteen or twenty minutes. After the pulsation in the navel-string ceases, there will be no danger in cutting before tying it, as no blood could discharge from it, though it is universally customary to tie it before it is cut. Different authors recommend different distances from the belly at which the cord should be tied: but this is a matter of but little consequence. An inch and a half, or two fingers' breadth, is sufficient, and a common course sewing thread will answer to tie with; and after it is tied, the cord should be cut off about three fourths of an inch from the string. It was formerly customary to tie the cord in two places, and cut it between the ties; but this can be of no use unless possibly in some cases of twins; as, if blood is discharged from it, the end may be held in the fingers.

6. Removal of the after-birth. A variety of rules have been given by practitioners with regard to the extraction or removal of the placenta or after-birth. Almost any of them may be adopted, excepting those which recommend the hasty removal of it by force. Unless there is flooding, there is no need of anxiety about it. It may remain in the womb for one, two, or three hours, or as many days, and has been known to remain even for months, without producing any bad effect. But in most cases, the placenta will be expelled in from ten to thirty minutes.

The placenta, during pregnancy, is attached to some part of the inside of the womb, through which a communication is established between the mother and the fœtus. Now, in order to

its expulsion from the womb, this attachment must be destroyed, which is almost always accomplished by the contractions of the womb to expel the child. How do the contractions of the womb loosen the after-birth from its attachment? The womb, by contracting, lessens the surface of the part to which the placenta is attached; but as this body does not contract, the womb tears itself loose, as it were, from it; and in most births, it is probably detached from the womb during the last pains of labor. The number of instances must be very few, in which this is not the case.

The navel-cord being cut, and the child given to the nurse or other person to wash and dress, the midwife must apply her hand to the bowels of the mother, and ascertain if the womb is contracted or contracting. If the womb be not contracted, the abdomen will feel soft uniformly all over; but if contracted to the size which the placenta will admit of, a hard ball will be felt just above the pubes, and it will often happen that the placenta can be immediately extracted, or perhaps may even now be expelled and lying in the vagina, without the mouth of the womb. The navel-cord must now be very gently and steadily pulled, and the placenta will most probably be soon obtained. But if it do not come with moderate force, there is danger of breaking the cord, and, therefore, the midwife must desist.

After delaying for a reasonable time, occasionally pulling moderately at the navel-cord, without extracting it, we may proceed to offer assistance. How is this to be done? Wind the cord around one or two fingers of the left hand, and introduce into the vagina two or three fingers of the right, the ends of which are to be placed on the cord, when by gently pulling the cord with the left hand and pressing on it with the fingers of the right, the placenta may almost always be extracted, with but little trouble to the midwife and no hazard to the woman. But the midwife must understand the mechanism of the operation, or she may not by this means succeed immediately in its extraction. This we will endeavor to explain in the most familiar manner possible.

We will suppose a bulky substance lies at the bottom of a vessel whose sides are perpendicular, or suppose it may be smallest at the top. To this substance we will suppose a rope to be attached, by which it is to be drawn from the vessel. Now in what manner can this object be accomplished with least possible force? by raising it directly perpendicular, with the rope in the center of the mouth of the vessel; or by drawing the rope over its edge, and at right angles with its side? Doubtless by raising it perpendicularly, with the rope in the center. Raised in this manner, the force would be said to be applied along the axis of the vessel; or, in other words, along an

imaginary line through the center of the vessel. Now apply these remarks to the placenta in the womb, and the midwife will understand the mechanism, and the reason why the placenta cannot always, though completely detached from the womb, be extracted by simply pulling at the cord.

The axis of the upper strait is, from above, backward; and hence it may often happen, that in order to extract the after-birth the force must be so applied as to carry it backward, instead of forward as will be the case in pulling the cord without introducing the fingers into the vagina. If, on introducing the fingers, the direction of the cord appears to be from either the right or left side, or from the back, it should be drawn in a line as directly as possible from the point where it appears to be attached or located. It is the want of understanding this method of extracting the after-birth, that has in most instances produced the frightful stories about its adhesion or growing fast. It always adheres or is grown fast to the womb during pregnancy, and is almost as constantly separated from it during labor.

But the midwife must be cautioned against using any means for the extraction of the placenta, unless the womb is contracted into a hard ball, as before observed, just above the front bones or pubes; and even then it is not necessary only to put an end the sooner to the woman's anxieties. If the bowels feel uniformly soft all over, the midwife, instead of making any attempt to extract the placenta, should rub the abdomen briskly, occasionally placing one hand on each side and pressing the bowels together, and sometimes grasping the belly with the hand. By pursuing this course, a short time, the womb will contract, which may be known by its hardening under the hand, and the hard space gradually lessening in size until it becomes like a ball at the top of the pelvis. After this has taken place, some time should be allowed to elapse in order to be satisfied that the womb will not again relax; when the placenta may be extracted as before directed.*

In case of flooding, the directions just given must be closely attended to, as this difficulty is always caused by the womb's not contracting and closing the mouths of the vessels which are

* The artificial extraction of the after-birth seems so much at variance with the fundamental principle of trusting to nature, which we have so strongly and so often enforced, that we feel almost disposed now, in offering the second edition, to erase the directions for its performance from our pages. After much reflection, however, we have concluded to let them remain, and subjoin the following:—Rarely, or never, attempt the artificial extraction of the after-birth until a return of pains indicates that the womb is making an effort to expel it, unless these should not occur for an unusual length of time after the child is born. We think this the safest mode of procedure because it can do no harm, and is likewise sanctioned by some of the best authors, as well as being more consistent with nature, which should always be consulted.

left open by the separation of the placenta from the womb. Floodings of an alarming and even fatal character have once in a while occurred without any discharge of blood from the vagina. In this case the placenta closes the mouth of the womb so as to prevent the escape of the blood; and the flooding is only known by the woman's becoming deathly pale and faint. When symptoms of this character take place, or if the blood is discharged, the bowels must be instantly examined, and the rubbing, &c. immediately resorted to, and continued until the womb contracts; when the flooding will cease. The midwife must be cautioned against any alarm if pains and a discharge of blood should immediately follow the rubbing of the bowels; they are to be regarded as favorable symptoms of the good effects of the means employed. For more extensive observations respecting the treatment of flooding, see chapter 4, section 1.

The practice of introducing the hand to extract the placenta is, at best, cruel, barbarous, and dangerous to the woman, and we think should rarely or never be attempted. If any circumstance can justify it, it must be a case of flooding which continues after the womb has contracted to the smallest size that the placenta will permit; but cases of this kind, if ever they occur, must be exceeding rare.

SECTION 4.

OF PRETERNATURAL LABORS.

PRETERNATURAL or difficult labors are caused by almost any circumstance out of the usual order of things. Hence they may be produced by flooding, convulsions, fainting, weak contractions of the womb, or by deformity of the pelvis, or unusual or unnatural presentations. The reader who is acquainted, as every one ought to be, with the general principles of the healing art, as we have laid them down, and with the medicine and mode of practice contained in the second volume of this work, scarcely need be told what course to pursue as to the medical treatment of all the causes of difficult labor, excepting deformed pelvis and wrong presentations.* We shall, therefore, only notice, at present, the difficulties arising from wrong or unnatural presentations; and these so seldom occur, that we deem a brief account of them all that is necessary. The difficulties arising from a deformed pelvis are so rare, that several eminent

* The medical treatment of women in labor will be found in Section 7 of this chapter.

and extensive practitioners, in the United States, have asserted that they have never met with an instance in American women in which nature was not entirely sufficient to accomplish the labor without any assistance from art.

"Preternatural presentations," says Dr. Gooch, "are those of the feet, breech, and arm: writers on midwifery describe others, as of the shoulder and knees; but these are only modifications of the arm and feet presentations." Presentations of the back and belly have also been spoken of, but it would seem impossible for this to be the case; though the navel-string does sometimes present. But if we know, says Dr. Gooch, how to manage the three first deviations from the natural position of the child, we know how to manage all.

Although the midwife may suspect a wrong presentation, yet she cannot with certainty know it until the membranes are ruptured and the waters discharged. When this takes place, by a careful examination, there will be but little difficulty in ascertaining what part presents; and every part which can present has something to distinguish it from every other part; thus the hand has a thumb, and the foot a heel. If the feet present, endeavor to get both of them, though some think it a matter of little consequence whether one or both are brought down, as the child will be born either way. In this case, the labor may be suffered to progress in the natural way until the navel is expelled, when, if the birth be not gently hurried, the child may die from the navel-cord being so compressed as to stop the circulation between it and the mother.

Before proceeding to describe the method of assisting the expulsion of the shoulders and head, when the labor is thus far advanced, we will remark, that in order to have the head in the right position to pass the upper strait of the pelvis, the toes of the child must be towards either the right or left side of the mother. If, therefore, they are turned to the front or back of the mother, wrap a cloth around the legs and as much of the body as possible, and during the intervals between the pains, very gently turn the body so that the toes are in the right direction; that is, either to the right or left side. This being done, and the expulsion of the child to the navel completed, pull the navel-cord down a little way, and then commence the extraction; and no time is to be lost, for if the child be not born in a few minutes it will certainly be dead; but the midwife should be cool and deliberate, and not be frightened, or she may be in too much haste, and injure both mother and child.

The extraction is to be performed by wrapping a cloth around the breech, and then carefully but quickly working the body from hip to hip, and minding also, as the child advances, to turn it with the belly to the back of the mother, as this is necessary

to accommodate the head to the lower strait of the pelvis. As soon as the shoulders are born, pass the fore finger from the shoulder, which is at the back of the mother, along the arm to the elbow, and fetch the arm and hand down; then proceed to extract the other as soon as possible. When this is done, pass up one finger along the breast of the child, introduce it into the mouth, and press the chin down towards the breast, with the other hand raise the child towards the pubes of the mother, extracting at the same time downwards and forwards, and the delivery will be readily accomplished.

If the breech presents, it will be ascertained after the discharge of the waters, by the peculiarities of its shape, and by the organs of generation, especially if it be a male. The efforts of nature are almost always sufficient to accomplish delivery in cases of breech presentations; though in many cases it may be tedious. When the breech has advanced low down, some assistance may be given by passing one or two fingers of each hand into either groin, by which the midwife will be enabled, with perfect safety to render any assistance which may be necessary. Or when still lower a handkerchief may be passed over the groins, by which the necessary aid may be more easily afforded. The legs are not to be brought down in this case as the arms are; but it must be borne in mind, that if the belly is not towards the back of the mother, the child must be turned in proper season to fetch the face to the back, to favor the passage of the head through the lower strait of the pelvis.

When the feet and body as far as the navel are delivered, it then becomes necessary to use the same caution and expedition in completing the delivery that is used in the presentation of the feet.

When the shoulder or the arm presents, the child lies across the pelvis; and so long as it continues in this position, delivery is impracticable. The arm may readily be distinguished by feeling the hand and fingers; but the shoulder is not as readily known, being liable, from its softness, to be mistaken for the breech. By a careful examination, however, the midwife may be fully satisfied. In extending her finger around, she will be able to distinguish the shoulder-blade, the neck, the arm-pit, or the arm. When either the shoulder or arm present, it is almost always considered a sufficient reason for turning the child, and fetching it by the feet.

The time for turning is immediately after the waters are discharged and the mouth of the womb well opened. Though it sometimes happens, that by pushing back the presenting part, and keeping it so, the pains will force the head into the pelvis and make it unnecessary to turn. But should this fail, an attempt must be made to reach the feet, and bring them down.

And the first thing is to decide upon which hand the midwife shall employ. If the palm of the child's hand is towards the abdomen of the mother, then use the right hand, which must be passed up the *front* part of the womb; but if the back of the child's hand occupies this position, then use the left hand, which must be passed up the *back* part of the womb. These precautions are necessary that the midwife may the more readily arrive at the feet, and be enabled to bring them down in the proper manner. But if it be found on introducing one hand, that the other will do better, that must be withdrawn and the other introduced.

When the operation of turning is determined upon, the hand is to be smeared with lard, then compressed or contracted into its smallest possible size, and in the most gentle and gradual manner introduced into the womb; and the greater the resistance, the more gentle and slow should be the introduction. During the time of a pain the operation must be stopped, and only be performed during the intervals between the pains. Whenever the womb contracts, the fingers and hand must be made as flat as possible lest the womb should be injured by contracting upon an uneven surface. Having reached the feet, endeavor to bring both down at once; but if this cannot be done, fetch one at a time, but be sure and get both. Remember also to fetch them down by the face instead of the back, or there will be much danger to both child and mother. When the feet are thus brought down, some authors recommend the immediate extraction by force, whilst others leave it to nature; but in this the midwife must be governed by circumstances. If the woman is not exhausted, and the pains indicate a prospect of delivery, the labor may be suffered to go on, and must be conducted in the same manner as when the feet present; but if the woman has become much exhausted and feeble, the delivery should be hastened by the midwife.

SECTION 5.

OF TWINS.

Cases of twins sometimes occur, though they are not very frequent. And although much anxiety is sometimes felt by women from suspecting themselves pregnant with twins, yet there can be no positive evidence of this fact, when it even exists, previous to the birth of the first child. If the abdomen of the woman be very large and the child small, with only a trifling discharge at the rupturing of the membranes, there is then reason

to suspect there may be another child. And if, on applying the hand to the abdomen of the mother, after the birth of one child, it still feels large and hard, there can be but little doubt that there is another. In this case, the navel-cord should be tied in two places and cut between the ties, as the two after-births may be so connected that a flooding might take place from the cord of the first child.

Sometimes, after the birth of the first child, the pains cease; whilst at others, they are very soon renewed, and labor goes on, and is to be conducted in every respect as if it were an original labor. There should be no attempt made to extract the placenta after the birth of the first child, but always wait until the second child is born, when both placentas, if there be two, will be expelled, at the same time. The same general principles and mode of conducting the labor and removing the after-birth will be proper when there are twins, that have been recommended when there is but one child.

After the first child is born if the pains do not soon return for the expulsion of the second, rubbing the abdomen as recommended for the expulsion of the placenta, should be resorted to in order to stimulate the womb to contract; and in every other respect the labor may be conducted for each child separately as directed for single births. It may, however, be recollected, that in case of twins, one presents the head, and the other the feet. (*See plate* 16)

SECTION 6.

MEDICAL TREATMENT OF THE CHILD.

This is a subject upon which much has been written, and the necessity of administering something much insisted upon by various authors. Gooch recommends giving a tea-spoonful of castor oil "nearly as soon as the child is born," for the purpose of purging the meconium; Ewell directs this on the second day, if other means fail; and Dewees advises a little melasses and warm water, and on failure of this, to give the castor oil. Others again recommend more drastic and irritating medicines, by which no doubt much evil has been created, and many children destroyed.

We would by no means positively reject the castor oil or some other mild physic, such as the melasses and water, or butterfly root, if absolutely necessary; but if laxative injections are occasionally administered when the bowels do not move naturally, cathartic medicines given by the mouth, will very rarely be

necessary.—Introducing the stem of a tobacco leaf smeared with lard, into the rectum, for a short time, will often answer every purpose of giving physic or administering injections; or instead of a tobacco stem, a piece of paper nicely rolled up and smeared with oil or lard, may be substituted for the tobacco stem, and will do very well.

If the child, however, is applied to the mother's breast, whether there is any milk or not, there will generally be no necessity for physic of any kind. There is, even before the milk is secreted, a fluid found in the breasts, which, as well as the first milk, is of a purgative quality; and as it is a more natural so it is a more suitable material to act upon the intestines than the mildest medicines we can employ. Moreover, the frequent application of the child to the breast, has a tendency to excite the flow of the milk much earlier than would otherwise be the case.

But if a new-born child appears to be indisposed, evincing by its appearance and actions that it is suffering much inconvenience or loss of health, we should proceed to treat it as we would a grown person; give it a tea of the diaphoretic powder, with cream and sugar; an emetic of the tincture of lobelia; keep it warm and make it sweat; there can be no better way than this; to manage in every respect upon the same principle that we would in case of an older person. We pursue this plan uniformly, having frequently vomited children of but a few days old, with the happiest effects. The quantity of medicine to be given must, to be sure, be very small, proportioned to the age of the infant; but enough should be administered to produce the desired effect.

A stoppage of the urine is an affection that sometimes takes place with infants just born. The common remedy for this difficulty is a tea made of the seeds of water melons or pumpkins, and it almost always answers the purpose. (*See also* "*Diseases of Children.*")

SECTION 7.

MEDICAL TREATMENT OF THE MOTHER DURING LABOR.

The introduction of this important subject at the close of the work may seem, and perhaps is, out of place; but as we have not any where else given directions respecting it, we must do it here.

In the first place we will remark, that every necessary attention ought to be paid to the woman's health previous to the ex-

pected time of her confinement, so that she may be in the best possible condition for sustaining herself during labor.

When she begins to experience pains resembling those of labor, she should drink occasionally of a tea of the diaphoretic powders, or anodyne powders, in sufficient quantity to keep the skin very moderately moist. This has a tendency to relax the parts concerned in the passage of the child's head, as well as to give strength and energy to the mother. If the pains be untimely, it will aid powerfully in allaying them; or if they are timely and not sufficiently strong, it will increase them, and forward the labor.

Dr. THOMSON recommends the leaves of the red raspberry, as being the best thing he ever used as a medicine for women in labor. He directs them to be steeped and made into a strong tea, adding to it a little cayenne to make it stimulating, of which the woman must drink freely and frequently. If the pains are premature, it will remove them; or if timely and feeble, it will stimulate the womb to more vigorous contractions, and facilitate the labor. We have had some experience in the use of this medicine, and find it very good; but it does not appear to merit all the praise that Dr. THOMSON has bestowed upon it.

In most cases of labor, what has already been recommended will be sufficient; but when any untoward symptoms arise, more active measures must be pursued. If the pains are severe but unavailing, the quantity of cayenne must be increased, and, if necessary, the steam bath and injections should be employed. After pursuing this course for a reasonable time, without mitigating or removing the symptoms, a full course of medicine should be resorted to. Most women unaccustomed to our practice, perhaps, may be startled at the idea of a woman in labor taking an emetic, but it may be done with perfect safety. Emetics of lobelia have frequently at such times been given, not only without any injury, but with the very best effect.

If the parts concerned are slow in dilating, or if they become dry, swelled, or inflamed, the woman should sit over a hot steam, long enough to produce a free perspiration, taking cayenne or some other stimulant article to assist in producing it. If convulsions or fits occur at any time during or after labor, or at any other period, a tea-spoonful, or more, of the anti-spasmodic tincture should be administered, and repeated, if necessary, until the removal of the spasms, which we believe will always take place when enough of it is given. This tincture may also be administered in case of any unnatural, uncommon, or alarming symptom suddenly taking place during labor; and will often, when the pains seem dying away, or the woman is faint or exhausted, arouse the drooping energies and restore the powers of nature, when nothing else will.

When floodings take place, a great deal will depend upon the free use of cayenne, and keeping the skin moist. The cayenne may be given in large doses with strong birth-root or witch-hazel leaf tea, and repeated according to the violence or urgency of the symptoms. The other means heretofore recommended in cases of flooding should also be employed.

Dr. SMITH recommends the partridge-berry, above every thing else, as the means of regulating the process of labor; relieving pains when untimely, or increasing them when too feeble. He also advises the use of this article for a week or two previous to the expected time of confinement, as a means of rendering labor safe and easy. He says he learned the use of this valuable medicine from the Indian women, who employ it in this way. He, however, recommends it in combination with another article with which we are unacquainted; but says it answers almost as well alone. It may be used in tea, at discretion.

The blue cohush is an article highly recommended by PETER SMITH, for pregnant women at the time of labor, as well as preparatory to this event. If the pains are untimely, a tea of this root will relieve them; but if timely, and the pains insufficient or labor lingering, it will stimulate the womb, and hasten, in a safe manner, the delivery. In like manner, if the pains are severe, but ineffectual, it will moderate their severity and make them more efficient. Or if cramps or spasms in any part take place, it will remove them, being, as SMITH says, "the best anti-spasmodic in the compass of medicine."

"But the great benefit," says he, "is the state of safety and of speedy recovery that the mother experiences afterwards."

The root is to be made into a tea, a small handful to half a pint of boiling water, pour off and give the half of it, and then add more hot water, until the strength of the root is exhausted; repeating the dose every ten or twenty minutes until the desired effect is produced.

RECAPITULATION;

GIVING A CONDENSED VIEW OF THE PROCESS OF LABOR, AND OF THE OFFICES TO BE PERFORMED BY THE MIDWIFE.

1. If a pregnant woman, about the time she expects to be confined, feels slight pains in her back, shooting forward to the pubes or front bone, and down the thighs, with intervals of ease between them, and the pains gradually increasing in severity, she will have good reason to suspect that her labor is approaching. And if, in addition to these symptoms, there has been a sinking down of the belly, or womb, and a discharge of mucus from the vagina for several days, she may with still more certainty be assured that her travail is commenced.

2. If she feels any doubts whether her labor is really approaching, she may take, occasionally, a dose of the anodyne powders, cayenne, or any other article recommended to regulate the pains of labor, sitting by the fire, to promote perspiration. The partridge-berry or winter clover, and blue cohosh, have been highly extolled in these cases, and are probably very useful. But we have generally depended upon the cayenne in a tea of the raspberry leaves, bayberry, or diaphoretic powders. If, by the use of any of these articles, the pains gradually subside, nothing more is necessary; but if they are increased, and become pretty regular and sharp, such help as may be desirable or convenient should be called in.

3. When the midwife arrives, it is customary to make an immediate examination; though this is by no means always necessary. Common usage, however, sanctions the custom; and if the pains are urgent, the woman, as well as her friends, may be anxious to have it attended to; therefore, if insisted on, and the midwife think proper, she may proceed carefully to its performance. For this purpose, the woman may stand up, lie in bed, or sit in a chair. If she stands on her feet, she should have them somewhat separated, leaning a little forward, supported by the back of a chair or an assistant, and her knees a little bent; if she sits on a chair, she must lean back considerably and slip so far over the edge of the seat that this shall offer no impediment to the examination; or if in bed, she may lie either on her back or side; and if on her side, her knees must be drawn up towards the abdomen with a pillow placed between them to keep them separated; and if she lies on her back, she should have a coverlet, quilt, or sheet, folded narrow so that it may be

placed under the hips to elevate the breech a little from the bed, having her knees also flexed or drawn up. When the woman is properly adjusted in some one of these ways, the midwife may proceed to introduce, in the most gentle manner, the fore-finger of the right, or, if she prefer it, of the left hand, into the vagina, and there search for the mouth of the womb. On the return of a pain, if labor has actually commenced, the mouth of the womb will be felt to dilate or open a little; or if it does not sensibly dilate, the lips or edges of the opening, when the pain is on, will be felt very sensibly to grow thin, and as soon as the pain ceases, the edges will become thick and rounded, and have a kind of puffy or spongy feel. But if labor is not actually commenced, none of these changes will take place in the mouth of the womb, which, in that case, will be hard and unyielding to the touch, and no way affected by the pain. Sometimes, however, the mouth of the womb will not readily be found at the first introduction of the finger; and then it is to be suspected that it is turned backward. In this case the finger must be further introduced, and if the open mouth can be found, introduce the end of the finger a little into it, and bring it forward to its proper place. If, however, it cannot be reached without so much violence as to make the woman complain, two fingers may be introduced, and, by using a little dexterity, first with one finger and then with the other, it may be gradually brought forward.

4. The midwife being satisfied that labor has actually commenced, and every thing, so far as the examination enables her to know, is right, the woman may take such moderate exercise as she chooses, or she may sit, lie, or pass away the time in any manner most easy and agreeable. If the labor progresses slowly, she may take some article of medicine, such as tansy, pennyroyal, red raspberry, or bayberry tea, with, from one-eighth to one half a tea-spoonful of cayenne pepper in each dose, or she may take the tea without the pepper; or she may take any other article hereinbefore recommended in cases of tedious labor. It should, however, be borne in mind by both woman and midwife as well as by all concerned, that slow labors in general end better than those which are quick, and are less liable to be attended by any bad consequences. The cause of this is very obvious:—In tedious labors the parts which must necessarily be dilated are more gradually subjected to this process, than they are in speedy labors, and hence far less liable to be injured.

5. When the mouth of the womb has become fully dilated or opened, or about this time, either before or after, the membranes are generally ruptured, which is called breaking of the waters, which are then discharged. This is the proper time to make an examination for the purpose of ascertaining whether the child presents naturally or properly. There is now a longer

intermission of pain; the parts are fully dilated, the water out of the way, and the best possible opportunity presents for ascertaining the exact position of the child; and if wrong, now is the proper time to attempt righting it.

6. The position in which the woman is placed for the completion of labor may be left to her own choice, as she will, in general, know best what position is most agreeable. "Indeed," says VELPEAU, "a strong and well formed woman may be delivered in any posture, on a chair, on the floor, a bundle of straw, on foot, and on all kinds of beds," to which we will add that some prefer resting upon their knees and elbows on a quilt or carpet. If she becomes restless in, or dissatisfied with, one position, she may take any other that she may choose. But the most common situation is lying on a bed; and most women, if left to their own choice, will, especially during a pain, place themselves on the back, with the knees drawn up.

We cannot suspect so much ignorance, either in the midwife or others who may be called upon as assistants, as to deem it necessary to describe, in detail, each or any particular method of arranging the bed or other contrivance for the accommodation of women in labor. We will, therefore, only remark, in general terms, that if she prefers lying on her back, a cushion, folded sheet or blanket, or something of that kind, should be placed under her hips so that her bottom may be clear from the bed that it may not interfere with the passage of the child. The back should also be supported by passing around it a long towel or sheet folded narrow, an assistant holding and pulling each end during the pain. If the woman prefer lying on her side, an assistant may either sit on the bed in contact with her back, or she may press against it, during the continuance of the pain, with her hands. A folded blanket, or something of that kind, ought also to be placed immediately under the woman's bottom, to receive the discharges, to prevent wetting and soiling the bed; and the better to protect the woman from the disagreeableness arising from her own clothes getting wet and soiled, she may have a sheet, folded to a proper size, either fastened around her waist or spread under her, and after delivery removed. As a further protection, her linen may also be carefully tucked up, minding to observe the utmost decency, to avoid any exposure of the woman.

7. The proper time for the woman to place herself on the *bed of labor*, or in such posture as she may prefer, to be delivered, must be left to her own choice. Most women, however, will desire this situation previous to the breaking of the waters. But they must be allowed to rise when they please, or to roll from side to side, which almost all women are inclined to do, and many, especially in tedious labors, will even desire it when

the child is very far advanced; in which cases they are to be allowed to follow the dictates of their own feelings, as by doing so the labor is frequently accelerated, and brought to a more speedy termination than would have been the case by confining her to a situation which has become irksome and unpleasant. But we must again observe, for the benefit of those who may become impatient or alarmed in consequence of the tediousness of labor, that there is less real danger to apprehend in such cases than in those which are remarkably speedy.

8. The woman having taken to her bed and the waters being discharged, or even sooner if much insisted upon, the midwife may introduce a finger into the vagina, and if the head present properly, nothing more is necessary than to note the progress of the child so as to be ready to give proper care to it when the head comes into the world. So soon as this takes place, the midwife should search with her fingers around the neck of the child for the navel-string, and if she finds it she should gently fetch it over the head from the back to the face. Then wait until the pains expel the body of the child, having a warm cloth to receive it upon, and by no means attempt to take it away by force. When this is accomplished, the next thing is to attend to its breathing. In most cases, however, the child will give ample evidence by its cries, that no attention to this matter is necessary. But if it does not, it must immediately be examined. If there is a pulsation or beating in the navel-string, but little danger need be apprehended so long as it continues; but if there is no pulsation and the child's body flaccid or soft and yielding, the event will then be doubtful. In all cases the mouth must be carefully wiped out as far as can be reached, with a piece of rag, or some such thing, on the little finger, and then dash upon its body a little cold spirits or water. If this does not induce breathing turn the face downward and hold the feet, legs, &c., upward, and at the same time gently shaking it, which may possibly loosen the mucus that interrupts its breathing, and allow it to flow from the mouth; after this again wipe the mouth as before directed. The navel string may also be stripped between the thumb and finger from the mother towards the child, or the after-birth may be taken and placed on coals, and the same process repeated, for some time, or until breathing is produced.

Breathing being established, and pulsation in the navel-cord having ceased, a string must be firmly tied around it, about an inch and a half or two inches from the belly of the child; and if twins are suspected, another tie, about two inches from the first, must be made, and the cord cut with a pair of scissors between them. Some writers recommend two ties in all cases, though this is seldom necessary; but to ensure the greater safety it might always be done.

9. The child being separated from the mother it must be removed from the bed, and attention next given to the extraction of the after-birth. This should almost always be permitted to take place spontaneously, as nature, in her own operations, is the best guide and should, therefore, always be consulted. At least, there is, in general, most safety in allowing the after-birth to remain until the contractile powers of the womb expel it into the vagina, whence it must be removed by the midwife into a chamber pot, and deposited behind the fire, or buried in the earth.

If, however, flooding takes place, which may be known by the discharge of blood from the vagina, or by the woman's becoming deathly pale and faint, the bowels should then be rubbed briskly with the hands, occasionally grasping the abdomen by closing the fingers, and also by pressing upon the bowels. If the woman complains of pain, it is an evidence that the friction or rubbing, &c. is producing the desired effect, as the pain is caused by the contraction of the womb; which as it contracts closes the mouths of the bleeding vessels, and also expels the after-birth. An assistant should also at the same time prepare and administer to the woman a dose, consisting of from half to a whole tea-spoonful of cayenne in a tea of some of the astringent articles, if there be any at hand, if not, in water either warm or cold. This will stimulate the womb to contract and thus arrest the flooding. Tying a bandage around the bowels immediately after the birth of the child, and before the placenta is extracted, is highly recommended by a late author, as a means of preventing fainting and flooding by the support which it affords the relaxed abdomen; and there is no doubt it is worthy of consideration.

10. The woman being delivered, a cloth well aired should be applied to absorb the discharges, and then, if she is not too weak, she may be assisted to rise upon her feet and every thing which is wet or soiled must be removed, the bed prepared, and she placed in it.

We have now completed a regularly connected account of the common management of child-birth, such as will most usually be necessary on ordinary occasions. We are well aware that our directions are only general, having left many minute parts unnoticed; but as they are mostly such as will readily suggest themselves, or are every where known, we thought it better to omit going into detail for fear of burthening the mind by too much prolixity. We will therefore close this subject by observing that *a little experience in midwifery, as in every thing else, is of more value than much reading, however great may be the advantages of books.*

CONCLUSION.

In bringing this volume to a close, we feel, as no doubt all authors feel, a solicitude about the reception and final success of the work. We candidly confess that we have some anxiety on this account; but our concern is mostly that the present undertaking may succeed in disseminating useful instruction, and be the means of removing from women, some portion at least of that load of wo which they have so long been destined to bear, more in consequence of the ignorance in which they have designedly been kept, than from the absolute dangers to which they are exposed. We wish them to be instructed in the knowledge of every thing which may have a tendency to alleviate their sufferings or lessen their liability to such difficulties as they are peculiarly subject.

We are satisfied that the ignorance in which they have been plunged with regard to themselves, and especially respecting the great simplicity of child-birth, has been the cause of more suffering—of more difficulty, and more accidents, than have arisen simply from child-birth itself. Tedious labors and painful cases, to be sure, are now and then unavoidable; but the occurrence of extreme difficulties or serious accidents are very rare; and when they do occur, are more often caused by bad management in attempting to take the business out of the hands of nature, than by any deficiency or failure on the part of nature herself. These facts are acknowledged by the best writers; and their declarations ought long since to have been impressed upon the minds not only of midwives but of women, with imperishable emphasis.

It will not be expected, we trust, that our account of labor will fit every case; there will be found hundreds of trifling deviations from it, but the woman who has become aware of the great simplicity, as well as unerring operations of nature, will be calm and resigned; she will possess a confidence which the delusions and mystery so long and so successfully practised upon the world, cannot shake. And the possession of this confidence is worth a thousand times more than all the little trouble which the acquisition of the knowledge necessary to bestow it, will cost. Let women read, and reason, and understand for themselves; and let midwives and physicians impress upon their minds the simple truths which we have endeavored to disclose

Let every woman who has acquired this knowledge and this confidence, so consoling and so staying to her own mind, use every means in her power to instruct and undeceive those who are still bound with the chains of ignorance, and are yet under the veil of this mischievous mystery; and how soon then might a great revolution be accomplished, and hapless woman set free!

The great advantages, both moral and physical, of such a state of things, to the female world, are certainly worth an effort; and not only upon women, but also upon men, devolves the task of promoting this great reform. Both the mental and bodily sufferings of women would be thereby much abridged; and the pleasures of existence and enjoyments of life proportionably increased. We are very sensible that the task will be an arduous one, but still we hope it will not be shrunk from by those who have it in their power to forward the work. It requires both time and patience, perseverance and resolution, to overcome popular prejudices, and more especially when they are associated with matters of so much importance as health and human life.

We cannot conclude this part of our work without expressing an apprehension that some may think it defective both in matter and design. Our treatise on midwifery, compared with most others, will be considered short; the only apology for which is that we did not wish to encumber the reader, and particularly females, with tedious descriptions. The greater number of women necessarily spend the most of their time in the busy cares of a family; and therefore have little time to devote to the acquisition of any other knowledge than is absolutely useful and necessary. We think that enough has been given to convey an accurate idea of every thing essential in almost all cases of midwifery; and we are willing to believe that it will be found adequate to the purpose for which it is designed—a book of private reference and instruction for female midwives, and heads of families both male and female, but particularly married women. We by no means wish it to be a common book in families, exposed to the idle gaze of licentious youth, or more simple and innocent children. But even should it fall into the hands of young men, who, perhaps, more than others, may be disposed to turn into ridicule, and treat with levity, the subjects upon which this work treats, we desire you, we entreat you, to recollect that you either have, or have had mothers—you may have sisters—who do or may stand in need of all the instruction herein so plainly given; and in the hour of distress and painful anxiety, may require all the consolation which this instruction is capable of affording. And above all this, you may yet have wives, liable to all the difficulties and distress, and all the agony and painful anxieties, which we have been endeavoring to instruct them to alleviate or guard against; and at some such seasons as these.

you might be willing most readily to barter a mountain of gold, if you possessed it, for the knowledge of the means which would relieve from difficulty and danger an affectionate wife. But independently of every consideration of this kind, we are willing, for the honor of our own sex, to believe the number of young men to be very small, whose want of dignity, breeding, and correct feeling, would allow them to indulge in such indecent and unbecoming levity, as to sport with the infirmities of women. The world is too much indebted to them—the pleasures of society are too much dependent upon them to allow, with impunity, such unsocial, such undignified privileges. We beseech you, therefore, young men, one and all, if you are favored with a knowledge of the things of which we have been treating, treasure it up in your own minds; and regard that individual who would make it a subject of mirth and ridicule, as an enemy to morality and common decency, and unworthy of being your friend or associate.

We also feel constrained to advise midwives of but little experience, when they do meet with a case of difficulty, which they know to be such, to request the counsel and assistance of one who is more experienced; which she should do so soon as she ascertains that the case is above her own knowledge. But by all means give the preference to a female, instead of a doctor, if you do not wish to lose your reputation. And the suffering patient may also be consoled with the idea, that a good sensible woman, in at least ninety-nine cases in a hundred, will do better than a physician; as experienced and sensible midwives have less of art and more of nature in their management than doctors generally have. This remark is confirmed by the observations of several eminent men. And simply a tedious labor does not constitute a case of difficulty; but even this, in some instances, might justify a young midwife in calling counsel. But it should be remembered by all parties concerned, that nature must have her way, and will perform her work in her own time; and any attempt to hurry, more than to give suitable medicines, as heretofore directed, might be attended by bad consequences. Patience, in tedious labors, is worth almost every thing else.

It is to be hoped that enough, at least, has been said in the foregoing pages, to awaken attention to the important subjects upon which they treat. And if we only succeed in doing this, to the extent of our wishes, we shall regard it as having accomplished much. It is high time the world was aroused from its slumbers, to a sense of the disastrous delusions and impositions under which it has so long and so unjustly been suffering. And these impositions, great as they have been speculatively, are equally so pecuniarily. We have heretofore made no allusions to the exorbitant charges made by physicians for their services,

having declined doing so for fear that it might be thought an interference with private concerns, in which the parties have a right to make their own contracts. But when we consider the delicacy which people generally feel in objecting to the bills of physicians, and the prerogative which they claim and enforce of fixing a price upon their own services in defiance of public sentiment, we feel an irresistible impulse to notice their extravagance in this particular. And if we only regard this circumstance alone, it will be found a powerful inducement to people not only to become their own physicians, but to encourage the employment of women as midwives.

Every impartial observer, in contemplating the rapid augmentation of the fees of physicians for the last thirty years, must be struck with astonishment at the magnitude of the imposition, and the oppressive amount of their exactions. If they go on for thirty years more at the rate they have for the thirty past, the whole community will be little better than the slaves of the medical faculty. To some, no doubt, our language may seem severe, but when they read the following extract from a list of medical fees published in the New-York Medical Inquirer, they will no doubt admire our forbearance, rather than censure our severity. Indeed, we think the list itself a greater reproach, a more stern rebuke, to the dignity and liberal pretensions of the medical profession, than any thing that we could say possibly can be.

The article to which we allude was published in the fifth number of the first volume of the New-York Medical Inquirer for 1830; from which the following is extracted:

NEW-YORK MEDICAL FEES.

Verbal advice	From $00 to 5 00
Letter of advice	10 to 15 00
Ordinary visit	0 to 2 00
Consultation do.	5 00
After visits, each	3 00
Night visit	7 00
Visit at a distance, per mile	1 50
Visits in haste to be charged double.	
Detention, per hour	3 00
Do. per day	25 00
Vaccination	5 to 10 00
Each dressing of wound	1 to 5 00
Bleeding in the arm or foot	2 00
Dressing blister	1 00
Introducing catheter	5 00
Each succeeding time	2 00
Do. in females	5 00
Reducing simple fracture, (setting broken bone)	10 to 15 00

Do. dislocations, (joint out of place) -	$5 to 20 00
Of the hip - - - - - - - -	30 to 50 00
Opening abscess, or common swelling -	1 to 5 00
Amputation, (cutting off) of the female breast	- 50 00
Do. leg - - - - - - - - -	50 00
Do. hip or shoulder - - - -	100 to 150 00
Do. finger or toe - - - - - -	10 00
Paracentesis of abdomen, or tapping -	- 15 to 25 00
Common case of midwifery - - -	25 to 35 00
Tedious or difficult labors - - -	- 36 to 60 00
Preparing and administering enema, or injection	2 00
Extracting tooth at the patient's house - -	- 2 00
Do. at surgeon's - - - - - -	1 00

These prices speak for themselves, and therefore require no comment from us. We will remark, however, that we are far from wishing to see medical fees reduced down to the mere compensation of an ordinary day laborer—far from it. But we desire to see them so modified that it may not require the wages of a laborer for a *quarter of a year* to pay the physician for *one day's* detention, or, perchance, but one or two hours, as may often happen in cases of midwifery!

OF THE DISEASES OF CHILDREN.

INTRODUCTION.

If children, from birth, were managed, in all respects, agreeably to the wholesome precepts of nature, restraining their excesses, and encouraging correct regular habits, there would be far less necessity than there is for devoting even the little space which we shall occupy, to a consideration of their maladies. But in every attempt to benefit the world, we must take man as he is, and not as he ought to be: indeed, it is a deviation from the right path, or, in other words, a transgression of either the moral or physical laws established by the Creator, that generally places mankind in a condition to need assistance and instruction.

Many of the diseases incident to childhood, have been mentioned in the second volume, which, together with the general principles heretofore laid down, upon which diseases are always to be treated, will render only a short account of those that remain to be noticed, necessary here. As it has always been our object, rather to give or inculcate general rules than go into minute detail, when that would answer the purpose, (which, to some extent, in every instance is the case,) we hope the following short treatise will be found to contain all that is necessary; and prove valuable to the *mother*, who is almost always qualified to be the best physician for her child. If any thing disqualify her for this important duty, it will, in general, be found to be an excess of tenderness and sympathy for the little sufferer, which, by interposing themselves betwixt her judgment and her duty, may prevent her from rigidly pursuing such a course as the exigencies of the case may sometimes demand.

But we entreat parents not to allow their sympathies for a suffering child to overcome their reason so far as to induce them to omit employing all suitable means, especially in dangerous cases. Do you wish to relieve its sufferings, and save its life? then resort promptly to the use of such means as you believe

are best adapted to answer those ends. It may be unpleasant, nay, extremely trying to your feelings, to force the little creature to swallow some of the more violent medicines which the case may unequivocally require; but in some instances this may be the only alternative soon to remove the malady, or even to save a darling child from premature death!

You may also bear in mind that no medicines will be herein recommended but such as experience has often proved to be both innocent and useful—nothing but what we should, upon all necessary occasions, administer, with confidence, to our own tender offspring.

DISEASES OF CHILDREN.

PREVIOUS to entering upon the details of the particular diseases herein treated upon, we think it may be useful to give the following

GENERAL RULES,

Which we have found to be excellent in all the diseases of infants, and which we believe may be safely relied upon in all cases :—

1. When a child becomes fretful and peevish, or appears in any manner amiss either with fever, colic, costiveness, or looseness of the bowels, take half a tea-spoonful or more of the diaphoretic powders and steep them in a half tea-cupful of hot water; then pour off, sweeten, and add cream enough to modify the strength of the medicine to suit the age of the child. Of this give at discretion, according to the age, &c.; but in common, for a child of from one day to four weeks old, from one to three tea-spoonfuls may be given once in ten to sixty minutes, according to the urgency of the symptoms. Above this age the quantity may be increased at discretion; but much will depend upon the strength of the medicine, which, in all cases, should be sufficiently strong to impart a very sensible taste to the mouth. But one thing may be remembered—it will, in any reasonable quantity, do no harm.

2. If the complaint be a little more severe, and especially if the bowels are in any way disordered, in addition to the medicine just recommended, injections made of catnip tea must be occasionally administered. In many instances one injection will be found sufficient to relieve the child of a severe colic or other difficulty; but when it does not, or in any other case which cannot be immediately cured, the injections must be repeated at discretion. If the bowels be costive, a little butternut syrup may be added to the catnip injections; or if the syrup be not at hand, castor oil or any soft grease may be used in its stead.

Catnip tea sweetened, and cream added, as recommended for the diaphoretic powders, will also be highly useful, taken into the stomach, especially for infants.

In obstinate looseness of the bowels, or in dysentery, the in-

jections must be made of a strong tea of the astringent tonic, bayberry, birth-root, witch-hazle, or some other astringent article; or any of those articles may be steeped in the catnip tea, adding to each injection from the fourth to half a tea-spoonful, or even more, of the tincture of lobelia, and, occasionally, a tea-spoonful or more of the diaphoretic tea, to make the injection more stimulating. In all bad or alarming attacks of either looseness of the bowels or dysentery, injections must be frequently administered; and indeed they are highly useful in almost all cases of sickness of infants and children.

3. In almost all complaints of children, especially after the first two or three months of their age, the *butternut syrup* is a highly useful medicine. Most diseases of children either consist in, or are connected with, a disordered state of the bowels, which this syrup, in conjunction with the diaphoretic powders and injections, will almost always remove in a short time. We consider this article as one of the most valuable common family medicines. It cleanses, by its purgative qualities, all irritating matter from the stomach and intestines, and by its tonic properties, strengthens and restores them to a healthy tone. It may be given either as a purgative, or in less quantities as a tonic, in all cases of bowel complaints. This syrup is a very valuable medicine for worms, a disease to which children are very liable. The quantity to be taken at a dose, must necessarily vary with the strength of the syrup, which is seldom prepared twice alike, and also with the age of the child. But of the strength which we usually prepare it, for a child two months old, a tea-spoonful will frequently be sufficient to operate as a purgative; but when given with this intention, if it does not produce the desired effect in from one to three hours, another dose must be given. For a child one year old, from half to a whole table-spoonful may be given as a dose.

4. When children become so seriously ill as to require an emetic, either the tincture or decoction of lobelia may be employed in doses of one-fourth of a tea-spoonful for the youngest children, increasing the dose with the age of the child, repeated at discretion until ample vomiting is produced.

In violent and dangerous attacks, such as croup, cramp, convulsions, or fits, the tincture of lobelia must be administered in larger doses; or for older children, the anti-spasmodic tincture may be used with a happy effect.

RETENTION OF THE MECONIUM.

The meconium is the dark green substance which composes the first discharges from the bowels of infants.

If this matter, which accumulates in the intestines of the child during the latter months of pregnancy, is not evacuated within a reasonable time, it becomes an unfailing cause of irritation and disease. The danger arising from this source is such that many are in the habit of administering purgatives to new-born infants for the purpose of removing it from the intestines. The bad consequences of irritating the bowels with such unnatural means have, however, become too generally known and admitted, to require any expostulation with the reader here.

So soon as the child is washed and dressed, (the mother not being too much exhausted,) it should be applied to the breast. It is very true that there may not now be any thing which can be called milk, nor is it necessary for the child that there should be; but there is a substance in breasts to which the name of *colostrum* has been applied, that nature has provided for the express purpose of purging the bowels of this matter. The child should, therefore, always have the breast very shortly after its birth: and let the mother not be deterred from this indispensable duty because the child gets but little by sucking. She must apply it again and again; repeating it as often as it gives evidence of being hungry; and if it does not obtain enough to satisfy its cravings for food, it will in almost all cases get a sufficiency to purge off the meconium in the manner which nature designed. This will also be the best means of preventing the swelling and soreness of the breasts, to which women are so liable; and if it does not satisfy the cravings of the child for food, when the mother or nurse becomes satisfied of the fact, (and not till then,) it should have cow's milk sweetened with melasses or sugar, to which must be added about half as much water as there is of the milk. This is a far more natural and proper food for infants, than *pap*, or *panada*, articles of which bread composes a part, and which, instead of having a tendency to loosen the bowels, always clog and constipate them.

But if the mother's milk does not produce stools and cleanse the intestines of the meconium, and the child appears to suffer any inconvenience, an injection of sweetened water, or this with the addition of a very small quantity of the butternut syrup, should be administered; repeating it as often as necessary, until suitable evacuations are procured. Or if it be deemed necessary, melasses and warm water, or a small quantity of the tea of butterfly or pleurisy root may be given as a purgative. This course, we think will always be found to answer the purpose. If it should not, a small quantity of castor oil may be administered, and aided in its operation by injections.

RETENTION OF URINE.

This is a frequent complaint with new-born infants; and although in general easily relieved, has, nevertheless, occasionally produced death.

It may often happen that a child will pass its urine soon after birth, and a stoppage afterwards take place, perhaps without being suspected. If it continues long, much distress will be produced, which will be known by the sharp and often incessant cries of the little sufferer. Particular attention should, therefore, be paid by the nurse to know that it not only passes its urine soon after birth, but that it continues to do so at proper intervals afterwards.

In cases of a retention of the urine, the best remedy perhaps is a tea of pumpkin seeds, given in moderate quantity. The seeds of melons are also employed for the same purpose, and perhaps the seeds of other similar fruit might be useful in similar cases.

A tea of parsley roots is likewise a popular remedy in this complaint. It ought to be steeped strong and given in small quantity at a time. Gently rubbing the bowels with the hands will also have a good tendency; and perhaps if bathed at the same time with tincture of lobelia, or a very small quantity of spirits of turpentine it might have a better effect.

COLIC AND GRIPING.

These are among the first and most common complaints of infancy, and are often troublesome by their frequent occurrence and consequent disturbance of the child. They are usually caused by improper feeding.

For colic, the reader may see the "*general rules;*" and for gripes, which are attended by green stools, in addition to the diaphoretic powders and injections, it may often be proper to give the child a tea-spoonful, (less or more) of magnesia. This should be put into a table-spoon and made fine; then add breast milk or water sufficient to enable the child to swallow it conveniently, and immediately administer it.

A few drops of the essence of peppermint in warm water or milk, is also a very good remedy for both gripes and colic. If the child is very young, one drop may be sufficient; but if older, or it has to be often given, more must be administered.

A tea of genseng is often employed by some, and with a good effect. Indeed, it may be used with advantage in almost all complaints of children, especially when there are symptoms of

nervous irritation. If fennel seeds be added to the ginseng the value of the remedy will be thereby increased.

JAUNDICE.

This is apparently similar, in every respect, to the complaint bearing the same name in adults. The skin is yellow, the eyes and urine also tinged with the same hue, whilst the stools are white or clay colored, and the bowels costive.

There is, however, a yellowness of skin which is often seen in very young children, and which by many is called jaundice but in reality is not this complaint; nor indeed can it, in general, be called a disease, as there is no other evidence of it than the unnatural color of the skin. True jaundice may always be known by attending to the color of the eyes, urine, and stools.

For the cure of this obstinate disease, the child must be made to take of the butternut syrup in quantity sufficient to purge freely, or instead of this, the blackroot may be administered in doses of a fourth of a tea-spoonful, or less for a very young child, or enough to produce copious purging. This should be followed by the frequent use of the laxative bitter tonic, or a tea of poplar bark, made very sweet. The following day after taking the physic, the child should be made to sweat freely, and then administer a puke of the tincture of lobelia; giving enough to cause free vomiting. To produce perspiration, it should be made to take freely of the diaphoretic powders as heretofore recommended, and be steamed in the manner directed in the second volume, page 353, or have warm bricks placed around it in its cradle.

After the emetic has operated, it must have the bitters continued as just directed, with occasional injections, which, if the costiveness continue, should have a little butternut syrup added to give them a laxative quality.

If the cathartic and emetic do not afford so much relief as to give reasonable grounds to hope for a cure from the use of the bitters, the same process must be repreated in the course of two or three days; and afterwards, if necessary, at discretion.

THRUSH OR SORE MOUTH.

The complaint to which we here allude, is commonly, by way of distinction, called baby's sore mouth. It consists of a number of white pustules or pimples seated in the inside of the mouth, and, from a small number at first, often increase so as

to fill the mouth, pass down the throat, and, as said by some, extend through the intestines.

The common remedies for this complaint are, any of the astringent articles, and especially the bayberry, birthroot, pond-lily, beech-drops, golden seal, &c. These articles may be employed either separately or combined, in a strong tea sweetened with honey, or a pinch of the fine powder may be placed on the tongue, which will be soon conveyed to all parts of the mouth. If the tea is employed, a tea-spoonful may be put into the child's mouth occasionally; and the child in all cases must be made to swallow some of it or of the diaphoretic tea herein before mentioned.

In bad cases the bowels are always disordered, when magnesia, butternut syrup, injections, and emetics, must be used, which may more properly be left to the discretion of parents or nurses, than attempt to give specific rules here.

In the "*Maternal Physician*," we find highly recommended, not only for thrush, but for all cases of canker, the common wild turnip. The dried root is to be pulverized and applied to the tongue either dry or mixed with honey.

ERUPTIONS OF THE SKIN.

These need no description. The common remedy is a tea of saffron, which will almost always effect a cure; or at least keep the eruption on the surface until nature overpowers the disease. The diaphoretic tea, will be found an excellent substitute for the saffron, and in its absence may be used. If the child manifest symptoms of much ill health, and especially if the eruption has disappeared, suitable means should be employed to promote perspiration, both by giving more freely the diaphoretic tea and injections made a little stimulating by the addition of the fourth or half a tea-spoonful of the tincture of myrrh to each injection; the little patient at the same time being kept warm.

TEETHING.

The cutting of teeth, as it is familiarly called, although a natural function of the living healthy system, is, nevertheless, often attended with severe suffering, and not unfrequently much danger. Some children, however, cut their teeth without much apparent difficulty, and need, of course, no particular attention.

The most common symptoms attendant upon difficult or painful teething are, pains and gripings of the bowels, with loose-

ness attended by stools of various colors, such as green, pale yellow, dark brown or black. When teething is more difficult, there may be twitchings or mild spasms, startings during sleep; cough and difficulty of breathing; fever, and even convulsions.

Children generally commence cutting their teeth at the age of six or seven months. The common symptoms attending teething are, slavering from the mouth; a disposition to thrust the fingers or other substance into the mouth; and a swelling of the gums.

For all irregularities of the bowels, the diaphoretic tea and catnip injections should be resorted to; and if there is evidence of griping, and especially if there are green stools, the magnesia, or butternut syrup, may be administered. If spasms occur, a tea of the nervine powder, in table-spoonful doses, or teaspoonful doses of the nervine tincture, must be occasionally given; and if convulsions arise, the anti-spasmodic tincture may be administered in half tea-spoonful doses, and repeated, if necessary, according to circumstances, at discretion.

Most of the extreme difficulties attending teething, may, however, be avoided, by cutting the gums immediately over the tooth so soon as they become visibly swelled, which will demand more special attention when any of the usual bad symptoms occur. This is a very simple process and should never be deferred for fear of hurting the child, as experience has abundantly proved that the operation is attended with but very little pain—none in comparison with that arising from the irritation caused by the bursting of the blunt head of a tooth through the gum. The relief which is usually obtained by this operation is so great that parents should not hesitate for a moment about the performance of it, in all cases where the gums have become swelled, and the child is afflicted with the usual bad symptoms which attend teething. We do not advise that when children cut their teeth without any bad symptoms, as is sometimes the case, that the gums shall always be cut, although this is recommended by some. But we seriously advise in all cases of difficult teething that this operation be performed.

To cut the gums, let some person hold the child upright, if it be an under tooth, but lying down, if an upper one; the operator, with a sharp pen knife, in his right hand, introduces a thumb or finger of the left into the child's mouth, which he thus holds open, and then with the point of the knife proceeds to cut directly over the head of the tooth into the gum; minding to cut quite down to the tooth. The child may cry and struggle much during the operation, but if the gum has been badly swelled and painful all this will cease as soon as the operation is performed, and very generally the health will immediately improve. If there is more than one tooth the same

operation must be performed upon all; and the good effects which will follow, we think, must satisfy all parents of its utility and value. This operation, too, is in perfect unison with the great principle which we have so earnestly advocated and insisted upon, that of assisting nature when she is either incapable of or slow in the performance of her offices; and, therefore, we most seriously entreat parents to attend to the directions which we have laid down, and there is no doubt that by so doing much pain may be avoided and even life saved.

SORE EARS AND CHAFES.

CHILDREN are sometimes afflicted with bad ulcers behind the ears, which is most apt to be the case a little previous to, and during the time of teething, and is more especially liable to attack very fat children.

The origin of these sores appears to be nothing more, in many instances at least, than simple chafes or excoriations of the skin, which by being neglected, frequently degenerate into bad ulcers, that are often difficult to heal. Whenever any thing of this kind happens to a child, measures should be immediately taken to heal them up.

A very good remedy for chafes is burnt woolen rags. Take a small piece of old flannel, hold it in the tongs and set it on fire, let it burn until the flame ceases; then pulverize it very fine, and sprinkle the powder plentifully on the chafed part, having first washed it clean with cold milk and water, or water alone, and dried it with a soft rag. This dressing should be renewed once or twice a day.

Instead of the burnt flannel, finely powdered hemlock bark used in the same manner is very excellent; and no doubt many other astringent articles would be very useful. Dr. Beach recommends slippery elm bark for the same purpose.

When ulcers exist about the ears, if very bad, the child may be purged with the butternut syrup or magnesia, and the sores kept cleanly washed either with mild soap suds, or cold milk and water, and after each washing bathed with a tea of the wild lettuce. We have seen remarkable cures performed by no other means than bathing with this tea. But we think it best, in general, frequently to administer the diaphoretic tea as heretofore described, or in more violent cases, especially if of long standing, the bowels should be purged as just recommended.

If the external applications which we have recommended should fail, (which, however, we have never known,) and there is heat and inflammation in the part, a poultice might be applied, cold, to the ulcer, occasionally taking it off and replacing it with

another cold one. When the inflammation is subdued, the wild lettuce wash, or the healing salve must be applied and continued until a cure is effected.

HYDROCELE.

This is a collection of water in the scrotum of male chil dren, resembling the same disease in adults. It is commonly discovered a few days after birth, the scrotum being swelled in a round, uniform manner, though generally confined to one side only, and is of a half transparent appearance.

Dr. Dewees says he has never seen this disease resist the application of cold water, though he has occasionally found it obstinate. The best mode, he says, to use it is to pour it from the spout of a tea-kettle, (a tea or coffee pot we think would be more convenient,) two quarts at least, morning and evening, upon the part.

TONGUE-TIED.

This difficulty, now and then met with amongst children, consists in a transparent, whitish membrane, attached to the under side of the tongue, often extending to, or near to, the end of it, which prevents the child from elevating the tongue, or from protruding it beyond its lips. In this case the child sucks with difficulty and does it imperfectly, being attended with a kind of clucking noise. This membrane is easily discovered by provoking the child to cry, or by raising the end of the tongue with the finger.

To remedy this defect, let the child be laid across one's lap, with its face to the light; then let the person holding it, force open the mouth, when the operator raises the tongue with the fingers of the left hand, by which the membrane is not only brought to view, but is placed upon the stretch; the operator, now with a sharp knife or a sharp pair of scissors, cuts this membrane along the under side of the tongue back to the *frænum* (bridle) of the tongue. The true bridle of the tongue will be readily distinguished from the membrane that requires dividing, and care must be taken to avoid cutting further than is necessary. When this is properly attended to, no bleeding of any consequence will take place, whereas, if the cut be continued further than is requisite, considerable blood may be discharged. When this occurs, the powder of witch-hazle leaves, or of birth-root, may be sprinkled on the part, and repeated occasionally until the bleeding stops.

We have seen one instance in which cutting the membrane, in a case of tongue-tie, was neglected until the child was over two years old, when the membranous fetter had assumed the appearance of the true bridle, and in the division of it more judgment was necessary than would have been requisite had it been attended to at an early age. In this case, the child had discovered no disposition to talk, and was perfectly mute, which was the only thing that induced the parents to consent to have the membrane cut. Soon after this operation was performed the child began to talk, and quickly acquired the power of making known his wants with as much facility as most children of his age. We may also remark, in this case, although the fetter which confined the tongue had acquired very nearly the same appearance with the true *frænum* or bridle, the dividing of it was not attended by much bleeding.

CHOLERA INFANTUM.

This is a kind of cholera morbus of infants, being attended with vomiting and purging, which in some instances may continue for a considerable time, whilst in others it destroys life in a few days, or even hours.

Cholera infantum, in some cases, comes on with a simple looseness of the bowels, attended with a slight sickness of the stomach; but when the attacks are more violent there is both vomiting and purging, and often-times spasmodic irritation, similar to the cholera morbus of adult age. Fever generally soon follows, which is of a rather irregular intermittent character, attended with an insatiable thirst. There is also often stupor and delirium, sometimes ending in frenzy. When the patient sleeps it is with the eyes half open; and when awake, they have either a fierce or a languid expression. Whatever is taken into the stomach, is, in general, immediately rejected by vomiting.

The stools are of various appearances, sometimes natural, slimy, yellow, white, tinged with blood, thin and watery or thick, inodorous, or very offensive; though the smell is generally either sour or putrid. Sometimes the food passes through the intestines almost unaltered.

An attack of this disease is followed by rapid emaciation; the flesh becomes soft and flabby and the skin hangs in folds. "The skin on the forehead is tight, as if bound to the bone; the eyes are sunk; the cheeks fall in; the nose is sharp; and the lips shriveled. Even under such circumstances, which would seem to denote immediate dissolution, life will be in some cases preserved for weeks, and a recovery finally take place." —[*Dewees.*]

The same author says that a common and fatal symptom in the last stages of this complaint, "is thrusting the fingers, nay almost the whole hand, into the back part of the mouth, as if desirous of removing something from the throat." He also further observes that "just before its fatal termination, the eye sometimes has its brilliancy and vivacity renewed, after it had been a long time nearly extinct; the general symptoms seem to abate; the child receives food, even greedily; and manifests an intelligence that truly astonishes. But the *practised* eye sees nothing in these changes, but the immediate forerunners of death."

In the treatment of this disease, attention must be directed to the stomach and bowels. Injections may first be employed, with a view to evacuate the intestines, and if one does not do it pretty thoroughly, they must be repeated until this object is accomplished. This will frequently settle the stomach, when the diaphoretic tea must be administered in repeated small doses, which will often effect a cure. If it does not, however, or if the common catnip or other injections, do not check the vomiting, the tincture or tea of lobelia must be added to the injections, and these repeated until they produce vomiting and cleanse the stomach. Then follow with the diaphoretic tea; and if the complaint does not seem likely to be cured in this way, the child should be purged either with the butternut syrup or the black root. After this operates, give the diaphoretic tea frequently, and occasionally the bitter tonic at discretion; and in cases where great prostration of strength and emaciation of the body have taken place, and even in cases more mild, the tonic cordial should be administered, in one, two, or three tea-spoonful doses, three or four times a day. For the spasms or nervous symptoms, the nervine powder or its tincture, must be often given in small doses, frequently repeated.

A strong tea of mint is a highly valuable article to stop vomiting, and may, therefore, be liberally employed in all cases of this nature.

The neutralizing mixture, which will be found in the second volume, page 307, is highly recommended by Dr. Beach, and we have no doubt that it is a safe and valuable medicine in this disease, as well as all cases of either vomiting or purging.

RICKETS.

This disease comes on slowly, the first symptoms being a flaccidity or softness and looseness of the flesh, emaciation of the body, pale complexion, and slight swelling of the face. The head, compared with other parts of the body, at the same time

becomes enlarged, and the *sutures* and *fontanelle* are opened or separated apart. The head continuing to increase in size, the forehead becomes at length unusually prominent, and the neck appears very slender in proportion to the head.

Cutting the teeth is very slow, and much later than is usual, and the teeth that do appear soon spoil and are apt to fall out. The ribs become mis-shapen, the breast-bone protrudes forward in the form of a ridge, the back-bone becomes crooked, the joints are swelled, whilst the limbs between the joints seem to be more slender than before, and finally become distorted or crooked.

With these symptoms there is a great diminution of strength, the child is averse to making the least exertion, and is unable to walk. Its appetite is not often much impaired, but its stools are usually frequent and loose, whilst the abdomen appears uncommonly full and swelled.

Children laboring under the rickets, often possess a precocity or maturity of intellect, far beyond their years; though occasionally stupidity, and sometimes fatuity or complete destruction of mind takes place.

In some instances the disease proceeds no further, and the child gradually recovers its health and strength; but the limbs are apt to be left, however, in a crooked state. In others it continues to increase, till at last every function of the animal economy becomes affected, and the tragic scene is closed in death.

Rickets seldom appear before the ninth month of the child's age, and very rarely shows itself after the completion of two years. It is more frequently met with amongst the children of the poor than those of higher rank, and is almost solely confined to cold climates where much moisture prevails.

In some cases rickets are supposed to be a hereditary disease but it is oftener found in connection with a cold, damp residence, impure air, inattention to cleanliness, bad nursing, want of sufficient exercise, deficiency of food and debility.

The proximate cause of this complaint is supposed to be a deficiency of phosphate of lime or bone-earth, which deprives the bones of their necessary strength and solidity, in consequence of which they become soft and then crooked.

The rickets, although attended, in the worst cases, with much distortion of the bones, and various other unpleasant symptoms, very seldom proves fatal, unless where the distortion becomes so great as to interfere with the office of the lungs, or some other vital organ; or where the digestive powers become too weak to digest the food, when it passes unchanged through the intestines. Children at the breast are said to be more exposed to peril than those that have reached the age of three or four years.

In the cure of rickets we should proceed on the plan of stim-

ulating the vessels to greater activity, by the use of cayenne, &c., and bracing and strengthening the system by the use of tonics, both bitter and astringent.

We may commence by carrying the child through a regular course of medicine, for which directions will be found in the second volume. After this we may give from half to a whole table-spoonful of the wine-bitters, three or four times a day, and about the same quantity of a tea of the diaphoretic powders, made sweet and enough cream added to make it pleasant. This course must be rigidly pursued and if it does not appear to be mending, another course of medicine should be resorted to, and repeated, if necessary, at proper intervals, until the symptoms become more favorable. Injections should likewise be often used.

The cure will also be much hastened by the daily use of the vapor and cold bath, or even by the cold bath alone ; tempering the water according to the age and strength of the child. Previous, however, to putting it into the bath, or pouring the water on it, the latter of which is the best, the child must have a dose of some warming medicine, and immediately after the water is poured on, wipe it dry with a warm towel, and lay it in its cradle, or bed, and cover it warm, where it may lie from fifteen minutes to half an hour, or until it has recovered from the shock and fatigue of the bath. It should then be taken up and dressed.

The child ought also to be warmly clothed, even to the feet, as we have seen one case in which occasional inattention to them evidently retarded the cure.

It should likewise have proper exercise, by being taken in fair warm weather, into the open air, endeavoring to carry it in such a way as will be least likely to increase the deformity of its bones.

The diet should be nourishing, of easy digestion, and adapted to the age of the child.

APPENDIX.

We give here, at the close of this volume, a few cases, in illustration of the subjects treated upon in its pages. The number of these is very much abridged, in consequence of many being published in the second volume which with much propriety might have been introduced here. Cases of midwifery are generally so uniform, that we have deemed it necessary to introduce but a few from the many which have been treated with botanic medicines.

CASE I.

Mrs. Keever, of Warren county, was delivered of a child, and seemed quite comfortable for a few days; her milk came plentifully, and all seemed well with her. In a short time, however, she was attacked with a violent fever, and an almost incessant discharge of blood from the bowels; the lochia was intirely suppressed, and she suffered greatly from pain. Her milk dried away, and she was continually getting worse, when I was called to visit her. On examination, I found the uterus had fallen down low into the vagina, and was swollen to an enormous size; the rectum and lower intestines were much inflamed; the blood vessels in the adjacent parts were engorged, and some of them probably ruptured; and from the appearance and smell of the blood which passed from the anus, I was convinced that mortification was approaching. I began by giving bayberry root bark, hemlock bark, and pond lily root, all pulverized, and made into a strong tea, adding a sufficiency of capsicum to make it very hot, together with the umbil and No. 6. Of this I gave freely, placing hot stones wrapped in wet cloths, about her lower extremities; and when a free perspiration had taken place, and the parts were well relaxed, I proceeded to examine, by touching, and placed the uterus up in the pelvis in its proper situation; which, from its preternatural size, caused the appearance of a large swelling above the os pubis. I then gave

frequent injections of strong tea, as above mentioned, and also of the witch hazle leaves. During the discharge of the injections, the uterus came down again; I replaced it, and would not suffer her to be taken out of bed on any occasion. While replacing the womb, I gently pressed the os uteri; and it yielding to the pressure, was followed by a considerable discharge. By keeping her in a constant perspiration, and repeating the injections every hour until the disease was checked, in three days' time she was free from danger, and in a short time was perfectly recovered.

WILSON THOMPSON.

CASE II.

On the 12th of October 1830, at 9 o'clock, P. M. I was called on by Jesse M. Adams to see his wife, who was attacked with puerperal convulsions. She had been in hard labor about fourteen hours, with very little progress. A midwife was called in at first, but when she was attacked with convulsions Dr. Ramsay was called, who was then President of the Medical College of Ohio. When Dr. R. arrived, she lay in a state of total insensibility, and could not be aroused. The doctor, after an examination, said his engagements were such that he could not undertake her case, as it might detain him a longer time than he could spare, and advised that another doctor should be sent for immediately, and left her. I arrived about two hours after he left; but there was no material change in her condition, excepting that she could be roused a little, and she swallowed some medicine, viz: a tea of raspberry leaf and valerian, and a little of the third preparation of Dr. Thomson; after which she soon revived, and labor came on. On examination, I found the *os tincæ* (mouth of the womb) dilated, and the child's head at the inferior strait of the pelvis. The pains were regular, with regular intervals, and effectual, but not severe. During this period Dr. Ramsay came in again. He inquired of me how long I had been there; I told him about twenty minutes: he then inquired of the midwife how she had been in his absence; and on being informed, he asked me what I thought was the prospect. I told him I thought it favorable, and did not apprehend any difficulty. He staid by while she had several pains, and then advised to give the ergot tea. I told him I thought we could do without it. He then took his leave; but as he went out, several women who were present went out with him to learn his opinion of the case. He answered them freely, that he thought it a very bad case, and very dangerous; and said he was much mistaken if she got through safely. However, the child was

born within about fifteen minutes after his departure, and the woman had a very comfortable night; and she and the child are both well at this time, it being the 9th of February, 1832.

WILLIAM RIPLEY.

For the correctness of the above, the certificate of the woman and her husband has been obtained, and is as follows:

We hereby certify that the above account is strictly correct so far as we know: we both having heard Dr. Ramsay's opinion related by the women who conversed with him when he went out.

J. M. ADAMS.
R. B. ADAMS.

CASE III.

B——— H———, was taken in labor with slight pains in the back, extending forward and down the thighs. This happened in the fore part of the day, and the pains continued at intervals through the day and succeeding night with but little increase; the patient taking at intervals, a tea of the diaphoretic powders, and occasionally half a tea-spoonful of cayenne in four or five great spoonfuls of warm water. Towards morning, however, her pains increased a little, and so continued through the day, excepting that they sometimes worked upward, as she styled it, instead of downward, producing faintness and other disagreeable symptoms. Two or three spoonfuls of the antispasmodic tincture were finally administered, which completely removed this difficulty. The mouth of the womb, as appeared by two or three examinations, during this time was slowly opening. The same medicines which had been given through the first day and night, were continued, with the addition of two or three injections, during the second day and night. The cayenne was, however, given with more freedom, than during the first day.

On the morning of the third day, the pains were somewhat increased, and gradually continued increasing until late in the afternoon, when the mouth of the womb had become fully dilated. A little previous to this, however, the woman had been placed on her left side in bed, her knees drawn up and kept apart with a pillow. Soon after this, the waters broke, and the head of the child, on examination, was felt properly presenting to the birth. The head very soon descended to the lower strait of the pelvis, but here it seemed to stop; and the labor, notwithstanding the pains were severe, was for some time retarded. Her situation at length becoming irksome, she wished to get up

and walk the floor; which she was permitted to do, and had one or two pains whilst up. She then went to bed; the child advanced rapidly, and the head was soon born. Search was instantly made to know whether the navel cord was around the child's neck, which was found not to be the case. The pains soon returned and the child was born, apparently dead. Its face was exposed freely to the air, and on feeling the navel string it was found to pulsate, by which it was known that the child was not really dead. In a very short time the child gasped, and soon cried with a pretty strong voice. The navel cord was now tied with a coarse thread, about two fingers' breadth from the child's belly, and then cut off with a pair of shears, about three-fourths of an inch from the tie, and the child taken away to be washed and dressed. The abdomen of the woman was now examined by placing the hand upon it, and a hard ball was felt just above the pubes, by which it was known that the womb had contracted. The end of the navel cord was now taken in the right hand, whilst the fingers of the left were passed into the vagina along the cord to, or near to, where it was united with the placenta, and then by gently pulling the cord with the right hand, and pressing downward and backward with the left, the afterbirth was soon extracted with very little trouble or pain. The woman was now placed comfortably in bed, and although the labor had been so long and tedious, she soon recovered her health and strength.

CASE IV.

I was called to see a lady about ten o'clock, P. M. who had been in labor twenty-four hours, and was then supposed to be dying. She had lost all action, was cold and quite insensible.

I gave her one table-spoonful of tincture of lobelia in half a tea-cupful of raspberry tea, and ordered a warm stone wrapped in a wet cloth, to be applied to each foot. After an interval of ten minutes, I gave another dose, consisting of similar quantities of the tincture and tea; and in ten more, gave one tea-spoonful of a compound preparation; (as a substitute for which, Howard's anti-spasmodic tincture, or Thomson's 3d preparation, may be used,) which brought on her *pains;* and in about twenty minutes the child was born. The tincture and preparation puked her freely; and in six days she was up, and remarked that she had never felt so well in ten preceding births.

C. WADDLE.

CASE V.

The subject of this case, was a female, aged thirty-six years, who had been laboring under confirmed obstruction, for a number of years. For a period of nine years, she had been in the habit of throwing up her food, almost immediately after its reception into the stomach. When I was first called to her, she was a living skeleton. My first prescription was pills, made in the following proportions, viz:

Gum myrrh, one fourth lb.; cayenne, ditto; bayberry, half a lb. Two of these pills were administered, once in two hours, for three days; which had the effect to stop the ejection of the food from the stomach. I then ordered a preparation composed of equal parts of tincture of myrrh and tincture of lobelia, in doses of half a tea-spoonful every two hours during the day, for eight days; with the *antibilious pills, one at a dose. The feet were bathed each night during the same period, in warm hemlock ooze.

This treatment effected a complete cure in eight weeks time; and the patient has been healthy and able to attend to her usual employments. My charge in the above case, was *five* dollars; her father had previously expended upwards of *three hundred* dollars, without obtaining for her any relief. C. WADDLE.

CASE VI.

Mrs. Pamela Jeffries, aged 28, was of strong constitution, but had been much exposed in the early part of life. At about the age of sixteen, she was attacked with spasmodic fits from menstrual derangement, which lasted about two years, and were succeeded by extremely painful menstruation, attended by headache, pains throughout the body, and a chill, followed by violent vomiting, whenever those periods returned. In 1826, she had a severe attack of bilious fever, said to have been of a low typhoid type. During the continuance of this fever, a large amount of calomel was thrown into the system, said by the doctor to have been given *beyond portion;* (I suppose without weight or measure;) which, together with the disease, produced an abortion.

Shortly after this, she felt an unusual knot or tumor in her left side, which was accompanied with pain and stiffness in the hip, and down the whole limb on that side, into the foot. This knot commenced rising internally and discharging purulent mat-

*Note by the Author.—Our vegetable cathartic pill, or Bunnell's antibilious female pill, may be efficiently used as a substitute, in similar cases.

ter through the vagina, regularly once in from two to four weeks But she still bore children. In the latter part of 1831, she was taken with an excessive menstrual discharge, which lasted about a month, without any cessation; which, when it was checked, was followed by burning pains in the breast, violent headache; pains in her shoulders, worst in the left, and was much swelled through her body, and appeared like one in the last stage of the dropsy, (anasarca.) She was partially relieved by the fashionable practice; but the general symptoms continued to grow worse until the 21st of May, 1832. At this date I was called to see her. I found her swelled till her skin seemed ready to burst, and pained beyond all power of language to describe. I gave her a course of medicine as soon as it could be administered. The emetic brought off a large amount of yellow bilious matter, and she was much relieved; but for the want of a nurse, I did not give her another course of medicine until the 9th of June, at which time she had obtained one, though quite an inefficient one. At this time, for the first, she also told me of the tumor in her side.

I now gave her a course of medicine every other day, until I had given her five; when I was again obliged to discontinue them for the want of a good nurse. Between the courses of medicine she had taken diaphoretic powders, tincture of lobelia, and bitters composed of equal parts of poplar bark, goldenseal, and bitter root, three or four times a day. I now changed the above for the following preparation: 1 oz. mace, 1 oz. cinnamon bark, 1 oz. aloes, ½ oz. nutmeg, and 3 pints good whisky; the solids were finely pulverized, and added to the whisky in a bottle large enough to contain the whole, the bottle put into a kettle of water, and kept there until the water had been boiled ten or fifteen minutes. After letting it remain three or four days, the liquid was poured off, and for each gill of it, ½ oz. capsicum, ½ oz. pulverized seeds of lobelia, and ¼ oz. of lady's slipper were added. Of this she took from one to four tea-spoonfuls, three or four times in the day, or as much as would keep her bowels open; with a suitable proportion of diaphoretic powders. I also directed her to apply a plaster of the dregs of Thomson's third preparation of lobelia to the tumor in the side. (The dregs of the anti-spasmodic tincture may be used instead of this.) She said it drew powerfully from above and below, but she continued to apply the plaster and keep it moist. At length the tumor began to rise inwardly and be very painful, when I directed an injection into the vagina composed of half a tea-cupful of red raspberry tea and a tea-spoonful of tincture of myrrh, to be administered twice in the day which was to be preceded by an injection to move the bowels. Notwithstanding these administrations, the tumor rose inwardly, (though it was soon

drawn to a head,) and discharged matter through the vagina. But after this it rose no more, and she has felt no further inconvenience from it.

From the 21st of June, I gave her but two courses of medicine until the 1st of August. She then obtained a nurse who was able to attend to her. I again commenced and gave her a course of medicine every day until I had given her three. I then found that the matter collected so fast on her stomach that I must repeat the courses of medicine oftener; for no purgatives nor bitters (which I could direct) would keep the bile from accumulating on the stomach. I then gave her a course of medicine every day for four days, and she seemed to be gaining fast on the disease; but I was then called from home, and it was on the 18th of September before I could attend her again. She was then in a worse condition than she was on the 1st of August; though several courses had been given her in my absence by other hands. I then began and gave her eleven courses of medicine in eleven days. She then rested four days, and I gave her three more in three days, with the last of which a perspirable state was produced which was kept up nearly a week, with nothing more than taking bitters and diaphoretics. In the above operations, after the emetic had taken great effect on the stomach and system in general, and the stomach seemed to be cleansed, it seized on the womb and produced pains not inferior to labor pains, for two courses; it then moved down to the *os pubis*, (she had received a hurt in that part, in bearing her first child, having had those bones separated according to the practice of some women-butchers,) and during the operations of two courses it produced such pains as threw her out of her senses. It was afterwards difficult to produce vomiting; but I persisted until no phlegm could be brought from her stomach.

That you may know still further the extremity of the case and the extent to which the operations were carried, I assure you, that in the eleven courses, given in eleven days, there was about an average of an ounce of emetic seeds used at each course, besides tincture, and Thomson's third preparation, more or less, in nearly every one of them. I knew there was no danger and nothing less would reach her case. She now appeared to be entirely relieved and made sound in every part; but menstruation had not yet been brought on; and when the time in the month arrived that it should flow, she was severely pained in the left hip, and swelled in the hip and leg down to the foot. I now directed tobacco to be applied over the part that was most painful. It completely removed the pains and swelling in twelve hours; but I directed it to be continued for three or four days. She then gained flesh and

strength fast, until the time of her monthly period came round again, when the pains and swelling returned. The tobacco was resorted to as before, with equal success. On the completion of her next month, I directed the use of the rattle root, freely, and the tobacco if the pains returned. The pains and swelling were dissipated by the lobelia, and the rattle root brought on the menstrual evacuations. All the powers of nature are fully restored to their proper functions, and health is now so completely renewed, that she says labor is easy and delightful. Her complexion is changed from an African and Indian hue blended, to the fairness of the lily combined with the rose.

The tobacco was tried from Dr. Gunn's recommendation and prepared as directed by him.* As I have introduced it here I will mention a case in which it was used with the most unparalleled success. A lady, aged 52, was taken with a pain in her leg between the knee and ankle. In its advancement it spread through all the bones and joints of the leg, and finally moved up and settled in the hip, and extended along the *os pubis*. A fever came on, which was worst at night; and as the pains raged in the joints the stomach seemed inflated and ready to burst with anguish. The pains were worst some times in the head, and at other times in the lower extremities, and then again it was impossible to tell where they were most severe; always, however, having the hip as a kind of center from which they moved, and when abated elsewhere were but little abated there. Her paroxysms were so extreme at night, that it was frequently impossible to keep her in bed. She had gradually grown worse for ten days, and it seemed impossible for her to live. I was sent for; but, being from home, did not get to see her until late in the evening of the third day after. I first directed an application of tobacco to be made to the hip, and thence along the region of the pain; and gave her capsicum and lady's slipper internally in warm water. In half an hour after, a warm stone wrapped in wet cloths was put to her feet, and the capsicum and lady's slipper repeated in sassafras tea. I continued to increase the number of rocks around her, and giving the capsicum and valerian in sassafras tea, until profuse perspiration was produced. I then gave a tea-spoonful of lobelia seeds; in ten minutes gave two more; and in ten minutes two more were given. I next gave an infusion of the leaves and pods of lobelia, which had been previously prepared by putting about 3 ounces of the powders to a pint of hot water and sassafras tea; the whole of which I gave her at three times. When she could bear the tobacco no longer, I directed it to be taken off. The [illegible] operated very finely. The perspiration was of a very

*Steeped or moistened in vinegar.

rancid smell, and the matter ejected from the stomach very bitter, black, and fœtid. In ten minutes after her last puke, she called for a piece of ham and bread, which was eaten and retained. Her pains were now all gone; and from a state of agony and death, she had been wholly relieved in less than three hours. Bitters, diaphoretic powders, and antispasmodic tincture, taken two or three times in the day, restored her not only to usual health, but to better than she had enjoyed for months.

H. W. HODGES.

CASE VII.

A young woman about sixteen years of age, had been under the care of physicians at different times, one of whom had attended her for more than twelve months, with but little benefit, and that little, if any, of short duration. When I became acquainted with her case, which was a considerable time after the doctor had ceased to attend her, her skin was of a yellowish green color, and she was much afflicted with head-ache, sickness at the stomach, shortness of breath, palpitation of the heart, &c.; the menstrual discharge had not yet appeared, and her mother informed me that she had never had a day of health in her whole life. I prepared her some pills of lobelia, cayenne, the astringent tonic, and golden-seal; and occasionally the bitter root to obviate costiveness. The pills were taken on going to bed, in sufficient quantities to nauseate, and sometimes nearly to puke; at the same time using freely of bayberry tea through the day. In a few months her appetite became good, her strength increased, and her skin became clear. She has now continued the above regularly for about eighteen months; and from a poor, distressed being, has become a sprightly young woman. Every obstruction appears removed, and all the functions of the system completely developed. ISRAEL FRENCH.

10th month, 22d, 1832.

DESCRIPTION

OF

MEDICINES RECOMMENDED IN THE WORK.

Lobelia Inflata.

LOBELIA INFLATA — *Lobelia.* The Lobelia is one of the most valuable of medical plants, and is now generally known by the people as well as the profession throughout the country. It is the most prompt, certain, and safe emetic now known, and is remarkable for its antispasmodic and relaxant properties. Indeed, its chief value in midwifery is on account of these last named virtues. Every part of the plant is employed for the same purposes, but the seed is the most powerful. It may be employed in powder, tincture, or concentrated extract. The dose of the latter, as an emetic, is 5 to 10 drops; that of the powdered seed, a tea-spoonful; and that of the powdered herb or tincture, from one to four times as much, taken alone or in combination with other emetic substances, or some stimulating and astringent tea, as that of Bayberry or Boneset. As an expectorant, relaxant, or antispasmodic, it is taken in nauseating doses of say quarter of a teaspoonful, often repeated.

POLYGONUM; HYDROPIPER — *Smartweed; Water-pepper.* Smartweed is a good emmenagogue if it is employed without being heated as by decoction, &c. It should be used by infusion or in the form of powder. The leaves are the part employed, and may be prepared in any form desired if not heated. The dose is a tea spoonful of the powdered leaves, or a table spoonful of the tincture, or wine glass full of the cold infusion of the herb.

Queen of the Meadow.

EUPATORIUM PERFOLIATUM — *Boneset, Thoroughwort.* Boneset is a very common plant, growing in meadows and wet places throughout the States. It is emetic, laxative, diaphoretic, relaxant, and somewhat tonic. It is employed to promote the operation of Lobelia, as an emetic and relaxant, and is given as a nauseant in febrile affections and in tedious labors, to relax the system. It is also useful as an emmenagogue, in cases of painful and irregular menstruation. It is usually taken in the form of an infusion, or pills made of the extract, in doses as large as is agreeable with the stomach.

GERANEUM MACULATUM — *Cranesbill.* The root of this species of geraneum is one of our best and purest astringents, useful in all cases where astringents are indicated. It is commonly employed in the form of infusion.

EUPATORIUM PURPUREUM — *Queen of the Meadow.* The root of this plant, which is also called *Gravel Root*, is one of our best diuretics. It is used in strong infusion, taken freely.

APOCYNUM ANDROSÆMIFOLIUM — *Bitter-root.* This article, which is also called *Dogsbane*, and *Wandering Milkweed*, is a plant of great value as a medicine. The bark of the root is employed in the form of powder, tincture or extract. The medicine is a laxative tonic very useful in obstetrical practice as a means of keeping the bowels open during confinement. It is tonic and will promote the appetite and the general strength of the patient. The dose of the powder is ten grains or about two-thirds of a teaspoonful.

NYMPHÆ ODORATA — *White Pond Lily.* This species of the water lily furnishes an article of medicine of considerable value. The root, which is large and fleshy, is a very pure astringent.

An infusion made as strong as possible, of the powdered root, is an excellent application in cankered sore eyes and sore mouth of children. The powder when very fine may also be sprinkled into the fissures on the thighs, groin, and axilla of children, when they become inflamed by neglect. The infusion also makes a good injection for the vagina in cases of leuchorrhœa or prolapsus.

MYRRHA — *Myrrh.* This is a valuable article in obstetric practice. It acts as a gentle yet permanent tonic, antiseptic, and stimulant. It is often serviceable in parturition, as an incirant to effective labor pains. But its chief use is in the puerperal state, and as an emmenagogue. It may be employed in fine powder, pills, or in the form of tincture. The Compound Tincture of Myrrh (No. 6) s a popular remedy for both internal and external use. The dose of Myrrh is about five to ten grains, or about half a tea-spoonful; but is often taken in much larger quantities.

MYRICA CERIFERA — *Bayberry.* The bayberry is a shrub growing on the Atlantic coasts on the Eastern part of our continent.

Its virtues were brought into notice chiefly by Dr. Thomson. The bark of the root is a powerful stimulant and astringent, useful in many forms of disease. It is one of the chief ingredients of Dr. Thomson's *Composition Powders.*

Bayberry

Rhubarb.

RHEUM — *Rhubarb.* Rhubarb is one of the best of the mild cathartics, very useful in dysentery among children as well as grown persons. The dose of the best Rhubarb is ten grains.

LEONURUS CARDIACA —*Motherwort.* This is a common domestic remedy long in use. The leaves are nervine, tonic, and emmenagogue. Its chief use is in obstructed menstruation. A strong infusion may be taken freely for a week or two before and during the menstrual period.

CAPSICUM — *Cayenne Pepper* This is one of the most powerful and permanent stimulants that we possess. It is employed, in

enfeebled states of the body, to excite the vital powers, or to incite the organs to more vigorous action. Thus, in feeble and ineffectual labors, Capsicum will often seemingly renew the powers of nature, and produce the most happy effects in a very short time. It is also emmenagogue, by virtue of its general incitant power. The dose is from three to ten grains, or about a quarter to half a tea-spoonful. It is usually taken in hot water, sweetened, but is disagreeable in this form on account of its pungency, and is much more agreeable in the form of pills or emulsion.

BOTROPHIS RACEMOSA; MACROTRYS RACEMOSA — *Black Cohosh; Rattleweed.* This is a plant of luxuriant growth, common in the western and the middle States, growing in woods and new grounds. As a medicine, the root of this plant is of great value in midwifery and diseases of females. It is a powerful emmenagogue, antispasmodic, or relaxant, and somewhat nervine. Its greatest use is in difficult or obstructed menstruation, and as a parturient. Indeed, its power in this way is so great, that it has frequently been successfully employed for the (generally unjustifiable) act of procuring abortion. For this purpose, however, it is unsafe. As an emmenagogue it may be taken in doses sufficient to produce a slight sense of heaviness, or a feeling of dizziness in the head. The decoction is the most common form of its use. But the precipitated alcoholic extract, commonly called Macrotin, but more properly Botrophin, is the most convenient form of its use. The dose of this is from one to three grains.

PODOPHYLLUM PELTATUM — *May-apple.* This article, which is also called *Mandrake*, is an important article of the cathartic class of remedies. The root is a hydragogue and antibilious cathartic, useful in fevers and dropsical diseases. The powder of the root, the alcoholic extract, and the resinoid principle commonly called *Podophyllin*, are the preparations most commonly employed. The dose of the two last is about three grains; that of the powder is about ten grains.

Quaking Aspen.

POPULUS TREMULOIDES — *Quaking Aspen.* The Aspen Poplar bark furnishes one of our purest and finest tonics, useful in all cases of debility.

ANTHEMIS — *Chammomile.* There are two species of this plant — the common garden Chammomile, and the *Anthemis Cotula* or wild Chammomile, or Dog Fennel, commonly called Mayweed. The flowers and leaves of both these are nervine tonic and emmenagogue, useful in painful menstruation and parturition. They are employed in the form of an infusion.

TANACETUM VULGARE — *Tansy.* The double tansy is an aromatic bitter tonic, nervine and emmenagogue. The infusion of the leaves is employed in painful menstruation and parturition.

Lady's Slipper.

CYPRIPEDIUM — *Lady's Slipper.* There are various species of this plant, all of which are medicinal, and employed for the same purposes. The root is nervine and tonic, useful in various nervous affections.

NEPETA CATARIA — *Catnip.* This, like Motherwort, is a common domestic remedy, and is used for the same purposes and in like manner with that.

ASTRINGENT TONIC.

Take equal parts of
Bayberry,
Hemlock Bark,
Witch Hazel,
Cranesbill,
White Pond-lily.

Pulverize and mix. This is a good compound for making astringent infusions for internal use in diarrhea, and for regulating labor pains as directed in the book, as well as for injections in cases of prolapsus, &c.

COMPOUND TINC. MYRRH — NO.

Take Myrrh (best) 1 pound,
Brandy (best) 1 gallon,
Capsicum, 2 ounces,

Pulverize the Myrrh and Capsicum, and digest them in the brandy, in sun heat, for six days, stirring it occasionally, then pour off the tincture. Dose, one tea-spoonful. The Compound Tincture of Myrrh is an excellent stimulant aud tonic, and constitutes a very popular remedy for colds, and for all violent attacks of disease, particularly those affecting the alimentary canal. Pain in the stomach, bowels, &c., arising from flatulency, is readily relieved by the use of this medicine. It is a powerful antiseptic, and is thus successfully employed, both externally and internally, in cases of incipient mortification.

HAMAMELIS VIRGINICA — *Witch Hazel.* The leaves of this shrub are a pure and mild astringent, useful in the same way and for the same purposes as other astringent articles.

Golden Seal.

HYDRASTUS CANADENSIS— *Golden Seal.* This article, which is also called *Yellow Puccoon*, is an acrid and permanent tonic, employed in tonic compounds for debility. A wash made of this article and Bayberry is very good for sore or cankered nipples; also, when employed by injection, the infusion of these articles is very serviceable in cases of chronic diarrhea.

SPICED BITTERS.

Take Golden Seal, 1 pound;
Poplar Bark, 2 "
Balmony, 1 "
Bayberry, 1 "
White Sugar, 5 "
Cloves, 8 oz.

Pulverize finely and mix. Dose, a tea-spoonful, in hot water. More sugar may be added if desired. This is an excellent tonic for common use.

EMMENAGOGUE POWDER.

Take equal parts of
Black Cohosh;
Smartweed (Polygonum);
Myrrh.

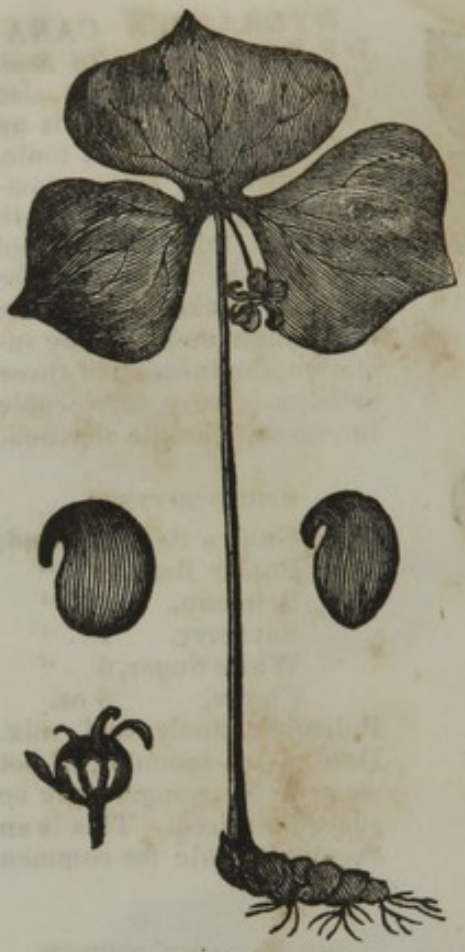
Pulverize and mix. Dose, a tea-spoonful three times a day.

This is an excellent remedy for obstructed menstruation.

THOMSON'S COMPOSITION POWDERS— DIAPHORETIC POWDERS.

Take Bayberry, 2 pounds;
Ginger, 1 "
Cloves, 2 ounces;
Capsicum, 2 "

Pulverize finely and mix. These powders are generally employed in the form of hot infusion or tea, as a diaphoretic and stimulant, and form a very popular remedy. The compound is improved, for the common purposes for which it is employed, and especially in obstetrical practice, by substituting one pound of White root (*Asclepias Tuberosa*) for one of the Bayberry, and by adding a pound of Colic root (*Liatris Spicata*).



Bethroot.

TRILLIUM—*Bethroot.* There are many species and still more varieties of the Trillium, all of which are medicinal. The root is stimulant, slightly astringent, tonic, pectoral, and emmenagogue. It has been supposed to facilitate labor, and is still much employed in obstetrical practice. The dose is a tea-spoonful of the powdered root, taken in boiling water, sweetened, and repeated as occasion may require.

ANTISPASMODIC TINCTURE.

Take
Lobelia herb, 1 ounce;
Lady's Slipper, 2 ounces;
Myrrh, 1 ounce;
Alcohol, 2 pints.

Pulverize the dry articles, and digest them in the alcohol for five days. This is an excellent remedy in convulsions among children as well as grown persons. Dose, from a tea-spoonful to a table-spoonful, repeated if necessary.

NERVINE AND ANODYNE TINCTURE.

Take English Valerian, 2 ounces;
Extract garden Lettuce, 1 ounce;
Oil Anise, ½ ounce;
Camphor, ½ ounce;
Alcohol, 2 pints.

Pulverize the Valerian, and digest with the other articles (made fine) in the alcohol for three days, stirring it occasionally. Dose, a tea-spoonful. Good for after-pains and painful menstruation.

CATHARTIC POWDER.

Take Mandrake, Senna, Blackroot, } Equal parts.

Pulverize and mix. Dose, a tea-spoonful.

CARBONATE OF AMMONIA.

This article is used for the purpose of a smelling salt, in cases of fainting. It is commonly, but improperly, called Hartshorn. It should be kept closely from the air.

Blue Cohosh.

CAULOPHYLLUM THALICTROIDES — *Blue Cohosh.* The Blue Cohosh is antispasmodic, emmenagogue, and nervine, and is employed for the purpose of regulating labor pains, especially to prevent those premature pains experienced by some women, and which are frequently more harrassing than the true labor pains. The medicine is equally beneficial as a remedy in cases of painful menstruation. The dose is five grains, or one large pill of the extract, three or four times a day. The infusion of the root is taken freely, in doses as large as is agreeable to the stomach.

BATHING DROPS.

Take Antispasmodic Tincture, and shake with it an ounce of the Spirits Turpentine to the half pint tincture. Good application for removing pain and swellings.

Clevers.

GALIUM — *Clevers.* There are several species of Galium, all of which are good diuretics, useful in dropsical affections and stranguary.

VERMIFUGE.

Take
Castor Oil (best), 1 pint;
Wormseed Oil, 1 oz.;
Spts Turpentine, 1 "

Mix. Dose, a teaspoonful three times a day for two days, and if it does not operate give a cathartic. This is one of the most convenient and best preparations against worms that we possess.

CATHARTIC PILLS

Take
Podophyllin (active prin. of May Apple, 1 oz.;
Extract Boneset, 1 oz.;
Oil of Anise, 1 dr.;

Mix and form into pills. Dose, one to two pills. This is an excellent pill for ordinary use, and is considerably anti-bilious in its effects. It may be given in all cases in which Bunnell's pills or the Anti-bilious pills are recommended.

TONIC CORDIAL.

Take Poplar Bark,
Yellow Parilla,
Golden Seal,
Lady's Slipper,
Sculcap,
} one pound each;
White Sugar, six pounds.

Bruise and boil in one and a half gallons of water for two hours; strain and boil down to half a gallon, and, while hot, add the sugar; when dissolved, bottle for use. Dose, a wine glass full three times a day.

SECRETION OF MILK.

Spirits of Camphor (*Camphire*) applied to the breasts will have a tendency to arrest the secretion of milk. The bruised leaves of the Castor Oil plant (*Ricinus Communis*), applied for several days, will excite the secretion of milk, and will sometimes enlarge the breasts spontaneously.

GLOSSARY,

OR EXPLANATION OF THE PRINCIPAL TERMS USED IN THIS VOLUME.

Abdomen, The belly.
Abortion, The premature expulsion of the fœtus from the womb.
Abscess, A tumor containing pus, as a boil, or other swelling.
Accoucheur, A person who assists women in child-birth; more commonly called Midwife.
After-birth, A soft, round, fleshy substance, that connects the fœtus to the womb, and by which the circulation is carried on between the parent and the fœtus. It is frequently called the placenta.
Amputation, The act of cutting off a limb, or some part of the body.
Anus, The fundament; or third and last of the large intestines.
Astringent, That which corrects looseness and debility, by rendering the solids denser and firmer.
Axis, 1. In anatomy means the second vertebra, or joint, of the neck. 2. An imaginary line passing through the center of a place, and equally distant from the sides.
Cartilage, A white elastic substance, which serves to facilitate the motions of the bones, and to connect them together; often called gristle.
Catheter, A small tubular instrument, to introduce into the bladder to draw off the water, when the natural discharge is impeded or suppressed.
Cavity, A hollow place.
Clitoris, A small elevated organ, situated within the labia, or lips, of the organs of generation, being the seat of pleasure in sexual intercourse.
Coagula, Clots of blood.
Coition, The act of veneral intercourse between the sexes.
Conception, The impregnation of the womb.
Contagious, Catching; that which may be communicated from one person to another by contact; or by a subtil excreted matter.
Dilatation, The act of expanding or enlarging.
Distend, To stretch; enlarge; spread apart.
Embryo, *In physiology*, means the first germ of an animal in the womb, before the several members are distinctly formed.
Enema, An injection or clyster; a liquid substance injected into the rectum.

Ergot, A morbid excrescence in grain, particularly rye. It is a powerful and deleterious substance, sometimes used to induce forcible pains in child-birth. Its improper administration has frequently produced much mischief to both mother and child.

Fallopian tubes, Small fleshy tubes, two in number, attached to the two opposite sides of the womb.

Flooding, Any preternatural discharge of blood from the uterus.

Fœtus, The child enclosed in the uterus of its mother is called a *fœtus*, from the time its parts are distinctly formed, to its birth.

Fontanelle, A vacancy in the cranium, or scull of infants.

Friction, The act of rubbing the surface of one body against that of another.

Function, The office which any particular part of the human body is intended to perform.

Generation, The act of begetting or propagating a being.

Gestation, The state of pregnancy, from conception to delivery.

Hymen, The virginal membrane, generally partly closing the entrance to the vagina.

Incontinency, Unchastity, want of restraint to the sexual appetite; free or illegal indulgence of lust; lewdness.

Labia pudendi, The lips of the external parts of the organs of generation.

Labor, *Labor pains*, } The pangs and efforts of child-birth.

Local, Belonging to a part, not to the whole.

Lochia, Evacuations from the womb, which follow child-birth.

Lochial, Appertaining to the lochia.

Lubricant, Any substance that makes the part to which it is applied smooth or slippery.

Meatus urinarius, The external orifice of the urethra; situated in women just beneath the os pubis, within the labia.

Mechanism, Action in any process according to the laws by which such action or process is governed.

Meconium, The green excrementitious substance that is found in the large intestines of the fœtus.

Menses, The monthly discharge peculiar to women.

Menstrual, Pertaining to the menses.

Menstruate, To discharge the menstrual fluid.

Menstruation, The act of discharging the menstrual fluid.

Membrane, A thin, delicate, flexible skin.

Nausea, An inclination to vomit, without effecting it; also, a disgust of food, approaching to vomiting.

Navel-string, A cord-like substance, that proceeds from the navel of the fœtus to the center of the placenta. It is frequently called the umbilical cord.

Nymphæ, Two semi-circular, oblong, thin bodies, situated within the labia.

Organ, A part of the body capable of performing some perfect act or operation.

Organization, Structure; form; suitable disposition of parts which are to act together in a compound body.

Orifice, The opening or mouth of a tube, or other cavity.

Os coccygis, The extreme end or lower termination of the sacrum, o back-bone.
Os pubis, The front bones of the pelvis.
Os sacrum, That part of the lower termination of the back bone, situated between the last joint of the latter bone, and the os coccygis.
Os tincæ, The mouth of the uterus or womb.
Ossa innominata, The two large bones forming the sides and front of the pelvis; the front being called the os pubis.
Ovaries, Two small bodies of a flattened and oval form; one of which is situated on each side of the uterus. They were formerly called the female testicles.
Paracentesis, The operation of tapping, as for dropsy.
Parturition, The act of bringing forth or being delivered of young.
Pelvis, The cavity below the belly, containing the internal organs of generation, &c.
Perineum, The space between the anus and the parts of generation.
Penis, One of the male organs of generation.
Pessary, An instrument that is introduced into the vagina, to support the uterus.
Physical, Pertaining to material things, as opposed to things *imaginary* or *immaterial*.
Physiological, Pertaining to the science which treats of the phenomena proper to *living* bodies.
Placenta, (See "*After-birth.*")
Pregnancy, The state of being with child.
Presentation, The manner in which the fœtus presents itself to the orifice of the womb, in child-birth.
Preternatural, A state or manner different from the common order of nature.
Puberty, The age at which persons are capable of procreating and bearing children.
Puerperal, Appertaining to child-bearing; as puerperal fever, &c.
Pulsation, The beating or throbbing of the heart, or of an artery.
Rectum, The lower portion of the intestines.
Secreted, Substances produced or separated from the blood, different from the blood itself, are said to be secreted.
Semen, The seed, or prolific fluid secreted in the testicles, which is essential to generation.
Seminal, Pertaining to semen.
Sensual, In the sense here used, means, the indulgence of a lustful appetite or passion.
Sexual, Denoting the distinction and office of male and female.
Still-born, Dead at the birth.
Structure, Manner of organization of animals, &c.
Stupor, Insensibility; numbness.
Sutures, The seams or joints which unite the bones of the skull.
Testicles, Two small oval bodies, forming a part of the male organs of generation.
Touching, The introduction of one or two fingers into the vagina, for the purpose of ascertaining the situation of parts, or the existence of labor.
Umbilical, Pertaining to the navel.

Urahra, The membranous canal leading to the bladder, through which the urine is discharged.
Uterus, The womb.
Vaccination, The act of inoculating persons with the cow pox.
Vagina, The canal which leads to the womb.
Vibrating, Moving or swinging backwards and forwards, as a clock pendulum.
Vice versa, Two Latin words, which mean, "The terms being exchanged;" as for example, The wise are prudent; and *vice versa*, the prudent are wise.
Virginity, The state of having had no sexual intercourse with man.
Waters, A fluid contained in a membranous sack, which envelopes the fœtus

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PLATES,

WITH THEIR EXPLANATIONS.

☞ The reader should bear it particularly in mind, that as figures on paper always represent the object, no matter what its shape may be, upon a flat surface, some effort of the imagination is necessary in order to obtain a correct idea of what is intended to be represented.

PLATE I.

PESSARIES.—SEE PAGES 64, 65.

Fig. 1.

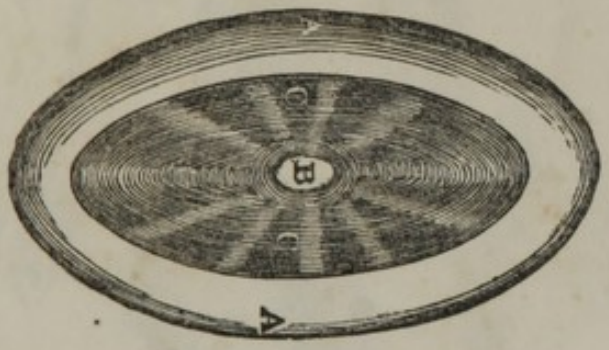


Fig. 2.

Fig. 1, represents a round Pessary, of a middle size.

A A—The circumference of the pessary, two inches and four-tenths in diameter.

B—A hole through the centre, to permit any discharges to pass, three-tenths of an inch in diameter.

C C—A depression; the dark part within the light ring being sunk, not altogether dissimilar to a shallow basin, for the mouth of the womb to rest in the ring representing the sides or edges of the basin or pessary, and are thick and rounded.

Fig. 2, represents an oval pessary, which, on some accounts, is preferred to the round. The round, however, is most commonly used. The letters in this refer to the same parts of the instrument as in figure 1, and, therefore, need no further explanation.

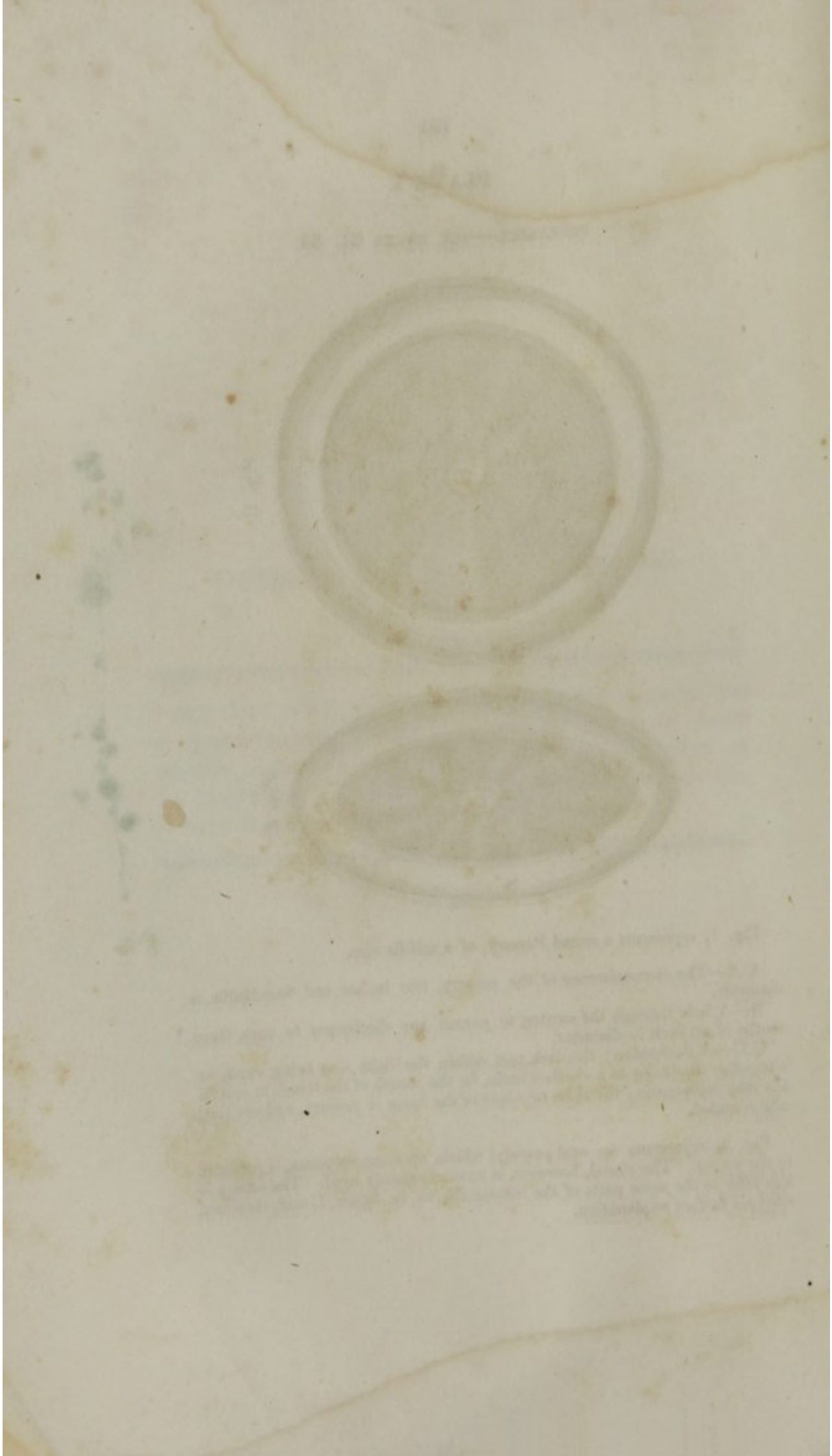


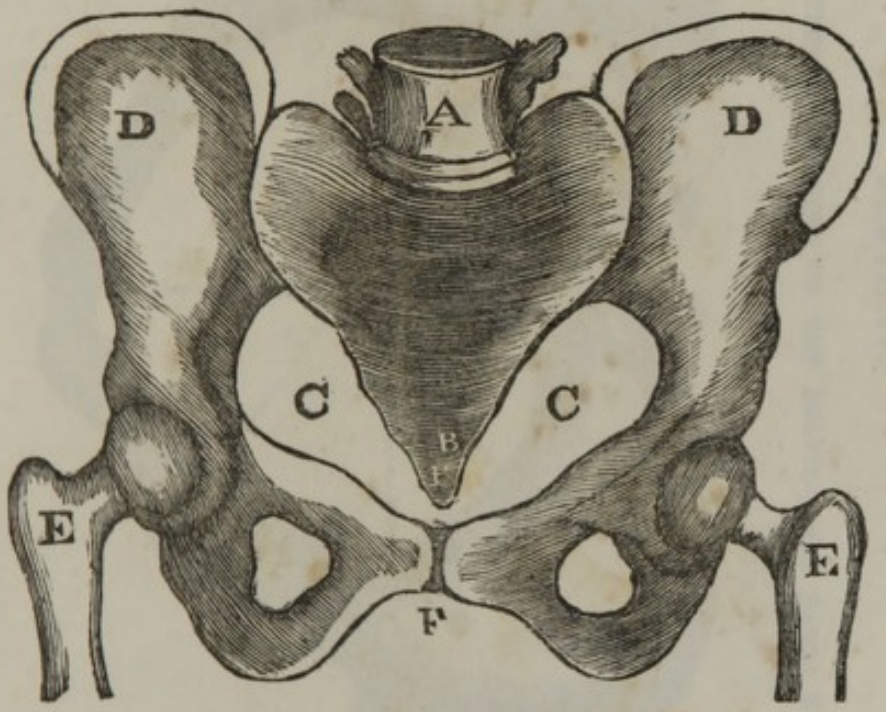
PLATE II.

FEMALE ORGANS OF GENERATION.—SEE PAGES 10, 88

A—The uterus, or womb.
B B—The fallopian tubes.
C C—The ligaments which connect the womb to the pelvis.
D D—The ovaries.
E—The mouth of the womb.
F F—The round ligaments which pass out of the abdomen, and are fixed to the labia.
G—The inside of the vagina, which is cut open.
H H—The labia.

PLATE III.

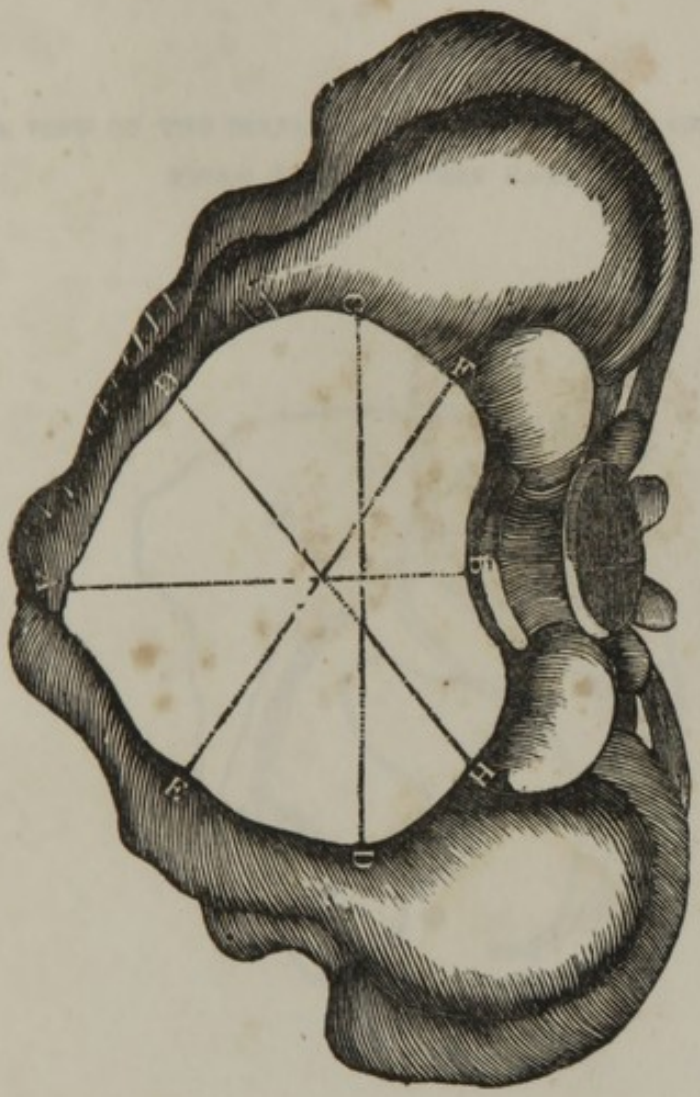
GENERAL VIEW OF THE BONES OF THE PELVIS.—SEE PAGES, 9, 98



A—The last vertebra or bone of the loins.
B—The os coccygis, or extreme termination of the back bone.
C C—The cavity of the pelvis; obscured by the coccygis.
D D—The ossa innominata, or two bones which compose the sides of the pelvis, projecting up towards the ribs.
E E—The thigh bones, with their round heads.
F—The symphises pubes, or union of the front ones.

PLATE IV.

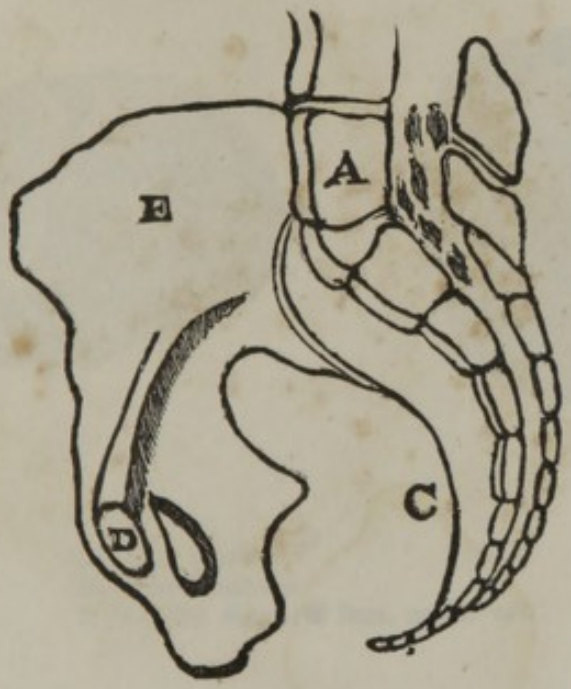
VIEW OF THE SUPERIOR OPENING OF THE PELVIS.—SEE PAGES 9, 98.



A B—Shortest diameter of the pelvis.
C D—Longest diameter, from hip to hip.
E F, G H—Diagonal diameters.

PLATE V.

SIDE VIEW OF THE PELVIS, DIVIDED THROUGH THE CENTRE FROM FRONT TO BACK.—SEE PAGE 98.



A—The last vertebra, or bone of the the loins.
B—The coccygis.
C—Hollow of the sacrum.
D—The os pubis.
E—The os innominatum, or side bone of the pelvis.

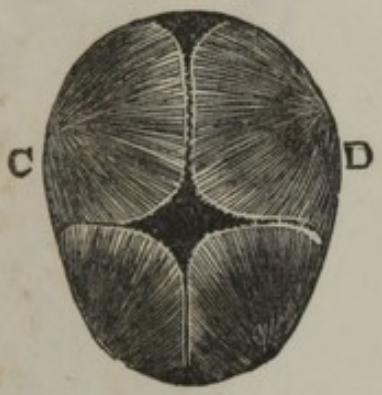
C
E

PLATE VI.

BONES OF A CHILD'S HEAD.—SEE PAGE 100, 121.

Fig. 1.

Fig. 2.



A—The forehead.
B—The hindhead.
C D—The diameter from ear to ear.

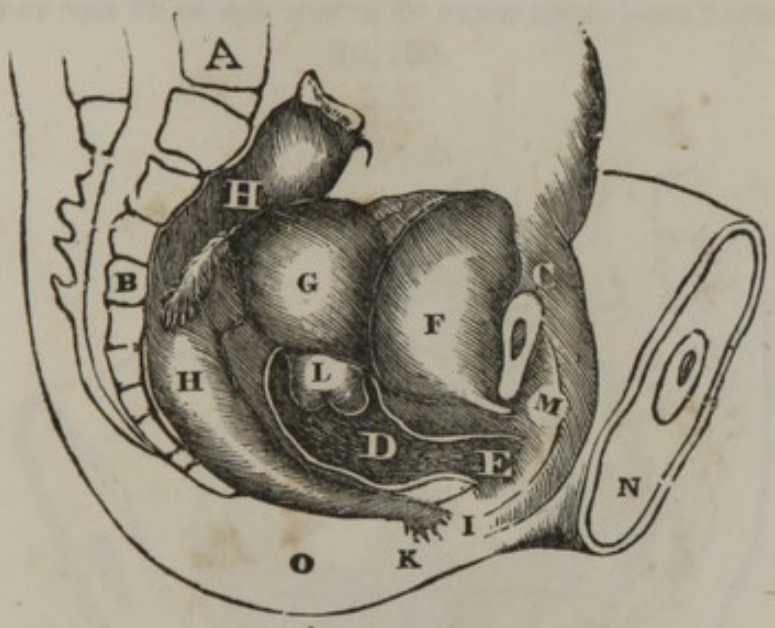
PLATE VII.

This plate represents the child's head as passing the upper strait of the pelvis; the passage contracted about one-fifth of its diameter, by the jutting inwards of the back bone. The natural pains of labor are sufficient to overcome difficulty of this kind, if suitable time be given.—See pages 99, 122.

PLATE VIII.

VIEW OF THE NATURAL POSITION OF THE BLADDER AND WOMB.

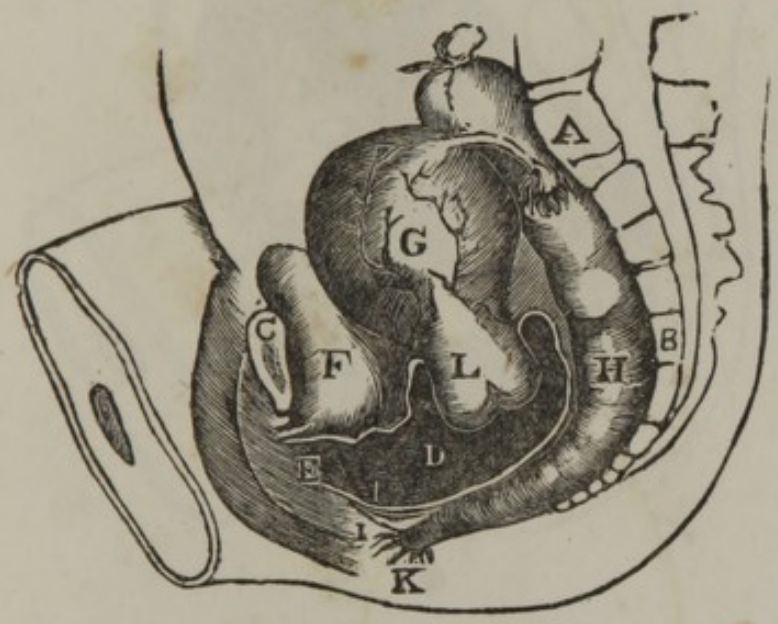
SEE PAGES 9, 10, 88, 94, 95, 100.



A—The last vertebra of the loins.
B—The sacrum, or rump bone.
C—The os pubis, or front bone.
D—The vagina, or canal leading to the womb.
E—The external orifice of the vagina.
F—The bladder.
G—The womb, not impregnated.
H H—The large or straight intestine lying behind and under the womb.
I—The perenium, or space between the external orifice of the vagina and anus.
K—The anus.
L—The neck and mouth of the womb.
M—The urethra, or urinary canal.
N—The stump of the left thigh cut off.
O—The buttock.

PLATE IX

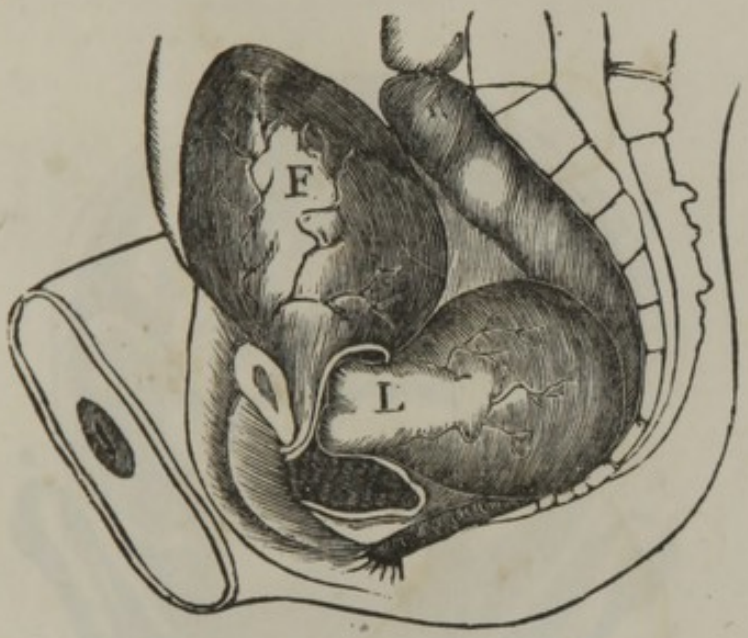
VIEW OF THE NATURAL CONDITION OF THE CONTENTS OF THE PELVIS AT THE 3D OR 4TH MONTH OF PREGNANCY.—SEE PAGE 9, 10, 100.



The letters in this plate refer to the same parts as those in Plate VIII., to which it is exactly similar, excepting the womb, which is enlarged.

PLATE X.

VIEW OF A RETROVERTED WOMB.—SEE PAGE 95.



F—The distended bladder
L—The neck of the womb.

PLATE XI

FRONT VIEW OF A CHILD IN THE WOMB AT THE FULL PERIOD OF PREGNANCY.—SEE PAGE 100.

A A—The os innominata, or side bones of the pelvis.

PLATE XII.

VIEW OF A NATURAL PRESENTATION OF THE CHILD'S HEAD AT THE COMMENCEMENT OF LABOR.—SEE PAGE 101.

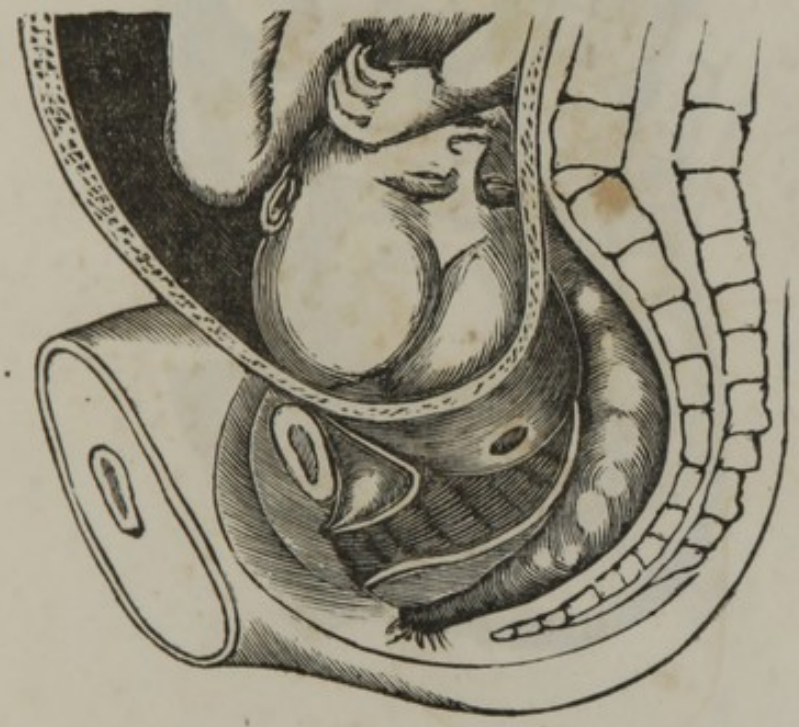
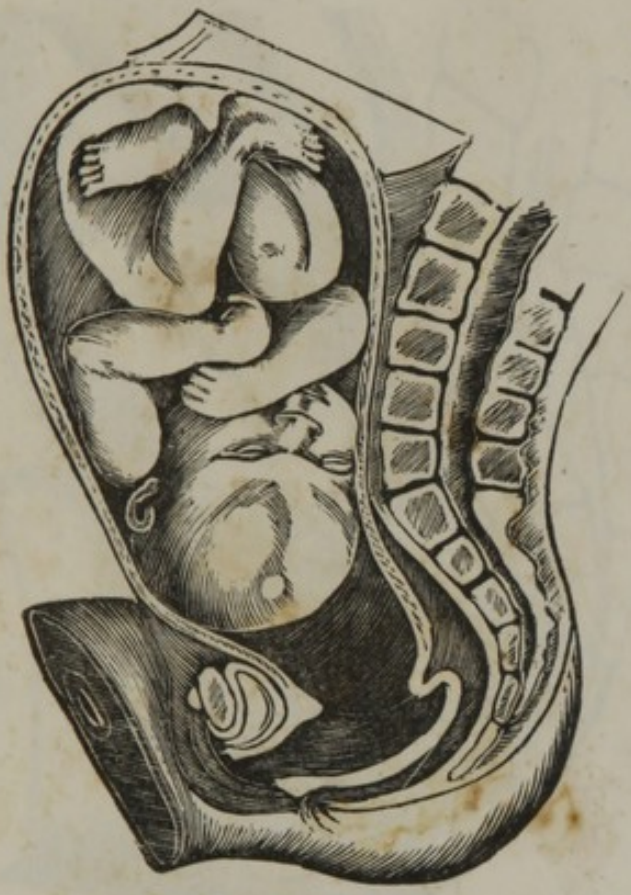
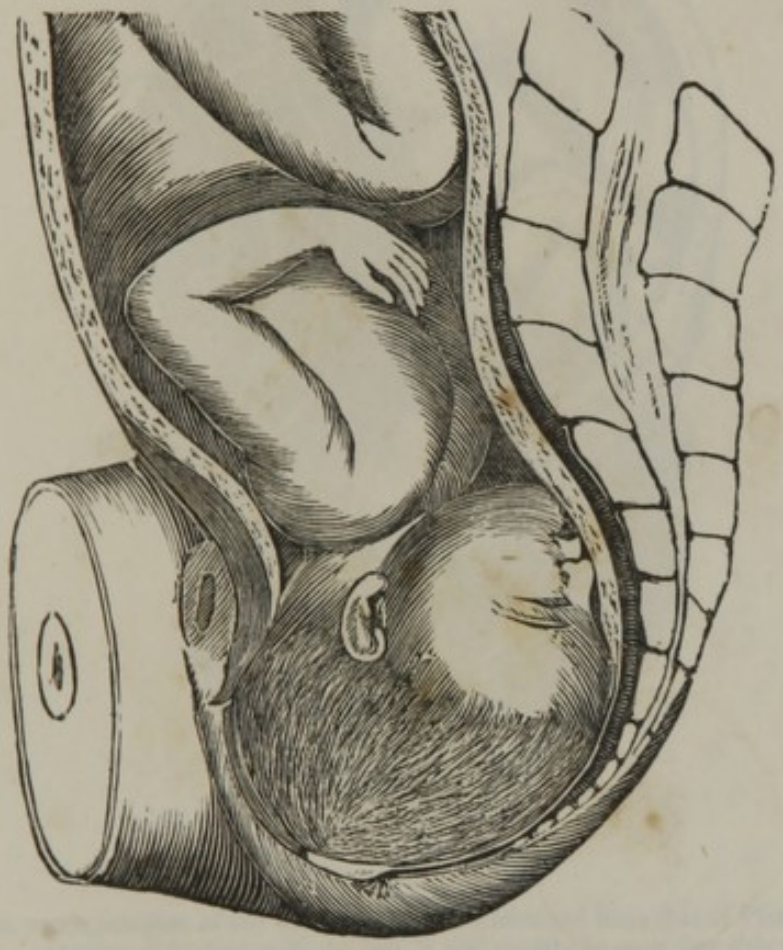


PLATE XIII



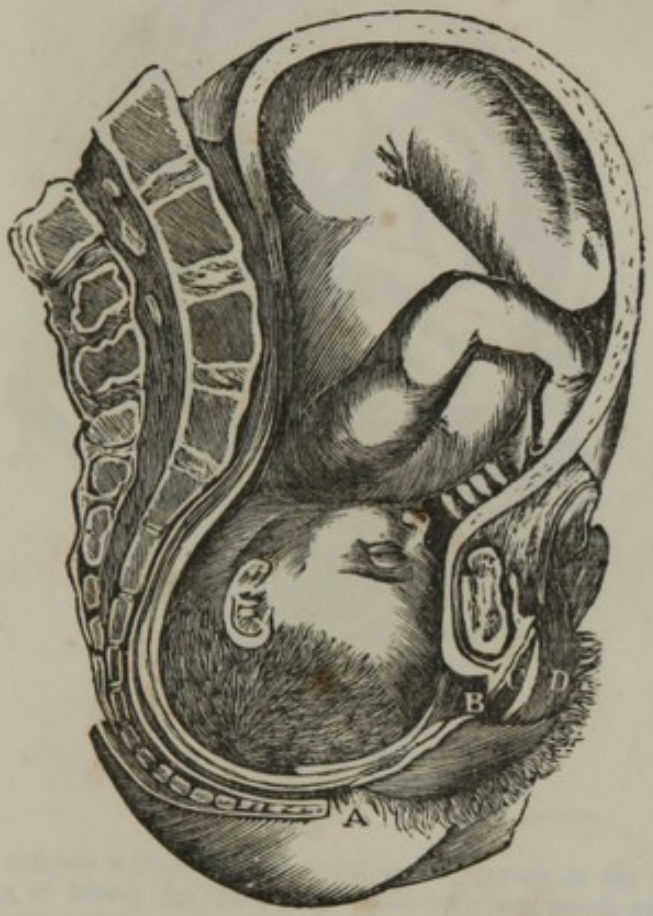
Representation of the child's head entering the upper strait of the pelvis; the mouth of the womb considerably opened.—See pages 99, 101.

PLATE XIV



This plate represents the head much further advanced than Plate XIII, passing the lower strait of the pelvis, with the crown presenting at the external orifice of the vagina, and the face in the hollow of the sacrum.—See pages 99, 102, 122.

PLATE XV.



A representation of the head in a position reversed from that of Plate XIV By comparing this plate with the last, it will readily be seen that this position of the head must be far more inconvenient for child-birth than that: Nevertheless, children are often born in this manner, though labor is much more tedious and painful.—See page 122.

A—The anus.
B—The external orifice of the vagina.
C—The nymphæ.
D—The labia pudenda of the left side.

PLATE XVI.

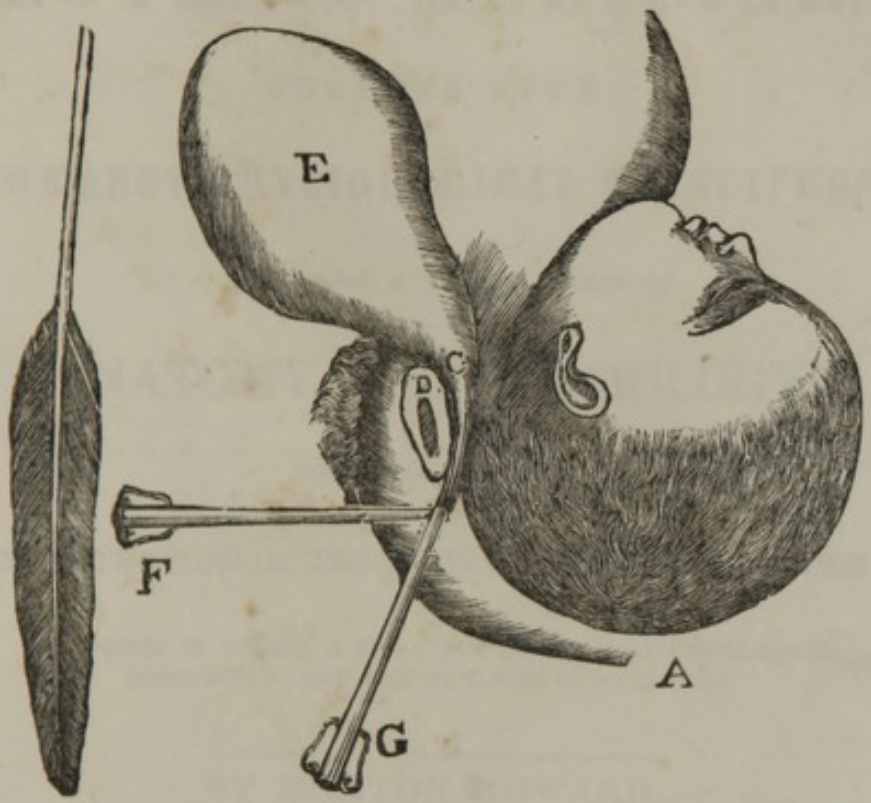
TWINS.—SEE PAGES 132.

This plate exhibits a front view of twins as they appear in the womb at the beginning of labor; the front part of the abdomen, womb, and membranes, being removed.

A A—The upper part of the innominata or side bones of the pelvis.
B—The acetabulum, or socket which receives the head of the thigh bone.
C C—The lower part of the os innominata.
D—The extreme point of the coccygis.
E—The lower part of the rectum.
F F—The sides of the vagina.
G—The mouth of the womb, a little opened.
H—The lower part of the womb, filled with the waters which descend below the head of the child that presents.
I I—The two placentas attached to the back part of the womb, the two fœtuses lying before them; one with its head presenting in a natural position at the upper strait of the pelvis; the other with its head at the fundus or upper part of the womb. The body of each child is represented as entangled in its proper navel-cord, which is often the case with either twins or single children.
K—A part of the membranes of one of the children.

PLATE XVII.

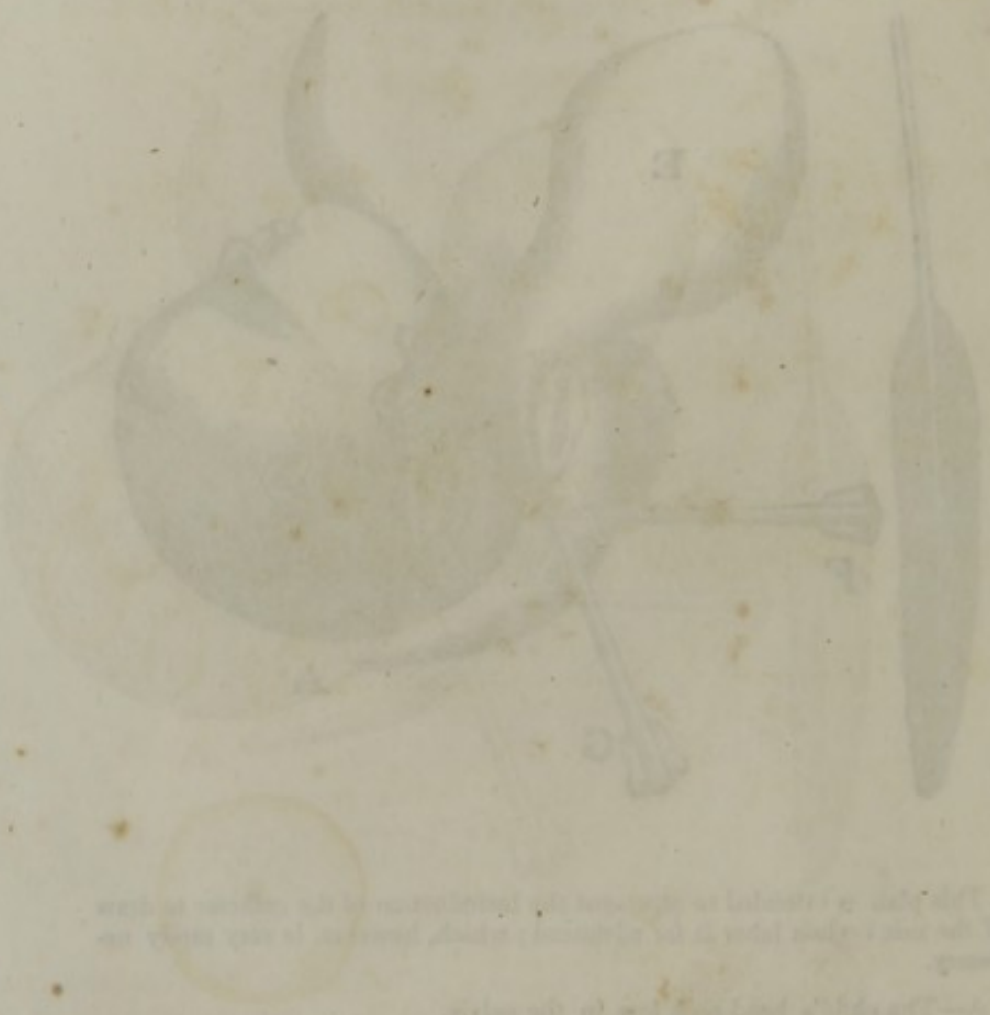
INTRODUCTION OF THE CATHETER.—SEE PAGE 102.



This plate is intended to represent the introduction of the catheter to draw off the urine when labor is far advanced; which, however, is very rarely necessary.

A—The child's head seen low in the pelvis.
E—The distended bladder.
D—The front bone.
C—The neck of the bladder pressed (and consequently much lengthened,) between the head of the child and the front bone.

In a case of this kind, the catheter cannot be introduced in the usual manner; but the end must first be introduced into the urethra or neck of the bladder, as represented at F; then gradually turn it back, as at G, and it will readily pass into the bladder between the child's head and the front bone.



AN

IMPROVED SYSTEM

OF

BOTANIC MEDICINE,

FOUNDED UPON

CORRECT PHYSIOLOGICAL PRINCIPLES;

EMBRACING A CONCISE VIEW OF

ANATOMY AND PHYSIOLOGY;

TOGETHER WITH AN

ILLUSTRATION OF THE NEW THEORY OF MEDICINE

TO WHICH IS ADDED, A TREATISE ON FEMALE COMPLAINTS, MIDWIFERY, AND THE DISEASES OF CHILDREN.

BY HORTON HOWARD.

IN THREE VOLUMES.

VOL. III.

FOURTH EDITION.

CINCINNATI:
H. M. RULISON, QUEEN CITY PUBLISHING HOUSE, 115½ MAIN ST.
PHILADELPHIA:
QUAKER CITY PUBLISHING HOUSE, 32 SOUTH THIRD ST.
1856.

Entered according to Act of Congress in the year 1848, by
HORTON HOWARD
In the Clerk's Office of the District Court of Ohio.

STEREOTYPED BY J. A. JAMES AND CO., CINCINNATI,
FOR THE HEIRS OF HORTON HOWARD, DEC.

OF DISEASES, SYMPTOMS, AND METHOD OF CURE.

THE reader will have perceived that in the first volume we devoted ourselves exclusively to an illustration of the grand fundamental principles of the new Physiological System of medical practice, together with a consideration of the true nature of disease, and correct method of cure. We are very sensible, however, that much more might have been written upon most subjects therein embraced; but knowing that brevity would be most agreeable to readers in general, we have preferred seizing upon a few of the most important facts, instead of entering into minute detail. We trust, therefore, that the reader will readily comprehend the important principles that we have endeavored to lay down, upon which the healing art is based, and on which medicines must act in the restoration of health.

In treating of Disease, we shall also endeavor to be concise but comprehensive; and confine ourselves generally to those complaints which are most common or peculiar. The reader, if he has perused the first volume, has no doubt perceived that we disregard all the various and contradictory systems of nosology which have been offered to the world, and which we confidently assert have had no better effect than to amuse the speculative mind, without in any degree improving the healing art. We believe with Dr. RUSH, that disease is a *unit;* or, in other words, that all diseases arise from a general proximate cause, and, hence, may be cured, if curable, by a general remedy or remedies. We do not mean, however, that one single herb or root, will cure all complaints. Disease is caused, as in the first volume has been abundantly shown, by a diminution of the living power of the system; the consequence of which is, a failure of strength, loss of tone of the organs, and foulness of the stomach and intestines. The indications of cure are, therefore, to restore the strength and tone of the organs, and cleanse the stomach by emetics, and the bowels by injections; to which we have also added the sparing use of cathartics or

purges. Now each of these indications may be answered by a great variety of articles, adapted to these different purposes. And hence, as disease is produced by a general cause, it may, in all its varieties, be removed by a general remedy or remedies.

And these general remedies are so systematically and harmoniously adapted to each other, and to the human body; and their principles and modes of administration so simplified, that any family possessing an ordinary share of common sense, may become their own physician in almost all cases of disease. We very well know that this doctrine is contrary to the common ideas of people in general, and of the medical Faculty in particular; but it has been verified, especially of late years, on a very extensive scale, and also has the countenance of some of the best men who have ever adorned the science of medicine. JOHN HOWARD, the celebrated English philanthropist, said that "every man must be his own physician; he must prescribe for, and practice on himself." And Dr. RUSH, whose benevolence was of the same enlightened and liberal cast with JOHN HOWARD'S, recommends the general diffusion of medical knowledge, by an academical education: for the essential principles of medicine, says he, are very few, and plain. All the morbid effects, continues he, of heat and cold, of eating and drinking, and the exercises of the body and mind, may be taught with as much ease as the multiplication table.

These are the sentiments of men eminent for their philanthropy and scientific attainments; and the extraordinary success attending the botanical practice, in the hands of families, abundantly confirms their correctness. We boldly challenge the world for any instances of success, in the old schools of medicine, equal to that which has attended the Botanical practice in the hands of the people themselves. And to this end are we laboring to take the practice of medicine out of the hands of the physicians, and place it where it ought to be; in short, to produce a new and correct order of things, as Dr. RUSH also says, when the knowledge and use of medicine, by the people, "shall be considered amongst the most essential articles and rights of man."

We boldly and fearlessly proclaim, that families ought to be instructed in the knowledge of the means of curing their own maladies as well as preparing their own food. "Let us strip our profession," says Dr. RUSH, "of every thing that looks like mystery and imposition, and clothe medical knowledge in a dress so simple and intelligible, that it may become a part of academical education in all our seminaries of learning. Truth is simple upon all subjects; and upon those essential to the general happiness of mankind, it is obvious to the meanest

capacities. There is no man so simple, that cannot be taught to cultivate grain; and there is no woman who cannot be taught to make it into bread. And shall the means of preserving our health, by the cultivation and preparation of proper aliment, be so intelligible, and yet, the means of restoring it, when lost, so abstruse, that we must take years of study, to discover and apply them? To suppose this, is to call in question the goodness of Deity, and to believe that he acts without system and unity in his works." "In thus recommending," continues Dr. Rush, "the general diffusion of medical knowledge, by an academical education, let it not be supposed that I wish to see the exercise of medicine abolished as a regular profession. Surgical operations, and diseases which rarely occur, may require professional aid; but the knowledge necessary for those purposes, is soon acquired; and two or three persons, separated from other pursuits, would be sufficient to meet the demands of a city containing forty thousand people."

But how have these benevolent views of the venerable Rush been received or complied with? They have been met by prejudices the most inveterate, and opposition the most untiring. Instead of clothing medical science with simplicity, and making it a part of all education, the most unwearied exertions have been made to shade it with impenetrable mystery; to bury it in a mass of technical lumber, and pompous, unmeaning phraseology, unintelligible to persons of common leisure or learning. How great soever may be the fame which Dr. Rush has so justly acquired by his scientific attainments however revered may be his other writings; and how much deference soever may have been paid to his sentiments upon other subjects, but very little heed has been given to those benevolent designs which are disclosed in the foregoing quotations. Instead of enlightening the public mind, by a general medical education, the Faculty have been strengthening all those prejudices which the mysteries of their art had very naturally as well as intentionally produced.

These prejudices and mysteries, are the engines by which the people have been made to forge their own chains, and by which they are bound to the car of medical despotism and scientific tyranny. Our grand object in the present work is to furnish the means by which those chains may be broken, and mankind set free from this oppressive bondage. It was in these United States, that the spirit of independence, driven from the Old World, first enkindled the flame of civil liberty, and revived the principles of self-government: And it is here, too, that the desire to throw off the yoke of scientific medical oppression, which so long has rested with resistless weight upon our necks, has first become manifest; and here also have

the means been furnished by a benign Providence to do this work effectually; the knowledge whereof we are hereby endeavoring to communicate to the world. We entreat you, then, as you value the inestimable blessing of health for yourselves or your families; or as you value your independence of medical nabobs,* to lay aside your prejudices and examine this interesting subject for yourselves. Honor your own judgments, and do justice to posterity, by preventing the oppressive prejudices of the present age, from descending with accumulated power to those who may be destined to succeed you on the stage of life.

Our remedies are all simple, as nature herself is simple; they are moreover innocent, as all medicines, as well as food, ought to be; harmless towards nature, but powerful in opposing disease; restoring health by changing a diseased action to a healthy one, instead of preying, as the mineral and all other poisons do, upon the vital power, and thus contaminating the fluids and destroying the tone of the organs, which is the natural and unvarying effect of disease. Then why continue the use of these poisonous drugs, when others, both innocent and efficacious, are offered to your acceptance? Why neglect the means which a bounteous Providence has provided to relieve our maladies, and which he has scattered with profusion in every land? Why, we will once more ask, continue in the use of those inhospitable medicines which have so often given melancholy proofs of their destructive character, by scattering disease, dismay, and death, amongst the most enlightened portions of the human race? when, at the same time, there grow, not only "upon some Alpine height, or along the margin of some mighty stream," but indiscriminately over mountain, hill, and dale, the choicest remedies for all the maladies of man.

We can assure the reader that these sentiments are not the ebullitions of enphrenzied enthusiasm or bigoted zeal to support the doctrines of a new sect; they are the sober conclusions of deliberate investigation, and the result of experimen tal facts. We cheerfully and confidently submit them to the world, to be tested by the scrutiny of the learned, or the experience of the multitude, and decided at the unerring tribunal of public opinion. And in thus submitting this work to the public, we take this occasion to express our firm convictions that scarcely any family will be subject to any hazard in using any of the articles commonly recommended; they are all harmless; nothing poisonous or destructive to life; and, there-

* The reader should bear in mind that such remarks as these are not intended for the whole body of physicians; but for that portion only to which they may be justly applicable.

ore, the main object is to give the medicine in some way or other, if not exactly as hereinafter directed, nothing need be apprehended, but be sure and give it in some form; remembering that the lobelia cleanses the stomach, relieves spasms, difficulty of breathing, and, above all, gives an impulse which nothing else will, to the living power, in all cases of suspended animation, or prostration of the vital power from any cause whatever. On the other hand, remember that capsicum possesses the quality of permanently keeping up and strengthening the vital power, and should, therefore, be almost always used in every disease. The astringent and bitter tonics, are to be used to restore the tone of the organs, which is always more or less impaired by disease—the astringents are to be more especially used in bowel complaints, such as looseness, dysentery, &c., and the bitters to restore the appetite. Both astringents and bitters, may be used indiscriminately, and should almost always be combined with the capsicum to strengthen the living power.

For a description of a course of medicine, so often mentioned, under the head of TREATMENT, the reader is referred to the INDEX. It should always be resorted to in violent attacks, and in cases which do not readily yield to other means.

ABSCESS, BOILS, &c

THE term, abscess, is applied to those cavities in which collections of pus or matter are formed, in any part of the system, such as boils, and all other swellings, which are preceded by inflammation.

Inflammations which terminate in abscess, usually come on with itching, dryness, redness, and increased heat of the part, which symptoms are succeeded by a small tumor or swelling, through which shooting and throbbing pains are commonly felt. If the inflammation runs high, and is of considerable extent, feverish symptoms come on; the pulse becomes full, hard, and quick; the skin dry and hot, with increased thirst.

Inflammations of this kind may terminate in different ways, either by *resolution*, *suppuration*, *adhesion*, or *gangrene*.

By resolution, is understood the natural and gradual cessation of the inflammatory symptoms, and the part becoming sound again.

Suppuration implies the formation of pus or matter in the inflamed part, and forming a cavity, which is properly termed an abscess.

By adhesion is understood a growing together of inflamed parts; which is said often to take place in twenty-four or thirty hours.

Gangrene is the incipient or first stage of mortification.

The symptoms which indicate the formation of pus are, an abatement of the feverish symptoms; a diminution of the acute pain, which is succeeded by a heavy, cold, and dull uneasiness in the part affected; softness and whiteness of the most elevated part or point of the swelling, whilst the other parts appear more red. If the matter is near the surface, we may be still further assured of its formation and existence by applying a finger to each side of the head or most elevated part of the swelling, and by gently or quickly pressing down with one, a gush or movement of the fluid may be felt under the other finger. When this fluctuation can be felt, there need be no doubt that matter is formed, and we may proceed immediately to make an opening in the abscess with a lancet, or some sharp instrument, to evacuate its contents.

When the matter, however, is more deeply seated, the fluctuation cannot always be felt. But in most cases of this nature, the sudden subsidence or abatement of the inflammatory symptoms, the repeated chills, the sense of weight and coldness of the part, may be regarded as good evidence of the existence of matter and its ripeness for opening; and if the patient is afterwards attacked with emaciation, night sweats, and other hectic symptoms, we may regard them as certain signs of a hidden collection of matter.

The symptoms which denote the termination of inflammation in gangrene are, a sudden diminution of the pain and fever, the part becoming livid or green, the cuticle or scarf skin being detached from the true skin, under which is effused a turbid or dirty water; the tension, swelling, and hardness subside, and, at the same time, a *crepitus*, or crackling noise, is heard on pressing upon the part, which is owing to a generation of air in the cellular membrane which is interposed between the skin and flesh. In this stage of the disease it is termed gangrene; but as the death of the part progresses, it becomes black and fibrous or thready and destitute of natural heat, sensation, and motion, and it is then termed a *sphacelus* or mortification.

Treatment.—If the inflammation proceed from any foreign or extraneous matter lodged in the flesh, such as a thorn, or splinter of wood, or any other substance, it ought immediately to be removed; and if necessary to its removal, the wound should be laid open with a knife or lancet so that the foreign body may readily be got at and removed, when it must be treated the same as other cases of inflammation.

In the first stages of inflammation arising from any other cause than injuries, such as boils, or other inflamed swellings, it will be proper to attempt the cure by producing a resolution of the tumor or swelling. To do this, it may be proper to ap-

ply cold water, which will have a powerful tendency to remove the inflammation; or we may bathe the part with a strong wash of pepper and vinegar, or with bathing drops. The application of the leaves of the common garden cabbage, or of skunk cabbage, to the part, will have a tendency to produce a moisture of the skin, arrest the inflammation, and dissolve the tumor. Cold slippery elm poultices kept wet with cold water will also have a good effect in promoting the resolution of the swelling.

But the most powerful discutient remedy, and which is by far the most certain to disperse the tumor, and remove all other bad symptoms, is a full course of medicine. Resorting to this process as the circumstances of the case may require, will remove feverish symptoms which always attend large inflammations, and has a most powerful tendency to promote a healthy action in the diseased part, and produce a resolution of the tumor. The frequent application of the vapor bath, taking at the same time some of the diaphoretic powders or capsicum, and omitting an emetic, will be found highly serviceable in removing the inflammation and swelling which precede an abscess.

If, notwithstanding these means, the tumor should show a disposition to suppurate, poultices should be applied, and often wetted with cold water, which will allay the pain and inflammation. The poultice must be renewed as often as it inclines to become sour. The vapor bath alone, or a full course of medicine, may also, if necessary in extensive inflammations, be resorted to during the suppurative process, and will always be found very beneficial. But it is seldom necessary to do any thing more when there is no unusual tendency to the occurrence of boils, than to treat the boil locally as above, and take the alterative syrup three or four times a day. This will change the diathesis or habit of body, giving rise to boils. An occasional dose of sanguinaria will often be sufficient also. The course of medicine as above, is not now much employed to cure boils.

When the suppuration is completed, or as commonly termed, is ripe, which is to be known by the appearances we have herein before noticed, the tumor should be opened with a lancet or other sharp instrument, and the matter pressed out; though it is thought best, by some, in very large abscesses, not to evacuate the whole of the matter at once, but by degrees. After the matter is discharged, if there be no pain nor inflammatory symptoms, the sore may be dressed with salve alone; but if symptoms of inflammation still continue, or should they at any time afterward arise, a poultice must be applied, and occasionally wetted with cold water as before directed.

Many cases of inflammation and abscess are continually occurring, such as ordinary boils, &c. which are too trifling to require much attention in any stage; but in more serious cases,

after the abscess is opened, the powers of the system should be supported, and its tone kept up by the use of the bitters, diaphoretic powders, capsicum, &c., which will also promote the formation of healthy matter; a circumstance essentially necessary to the rapid healing of the ulcer.

Good healthy pus is of the consistence and color of yellow cream; without smell or taste, and in general heavier than water, with which, at the common heat of the atmosphere, it will not unite, but at a higher temperature, readily combines with it. If the matter of the abscess is not evacuated it is absorbed and passes into the blood, and the cavity generally becomes filled up by an operation of the vessels, termed granulation, from the new parts appearing in the form of small red grains. The cavity also becomes filled in the same manner when the abscess is opened and the matter discharged in the usual way. When this process goes on favorably, the granulations are of a florid red color, and proceed in a regular manner until the abscess is completely filled up.

Sometimes the granulations are too exuberant, and form irregular shaped masses which project beyond the surface or lips of the sore, from which circumstance it is commonly called proud flesh, and when touched is easily excited to bleeding We have, however, never met with proud flesh in an ulcer of any kind, treated agreeably to the foregoing directions; but should it occur, a strong decoction of the pond lily, with the addition of a little fine alum, may be applied as a wash; or burnt alum, finely pulverized, may be sprinkled on the part. The compound tincture of myrrh is highly recommended by some, to remove proud flesh.

When inflammation threatens to terminate in mortification, or if it has already taken place, the most active and efficient means should be adopted to check it immediately; for the treatment of which, see under the head of mortification.

AGUE AND FEVER OR INTERMITTENT FEVER.

Ague and Fever is a disease of very common occurrence in low marshy countries and situations, more especially in warm climates.

Systematic writers have adopted names for this complaint according to the season of the year at which it occurs That which occurs in the spring, is termed vernal, and that in the fall, autumnal. Agues are also distinguished according to the periods between the fits. When they return within the space of twenty-four hours, they are called quotidians when every other

day, they are called tertians; when every third day, they are termed quartans.

Agues are often obstinate to cure, especially in warm climates, where they frequently give rise to other chronic complaints, particularly dropsical swellings, and enlargements of the liver or spleen, termed ague cakes.

An intermittent fever may be produced by any circumstance which has a tendency to depress the living power; such as watery poor diet; great fatigue; long watching or doing without sleep; intemperance; grief; great anxiety; exposure to cold; lying in damp rooms or beds; wearing damp clothes; and breathing a vitiated or noxious atmosphere; which last is by far the most universal and common cause of this complaint.

Each paroxysm of an intermittent fever is divided into three different stages, which are called the cold, the hot, and the sweating stages or fits.

The cold stage commences with a feeling of languor; a sense of debility or weakness; an aversion to motion; frequent yawning and stretching, and an aversion to food. The face and extremities become pale; the features shrunk; the bulk of every external part is diminished, and the skin over the whole body appears constricted, as if cold had been applied to it. These symptoms continuing to increase, the patient becomes very cold and universal rigors or shivering comes on; the respiration or breathing is short, frequent and anxious; the urine is almost colorless; sensibility is greatly impaired; the pulse is small, frequent, and often irregular.

The continuance of this stage is extremely various, from a few minutes to several hours, when the second or hot stage comes on with a sense of heat over the whole body; redness of the face; dryness of the skin; increased thirst; pain in the head; throbbing in the temples; anxiety and restlessness; the respiration is now fuller and more free, but still frequent; the tongue is furred; and the pulse more regular, hard, and full; when, if the attack has been severe, delirium perhaps will come on.

After these symptoms have continued for some time, a moisture breaks out on the forehead and by degrees becomes a sweat, which finally extends over the whole surface of the body. As the sweating progresses, the heat abates, the thirst ceases, breathing becomes free and full, and most of the functions are restored to their ordinary state; the patient, however, is left in a weak and wearied condition. This constitutes the third stage, and completes the paroxysm of fever.

It may, however, be remembered, that many deviations from the ordinary course of intermittents often occur. The different stages bear very different proportions to each other in different

cases, both as to the time of their duration and severity. There is also a great diversity in intermittents with regard to the situation in which the patient is left, and in which he remains after the paroxysm or fit. In some cases the patient eats, drinks, sleeps, and feels well, between the fits; at other times, although there is a perfect remission of fever, he continues weak and feeble, without any appetite, and even a loathing of food, attended sometimes with a great prostration of the living power. The stools sometimes appear natural, sometimes loose or costive, and often, especially in hot weather, presenting a dark, or what is termed a bilious appearance. The tongue becomes furred of a white, yellow, brown, or black color, attended mostly by a bad taste in the mouth.

There are also many other symptoms, and modifications of symptoms, often present in intermittents, which give a peculiar character to the complaint, and some of them evincing that the disease is of a very malignant form. Some of these are long and violent fits or paroxysms, attended with much anxiety and delirium; and when to these are added, great prostration of strength, vertigo or dizziness, fœtid or strong scented stools, the presence of dysentery, or of cholera morbus, the case may be considered of the worst character. The reverse of these symptoms may, of course, be considered as evidence of a mild form of disease.

Different names have been applied to intermittent fevers, such as bilious fever, when there are symptoms of a redundancy of bile; lake fever; and in those cases where there is only a chill without any or but very little shivering, and the patient between the fits appears to suffer much decline of health, chill-fever or chill and fever has, in many parts of the country, become a very popular name. But if the paroxysm commences with a shivering or shaking, leaves the patient pretty clear of disease, with the appetite not much impaired, and the functions pretty natural, the name of ague is generally applied to the complaint.

Treatment.—Mild forms of ague may generally be cured by the use of the tonic or ague pills, taken three times a day for two days. But in more confirmed cases, the treatment must be commenced by the administration of an anti-bilious cathartic. This is then to be followed after the cathartic has produced one or two motions upon the bowels, either by the tonic powders on page 426, according to the directions for their use, or the tonic pills may be given as directed on page 427.

When the chills are checked, the medicine may be discontinued for four or six days, when the tonic must again be repeated, or given as before for two or three days, to guard against a relapse which is liable to occur in all intermittent forms of disease.

In very obstinate cases, an emetic should be first administered. This should be composed of equal parts of lobelia and sanguinaria, and its operation promoted by a solution of super-carbonate of potash, (saleratus). After its operation a cathartic of the anti-bilious pills is to be given, and upon the operation of this the tonic must be given and continued until the chills are checked. In four or six days the cathartic is to be repeated, and then to be followed by the tonic for two days.

It is always beneficial to follow up, after the employment of the above course of remedies, by the use of some general tonic. This may be taken in the form of what is usually called bitters. Dogwood, or willow bark are good for this purpose. They may be powdered or bruised and digested in common whisky or in wine, and taken in convenient doses three times a day.

There are some forms of intermittent fever that will not readily yield to any treatment. In such cases, a course of depurative measures as the vapor bath and its adjuncts, as in the common course of medicine, page 461, may be employed to prepare the system for the tonics above prescribed.

Many who have heretofore depended alone on the depurative course, that is, the course of medicine for the cure of ague, have found it insufficient, and have been compelled to resort to the anti-intermittent tonics It is, therefore, well to commence the treatment with the tonics and resort to the depuratives only when the tonics seem not to act to satisfaction. If in those cases a thorough course of medicine is administered, and the tonics are then thoroughly used, there is no danger of a failure in the cure.

It is customary with some to commence the operation of vapor bathing, and giving an emetic a short time preceding the expected return of a paroxysm of intermittent, which often answers the best purpose, by preventing every symptom of the fit. But it sometimes happens that notwithstanding all that can be done in this way, the paroxysm comes on, and then it becomes very fatiguing and unpleasant to the patient; yet the good effects of the operation are not thereby lost.

The process of vapor bathing may be often very profitably commenced when the hot stage is coming on, as perspiration is then much easier promoted than it is previous to or during the cold stage. But in all cases where the process of steaming or vapor bathing and giving an emetic, does not prevent the paroxysm, it is better to resort to it after the fit has gone entirely off, and so long previous to the commencement of the succeeding paroxysm that the patient will be entirely recovered from the fatigue necessarily attendant on the operation.

An emetic may often be advantageously administered without vapor bathing; but in all bad cases the whole process of steaming, vomiting, &c., is the grand dependence for effecting a cure. During the intervals between the steamings, the patient should take of the diaphoretic powders and bitters frequently during his waking hours; and if there be much pain in the head, with restlessness and anxiety, the head must be bathed in cold water or vinegar, and doses of the nerve powder occasionally administered as the circumstances of the patient may require. Drafts applied to the feet may also have a good effect to remove the pain in the head. These may be made by spreading the dregs of the tincture of myrrh on cloth, or by wilting cabbage or burdock leaves, and applying them to the feet. Endeavors ought also to be used by the application of hot bricks, and the administration of cayenne, to keep up a perspiration, which will have a tendency to allay the irritation and anxiety which often attend bad cases of intermittents. If an enlargement of the spleen or, as commonly styled, an ague cake occurs during an attack of this complaint, it will probably be cured by the same means employed to remove the fever. Should this, however, not be the case, the affected part may be freely rubbed with any kind of bathing drops and have a hot brick or stone applied near it when in bed, together with the continuance of the same general treatment recommended for the fever.

The inner bark of the white ash *(Fraxinus acuminata)* boiled in white wine, is highly recommended for ague cake in an old work entitled the "*Treasury of Easy Medicines.*" It is quite probable, however, that a simple decoction of the bark in water would answer equally as well.

APOPLEXY.

Apoplexy is characterised by a sudden diminution, or entire cessation of sense and voluntary motion, whilst the heart and lungs continue to perform their functions.

This complaint may be distinguished from palsy, by the difficult and loud breathing, profound sleep, and the entire suspension of voluntary motion; and when to these we add the absence of convulsions, it will be distinguished from epilepsy; and from intoxication, by the impossibility of arousing the patient by shouting or any other means, and in general by the breath not being tainted by the smell of spirits.

Apoplexy chiefly attacks individuals of advanced age; and it has been observed, that persons of a corpulent habit, and those having a short neck and large head, and who lead an inactive and sedentary life, or make use of full rich diet, are more liable to it than those of different habits.

This disease is generally supposed to arise from compression of the brain, caused by an effusion of either blood or serum; which has given birth to the two distinctive names of serous and sanguineous apoplexy, each of which is preceded by a different set of symptoms.

Sanguineous apoplexy sometimes comes on with giddiness, dimness of sight, drowsiness, loss of memory, or faltering of the tongue; but it more often happens that the person is taken and suddenly falls down; the face becomes red and swelled; the veins of the head appear full; the eye-lids are half closed and the eyes prominent and fixed; the pulse generally full an strong; and the breathing difficult and loud. Grinding of the teeth, and slight convulsive motions, have been observable in a few instances; and if the fit continues for any considerable length of time, the pulse becomes weak, slow, and languid; the breathing gradually grows shorter and shorter, and finally ceases in death.

In the serous apoplexy, the attack is usually more gradual: the face becomes pale and bloated, whilst the veins are depressed; the pulse is small, weak, irregular, and intermittent; breathing is impeded and loud; and the extremities are cold. Occasionally these symptoms are preceded by giddiness, torpor, and impediment of speech, and failure of memory.

Cases of apoplexy occasionally occur, in which one side of the body is more affected than the other; which are termed by medical writers, *hemiplegia.*

A patient laboring under an attack of apoplexy, sometimes lies motionless and senseless for several days, and then gradually but partially recovers. In these cases he generally suffers the loss, either partial or total, of the use of one side, as is the case in palsy; and his mind usually sustains a shock from which it rarely recovers.

Treatment.—In tracing the annals of medicine, we find various and contradictory modes of treatment prescribed for this frequently fatal disease. Amongst the ancients, the use of warm cordials was in high reputation; whilst physicians of the present day, disapprove of stimulating the system, and recommend bleeding. This practice, however, is to be regarded as of quite modern origin, as Dr. Fothergill, and many others who were eminent in their profession, either dis approve of the practice altogether, or recommend it in very sparing terms. Emetics are generally disapproved of by practitioners of the present day, from fears of augmenting the quantity of blood in the vessels of the head, though some are found who prescribe them; and, although writers generally regard them as dangerous, no instances have been recorded, that we have any knowledge of, in which they have proved injurious or fatal.

Whenever an individual is attacked with apoplexy, every thing should be removed from about the neck which may have any tendency to compress it and prevent a free return of blood from the head; and his body moreover should be placed in an erect posture with the feet hanging down. A laxative injection composed of the butternut syrup, castor oil, hogs' lard, or, in the absence of those articles, of warm water, with the fourth of a tea-spoonful of cayenne in them, should be administered as speedily as possible, and repeated at short intervals until the bowels are evacuated. Dr. Beach very highly recommends immersing the feet and legs in warm lye water.

Whilst the foregoing operations are going forward, preparations should be making for steaming the patient, which ought to be attended to as soon as possible; and particular care must be taken to apply the steam or heat by some means to the feet and legs. If apoplexy is caused by an over determination of blood to the head, which seems to be the most common opinion, we know of no means by which it can be diverted therefrom so naturally, and with so much certainty, as by promoting a profuse perspiration, and particularly from the lower extremities.

In steaming, we may commence, if the patient is capable of swallowing, by giving a moderate dose of the diaphoretic powders, or of the cayenne; and then place him over the steam which should be moderate at first, and gradually increased as it can be borne, paying strict attention to every symptom of faintness, and often wetting the face and head with the coldest water that can be procured. If the patient be incapable of swallowing, a tea-spoonful of the anti-spasmodic tincture should be poured into the mouth.

After continuing the steam for ten, fifteen, or twenty, or even thirty minutes, if we have succeeded in restoring sense and motion, we may then give an emetic. When this is done operating, the patient should be again steamed, returned into bed, with hot bricks to keep up a perspiration, when a smart purge may be administered, which, with the bitters and diaphoretic powders continued for a few days, will probably effect a cure. But if it does not, the practitioner may pursue such a course, in accordance with the principles which we have laid down, as his best judgment may dictate; that is, the course of medicine must be repeated, and the bitters and diaphoretics continued.

ASTHMA.

Asthma is a spasmodic affection of the lungs, which generally comes on by paroxysms or fits, at night; though the patient

very frequently feels more or less of it through the day, with an increase of the symptoms at evening. It is attended with a frequent, difficult and short respiration, together with a peculiar wheezing, tightness across the breast, and a cough attended with such a peculiar crackling noise, (somewhat similar to the wheezing) that a person who has seen several patients with this complaint will readily recognize it.

When the disease is attended with an accumulation and discharge of humors from the lungs, it is called humid asthma: but when it is unattended by expectoration, it is known by the name of dry or spasmodic asthma.

An attack of asthma is preceded by low spirits, a sense of fullness about the stomach, with lassitude, drowsiness, and pain in the head. On the next evening the patient experiences a sense of tightness across the breast, and of straitness in the lungs, impeding respiration. The difficulty of breathing increases and is performed more slowly; the speech becomes difficult and uneasy; coughing succeeds, and the patient can no longer lie in bed, being, as it were, threatened with immediate suffocation.

Towards morning these symptoms suffer some abatement. The breathing becomes less laborious and more full, and speaking and coughing are performed with greater ease; and if an expectoration of mucus attends the cough, much relief is experienced and the patient falls asleep.

When he awakes he feels better, though not entirely relieved; but he cannot bear the least exertion without rendering all the symptoms worse. Nor can he lie in bed, but must either be bolstered up, or sit in a chair.

Towards evening the symptoms again grow worse, and continue to increase until they become as violent as on the preceding night.

After some nights passed in this way, the fits become more moderate, particularly when they are attended by a free expectoration of mucus from the lungs. At last the disease goes off and the patient is left in the enjoyment of his usual health.

Sometimes, however, the symptoms are all aggravated, and the fits continue to return for a much longer period, the patient not being able to lie in bed for weeks or months, and even years. At other times the symptoms are so mild as to subject the patient to but little inconvenience, and in children is usually called phthisic.

Treatment.—There are but two articles which, so far as our own experience goes, approach any where near to being specifics, or indeed that are very uniformly useful, in this complaint. These are the skunk cabbage and lobelia. The skunk cabbage, in doses of a half or whole tea-spoonful, repeated as occasion

may require, is very valuable in the asthma; and will often afford relief when other remedies appear to do little or no good. It acts both as an anti-spasmodic and expectorant, which gives it a double power over this complaint. The pulverized root or the fruit of skunk cabbage may be mixed in honey or molasses, or a syrup may be made of elecampane or any other articles useful to promote expectoration, and then the skunk cabbage added, as it ought to be taken in substance.

But the lobelia is the grand article to be relied upon for the alleviation or cure of this distressing malady. It may be given in half or whole tea-spoonful doses of the pulverized seeds, or leaves and pods, at bed time, or when the fits are coming on, and at any other time when the urgency of the symptoms appears to require it. A tincture of the lobelia given in half or whole tea-spoonful doses, is a more convenient as well as agreeable form of administering this remedy, and is, perhaps, equally efficacious. This preparation has cured many of the most inveterate cases of asthma.

Smoking the dried roots of the common henbane (*Datura Stramonium*) has been resorted to in many cases of asthma, with success. This remedy appears to act as an anti-spasmodic and expectorant. The smoke must be inhaled as much as possible into the lungs, where it usually occasions some degree of heat, followed by expectoration. It is said, however, that unpleasant consequences have followed its [improper] use, and it ought therefore to be used in moderation.

Burning in a close room, half a sheet of paper which has been saturated in a solution of salt-peter, and inhaling the smoke or fumes, is said to give perfect relief in this distressing malady.

Another remedy communicated from a respectable source, which proved successful in a case wherein even the lobelia failed, is the common mullen, (*verbascum thapsus.*) In this instance a strong tea was made of the bark of the root and sweetened to the consistence of syrup, of which four tea-spoonsful were given a child as a dose, and frequently repeated, with complete success.

A course of medicine must also be resorted to if the other means recommended fail.

BITE OF MAD DOG.

The bite of a mad dog produces a disease termed Hydrophobia, signifying a fear or dread of water, which is one of its most peculiar and characteristic symptoms.

Hydrophobia is a disease which it is believed arises spontaneously in dogs, cats, wolves, foxes, &c., but from what parti-

cular cause is unknown. When the complaint has once arisen, it is communicated, often to a great extent, from one animal to another, but spreads most rapidly amongst dogs, and is by them imparted to other animals.

This disease can only arise in the human species from contagion communicated by the bite of a mad animal; and it yet remains doubtful whether it can pass from one person to another; but prudence will certainly dictate that we should beware of exposing ourselves unnecessarily, as an experiment of MAGENDIE and BRESCHET, proved that dogs may take it by inoculation from the human subject.

It has been observed, that hydrophobia is quite uncommon in hot climates, being principally met with in those which are either temperate or cold.

When a dog becomes affected with madness or hydrophobia, he appears dull, seeks solitude, and endeavors to hide himself; seldom barking, but making a murmuring noise, and refusing food and drink. When strangers come in sight he will often fly at them; but he still knows and respects his master; his head and tail hang down, and he walks as if overpowered by sleep. A bite at this period, though dangerous, is not so apt to bring on the disease in the animal bitten, as it is at a later period of the complaint.

As the disease progresses, the dog begins to pant, and breathe quickly and heavily; his tongue hangs out, and his mouth is continually open, from which is discharged a large quantity of froth. Sometimes his movements are very slow, and at others he runs suddenly, but not always straight forward. At last he forgets his master; his eyes are dull, watery, and red; he becomes very thin or poor, and weak; he often falls down, and gets up, attempting to fly at other animals, especially dogs, and becomes quite furious. The most miserable, dejected, and gloomy looking animal which we have ever beheld was a dog under confinement in the last stages of this terrible and fatal malady.

All the foregoing symptoms at length become aggravated; the dog staggers about, for he can scarcely be said to walk, and at length the living power being exhausted, he dies, generally on the fourth or fifth day succeeding the attack or first symptoms of the disease.

The length of time which intervenes between the bite of a mad animal and the commencement of the hydrophobic symptoms is various; but in dogs it is generally from five to fifteen days; whilst in the human species it varies from one to six weeks, and even as many months. Instances are also recorded in which the patient was seized after the lapse of several years.

The symptoms of hydrophobia, in man, commence in general, with slight pains in the part which had been bitten, though it may be long after the wound was healed and apparently sound; sometimes an itching is felt, but commonly the pain appears like rheumatism If the wound have been in any of the extremities, the limb sometimes becomes numb or stiff; the old scar or cicatrix looks either red or livid; often opening afresh, and oozing forth a little colored matter. Then come on wandering pains, with a melancholy from which scarcely any thing can rouse him; with uneasiness, heaviness, disturbed sleep, and frightful dreams, accompanied with great restlessness, sudden startings, spasms, sighing, anxiety, and love of solitude. These symptoms continuing to increase, pains shoot from the place where the wound was, up to the throat, about which, as well as the chest, a stiffness and painful constriction are felt; the breathing becomes difficult, with a sensation of choaking; and a horror and dread of water, and other liquids. Bright colors, a strong light, acute sounds, particularly the noise of water pouring from one vessel into another, and even a simple agitation of the air by a movement of the curtains, greatly disturb the patient, and often bring on a paroxysm of general convulsion, or otherwise greatly aggravate the painful symptoms. He is tormented with thirst, bu dares not drink; the sight or even the idea of water often making him shudder. His eyes are haggard, glassy, fixed, and turgid with blood; his mouth is filled with a sticky saliva, in which lurks the hydrophobic poison, and he is constantly endeavoring to hawk it up, and spits it out in every direction; often desiring those around him to stand aside, as if conscious that he might injure them. If he attempt to drink, the moment the water or other fluid is brought in contact with his lips, he starts back with dread and horror, although he may be suffering at the same time with great thirst. The restlessness is extreme, and if the patient attempt to lie down and compose himself, he instantly starts up again, with wild unutterable anguish depicted in his countenance; and in some instances there is a great struggling, with raving, and furious madness; but the living power is soon exhausted, and death, as a welcome friend, comes to relieve the unfortunate sufferer.

Treatment.—When we take a survey of the empirical, the contradictory, the extravagant, and the pernicious means which have been used or recommended in the treatment of this terrible malady, we are forcibly driven to the reflection that the popular practice of medicine, as taught in the schools, was nothing more than a chaos of confusion—a tissue of error, and of dangerous unprofitable experiment; for of all the various and contradictory modes of treatment, recommended by different authors, whether of stimulating or depleting, of relaxing or exciting, of burning

or cutting, of warm bathing or cold bathing, nothing as yet is known to the *learned authors* of medicine, which can be relied upon as a certain cure. As Dr. Good observes, "our curative practice is still unfortunately all afloat, and we have neither helm to steer by, nor compass to direct our course. There is, indeed,' continues he, "no disease for which so many remedies have been devised, and none in which the mortifying character of vanity of vanities has been so strikingly written upon all of them."

A new era has, however, taken place in the annals of medical science; the practice of medicine has become established upon new and correct principles; the means of cure have been investigated and improved; whilst at the same time, the powers of the physician to control disease have become augmented and multiplied. There is good reason to believe that the lobelia inflata will be found a certain remedy for this terrific disease, as the few trials which have been made with it, give strong proofs of its powers, and high promise of its future usefulness.

We are well aware that the medical Faculty scout at the idea of a cure for hydrophobia, as they also do at all other improvements of the healing art which do not originate with themselves. This is virtually denying that the people have any right to investigate this subject, or to administer or receive any thing as medicine but what they sanction, or what passes through their hands. But light and knowledge, with giant strides, are marching through the world, and if the physicians *will not* seize and appropriate to usefulness, the gifts of nature, the people will do it themselves. And it is high time the practice of medicine was taken out of the hands of the boasting, selfish, dominant professors of this most important art, and restored to those to whom it rightfully appertains, and who are principally to be benefited by it.

If the lobelia had so often been tested by fashionable physicians, in the cure of hydrophobia, as it has been by the people, its fame would have been spread from sea to sea, and its echoes would have penetrated the deepest recesses of every civilized land. But the origin of this remedy is too humble; its adoption would eclipse the already waning glory of scientific and professional fame. It must therefore be despised and rejected; yes, the most valuable gift of Nature's God is neglected, because the honor of a vaunting, vain-glorious profession may be tarnished by the acknowledgment of its virtues.

The first account which we ever had of the lobelia was, that it would cure the hydrophobia; and, although we were incredulous, we certainly should have been willing to give it a trial from a conviction that no hazard could arise by deviating from a

mode of treatment which had never proved successful. But there have been several cases of this complaint in different parts of the country, successfully treated with the lobelia, one of which will be found detailed in the appendix to this volume.

Immediately after receiving the bite of a dog supposed to be mad, the wound should be well washed with the strongest tincture of lobelia; and if the teeth of the dog have any of them penetrated deeply into the flesh, the tincture should be forcibly thrown in with a small syringe, in order that it may reach the bottom of the wound. This washing should be often repeated until the sore is healed. At the same time we would recommend the largest doses which the patient would bear without vomiting, of the same tincture, given three times a day, for several days; or, what should be preferred, a thorough course of medicine every other day, and the tincture to be taken on the days which intervene between the courses. It will be advisable to repeat the course of medicine three or four, and perhaps six or eight times, in this way, and the tincture should be continued for a few days longer. Bitters should also be taken several times a day, during the continuance of the tincture, and perhaps for a short time thereafter.

The scull-cap has also been highly recommended, both as a preventative and cure of the hydrophobia, though it has fallen of late years very much into disrepute. Whether its character has failed in consequence of the feebleness of its powers, or from prejudices unjustly raised against it, we cannot say. It would seem from the account which is given of it by RAFINESQUE, that it contains many powerful chimical principles, which evince active properties. We must confess, however, that we should by far, give a preference to the lobelia, because its sensible effects upon the body so much exceed those of the scull-cap; but we, at the same time, most cordially coincide in the sentiment of the author just quoted, that "we have so few presumed remedies for this dreadful disease, and it is so desirable to confirm the properties of those supposed available, that it is needful to encourage, rather than to discourage, every attempt to throw light on the subject."—[*Flora of the United States, vol. II. page* 85.]

But if, notwithstanding the treatment, symptoms of hydrophobia make their appearance, we must have recourse to large and repeated doses of the anti-spasmodic tincture, on which we should principally rely. The nervine tincture which we have recommended, must also be freely used in large doses, which, with the anti-spasmodic tincture, will be the principal dependence in relieving the spasms. Courses of medicine must also be frequently resorted to, in which a free use may be made of the pulverized seeds of lobelia to produce vomiting and profuse perspiration; or instead of

these, we may use the anti-spasmodic tincture to produce the same effects. This course must be rigorously persevered in, paying no other regard to the quantity of lobelia administered than to be sure to give enough to produce the desired effect. If enough is not administered to overcome the spasms, but little good will be done. And in order to do this more effectually, injections, with from two to four tea-spoonsful of the lobelia, or anti-spasmodic tincture, will be highly advantageous, and should be used the more freely, and be the oftener repeated, if the difficulty of swallowing should increase.

An infallible remedy is said to have been lately discovered in France, by Dr. Buisson, who himself was afflicted with this awful malady and went into a *vapor bath* heated to 126 degrees of Fahrenheit's thermometer, thinking it the easiest mode of suffocation. To his astonishment, however, the whole symptoms vanished at once, and he never after had the slightest recurrence of them. Dr. Buisson, in the communication of this case to the Academy of Sciences at Paris, says that by the same means he had cured upwards of eighty patients of hydrophobia, and intended to try it in cholera, plague, yellow fever and gout. The vapor bath ought to be used in conjunction with the lobelia.

Much light may also be had upon this subject by a perusal of the case detailed in the appendix, to which the reader is referred.

BLEEDING FROM THE NOSE.

In the nose there is a net work composed of blood-vessels expanded on the internal surface of the nostrils, and covered only with a thin tegument or skin; hence upon any determination of a greater quantity of blood than usual to the vessels of the head, those of the nose are more easily ruptured. And hence also, any kind of violence about the nose is apt to rupture these vessels and produce a discharge of blood from th nostrils. In general, the blood flows only from one nostril; but sometimes it is discharged from both.

Persons of a sanguine and plethoric habit, and not yet advanced to manhood, are most liable to hemorrhage from the nose; females being less subject to it than males.—Peculiar weakness of the vessels of the part, and the decline of life, may be regarded as predisposing causes. Great heat, violent exertion, external violence, particular postures of the body, and every thing that determines the blood to the head, may be considered as exciting causes of bleeding at the nose.

It comes on at times, without any previous warning; but at others, it is preceded by pain and heaviness in the head, dizzi-

ness, ringing in the ears, flushing of the face, heat and itching in the nostrils, a throbbing of the temporal arteries, and quickness of the pulse.

Bleeding at the nose, in general, may be considered as of little consequence, when occurring in young persons; but when it arises in those more advanced in life, flows profusely, and returns frequently, it indicates too great a fulness of the vessels of the head, and not unfrequently precedes palsy, apoplexy, &c., and is, therefore, in such cases, to be regarded as indicating dangerous consequences. And when it arises in the course of any putrid complaint, it is to be viewed as a fatal symptom.

Bleeding from the nose often proves salutary in some cases, such as dizziness, headache, &c.; and critical in others, such as phrensy, apoplexy, and inflammatory fever, when there is a determination of too great a quantity of blood to the head; and we ought, therefore, to consider at the time it happens, whether it is likely to prove injurious or beneficial. And if it appear likely to remove any unpleasant symptom, or relieve any complaint, it may be suffered to go on, so long as it does not appear to weaken the patient. Nor need it be suddenly checked, when it happens to persons in good health, especially if they are of a full plethoric habit. But when it arises in elderly persons, or returns too frequently, or continues till the patient becomes weak or faint, no time ought to be lost in attempting to put a stop to it.

Treatment.—A snuff made of the leaves of witch hazle, and inhaled into the nose, will, in most cases, stop the bleeding. Wetting the face, head, and temples, at the same time with cold water, will assist the effects of the hazle. A tea of the hazle with the addition of cayenne, will also be beneficial, taken internally; to which may likewise be added the common beth root, either in tea or substance, or it may be taken alone, in a larger quantity. Bathing, fomenting, or steaming the lower extremities, will, by facilitating the circulation through them, draw the blood from the head, and thereby have a tendency to promote the operation of other remedies.

The powder of charcoal, is highly recommended as a styptic, in hemorrhages from the nose. It may be used as snuff, or it may be applied by means of tents, first moistened with water, then rolled in this powder, and introduced into the nostril. Probably the witch hazle might be advantageously used in the same manner.

When there is reason to believe that the bleeding is caused by a determination of blood to the head, or by any peculiar weakness of the vessels of the nose, and the means already prescribed do not check the hemorrhage, the patient ought to be thoroughly nauseated with lobelia.

After this process is completed, the extremities ought to be

kept warm, and the whole surface moist, until the danger of a recurrence of bleeding appears to be over; or if it does return, the same process may be repeated as often as necessary; using, during the meantime, any or all of the other means which have been recommended.

BLEEDING FROM THE LUNGS.

This complaint is usually called spitting blood, and consists in a discharge of blood of a florid red color, and often frothy, from the mouth, brought up by more or less of coughing or hawking, and usually preceded by a saltish taste in the mouth, a sense of weight about the breast, difficult breathing, and a pain in some part of the breast.

This disease is readily to be distinguished from bleeding at the stomach, as in this last, the blood is vomited up, usually in considerable quantities, and is moreover of a darker color, and frequently mixed with other contents of the stomach; whilst blood proceeding from the lungs, is usually in small quantity, of a florid color, mixed with a little frothy mucus, and is brought up by coughing.

A spitting of blood may be caused by any violent exertion, as running, jumping, wrestling, singing, loud speaking, or blowing on wind instruments; and likewise by wounds, inflammation of the lungs, weakness of its vessels, hard coughing, &c.

Bleeding at the lungs is not, however, always to be regarded as a primary affection, but is often a symptom attendant upon some other complaint. In pleurisy, inflammation of the lungs, and many fevers, a slight spitting of blood may be regarded as the presage of a favorable termination.

This complaint is sometimes preceded by a sense of weight and oppression at the chest, a dry tickling cough, some slight difficulty of breathing, and a hard, jerking pulse. At other times it is ushered in with shiverings, coldness of the extremities, pains in the back and loins, flatulency, costiveness, and lassitude. The blood which is spit up is usually thin and florid; but sometimes it is thick and of a dark cast, owing to its having lain some time in the lungs before it was discharged.

Spitting blood is not to be considered as a dangerous complaint when there are no symptoms of consumption present; or where it leaves behind no cough, difficulty of breathing, or other troublesome affection of the lungs: nor is it dangerous in a strong healthy person of a sound constitution, unless the hemorrhage is very great: but when it attacks persons of a weak lax fiber, and delicate habit, it may be dangerous and difficult to cure.

Treatment.—The removal of this complaint is to be at-

tempted, if mild, by taking freely of the diaphoretic powders, and at the same time using other necessary means to promote perspiration. If there be any considerable cough, the expectorant powder may also be given to promote expectoration. A tea of the witch hazle, or beth root, may also be freely used, to each dose of which may be added from half to a whole tea-spoonful of capsicum, and repeated according to the urgency of the symptoms.

After persevering in this manner for a reasonable time, if the symptoms do not abate, a regular course of the vapor bath and the emetic ought to be resorted to, and repeated as the urgency of the case may require. After the course, the diaphoretic powders, hazle or beth root tea, and cayenne, to which may be added the bitter tonic, must be continued at longer or shorter intervals, according to the urgency of the symptoms, until the patient is out of danger.

BLEEDING FROM THE STOMACH.

This complaint is usually denominated vomiting of blood, and is commonly preceded by a sense of weight, pain, or anxiety, in the region of the stomach. The blood is usually discharged in considerable quantity, of a dark color, and often mixed with the other contents of the stomach. It will readily be distinguished from a spitting of blood, by attending to the description of that complaint.

This disease may be occasioned by any thing received into the stomach which stimulates it violently or wounds it; or it may proceed from blows, bruises, or any other cause capable of exciting inflammation in the stomach, or determining too great a flow of blood to it; it often arises spontaneously without any apparent cause, and sometimes occurs as a symptom of some other disease.

Towards the close of malignant scarlet, and putrid fevers, and other disorders of a malignant or putrid nature, where symptoms of putrescency prevail in a high degree, a hemorrhage from the stomach is very apt to occur.

Vomiting blood is seldom so profuse as to destroy the patient suddenly. The principal danger seems to arise, either from the great debility which repeated attacks of the complaint induce, or from the lodgment of blood in the intestines which, by becoming putrid, may occasion some other fatal complaint.

Treatment.—This disorder may, in general, be treated the same as bleeding from the lungs. Charcoal, in table-spoonful doses, repeated as circumstances seem to require, will

be found a useful auxiliary to the other means. It will operate as a styptic to check the bleeding, as a laxative to cleanse the intestines, and as an anti-septic to prevent the putridity of the blood in the bowels. A strong decoction of yellow dock root in sweet milk, taken in doses of a gill three times a day, and a pill of white pine turpentine once a day, is recommended, by Dr. J. Williams, as infallible in this complaint. Common salt, in small doses, will also very frequent ly check it.

Patients recovering from this disease, ought to use a nutri tious diet of easy digestion, and abstain from all violent or long continued exertion, to prevent relapses, which are liable to occur.

BLOODY URINE.

This disease is sometimes occasioned either by falls, blows, bruises, or some violent exertion, such as hard riding, and jump ing; but it often takes place in consequence of a small stone being lodged either in the *ureter* or kidney, which, by its size, or irregularity, wounds the inner surface of the part it comes in contact with; in which last case, the blood discharged is most usually somewhat clotted, and deposits a sediment of a dark brown color, resembling coffee grounds.

A discharge of blood by urine, when proceeding from the kidney or ureter, is commonly attended with an acute pain and sense of weight in the back, and some difficulty in making water; the urine which comes away first being muddy and high colored, but towards the close of its flowing becoming transparent, and of a natural appearance. When the blood proceeds immediately from the bladder, it is usually accompanied with a sense of heat and pain in the lower part of the belly.

This complaint is distinguished from the high colored red urine attendant upon many diseases, by the deposit of clotted blood at the bottom of the vessel, and by its staining linen of a red color.

The voiding of bloody urine is always to be regarded as a dangerous malady, particularly when mixed with purulent matter. When it arises in the course of any malignant disease, it is regarded as indicating a highly putrid state of the blood, and is always succeeded by a fatal termination.

Treatment.—If the complaint has arisen as a consequence of some external injury, such as a fall or blow, a process of the vapor bath, and the emetic, ought immediately to be resorted to, which, if it do not stop it, should be followed by the use of the witch hazle, beth root, or other astringents, and the process again repeated as often as necessary until the cure is completed.

When, from the symptoms, there is reason to suspect that the complaint proceeds from a stone lodged in the kidney, ureter, or bladder, the patient ought to drink freely of some mucilaginous drink, such as thick barley water, a tea of marsh mallows, or elm bark, any or all of which may be sweetened with honey. Injections of the same may also be administered; and to allay irritation, the nervine powders, or ladies' slipper, ought to be freely used.

A decoction of peach leaves, drank so as not to produce much purging, is a very useful remedy in this complaint. In case the leaves cannot be procured, the bark may be used, and in one bad case in which we tried it, answered every purpose that the leaves could have done. The bark or leaves ought always to be resorted to in cases of this kind.

BRUISES.

Under this head we include all injuries from blows and falls which are of so serious a character as to require medical aid.

Treatment.—If the injury be not severe the part may be bathed with either salt and vinegar, tincture of myrrh, or bathing drops; or bruised tansy or wormwood, moistened with spirits or vinegar, may be applied to it, until relief is obtained.

But if the bruise be more severe, internal remedies must be resorted to, such as the diaphoretic powders, or cayenne pepper; and arrangements should be immediately made for applying the vapor bath, or perspiration may be promoted in any other manner. If there be much pain in the part, the application of cold water, either in a stream or by laying on wet cloths, should be resorted to.

Bleeding ought by no means to be attempted, as its tendency would be to reduce the vital power, and thereby increase the danger arising from extremely bad bruises. Promoting a profuse perspiration by the vapor bath, which may be kept up by the application of hot bricks or rocks, and occasional doses of cayenne, or the diaphoretic powders, is the only rational method of restoring the injured vessels of the bruised part to a healthy action, and preventing ulceration and mortification.

If the health of an individual meeting with an accident of this kind should be poor, an emetic and thorough course of medicine ought to be administered, especially if the bruise be a severe one.

BURNS AND SCALDS.

Cases of this kind are often occurring, particularly amongst children; and as they create excruciating pain, it is of the ut

most importance to apply a remedy immediately. Happily, the best remedy, and the one that affords the most speedy and grateful relief, is commonly at hand or very readily obtained.

Plunging the injured part instantly into cold water, or, if this be inconvenient on account of the injury being on the head or body, applying a cloth wetted with cold water, will afford instantaneous relief; and if applied at the instant, will prevent blistering, which is often so considerable, as to cause a tedious ulcer.

During the application of the cold water, the patient ought to take occasionally a dose of cayenne or of the diaphoretic powder, to prevent the cold application from doing an injury. If one of the extremities be burnt or scalded, the part may be immersed in cold water, occasionally withdrawing it, and again returning it when it smarts. But when it is inconvenient to immerse the part in water, a cloth folded several times, made wet with cold water, and applied to the part, will answer the purpose. As the cloth becomes warm and the injured part smarts, cold water may be poured on it, or a fresh cloth applied, and continued until the smarting has ceased.

If this plan has not been adopted in season to prevent blistering and a sore or ulcer arises in consequence of it, the slippery elm poultice may be applied after the smarting has ceased, and continued until the inflammation is out, when it should be dressed with salve until well.

An ointment made by mixing one part spirits turpentine and two parts sweet oil is also an excellent application for burns or scalds, usually giving speedy relief. This ointment is likewise said to be useful applied to ulcers which succeed burns. Raw cotton has also been highly recommended for the same purpose; and likewise sprinkling the burnt surface with flour.

In very bad burns or scalds near the vital parts, as on the breast or stomach, the patient ought to be taken through a course of the vapor bath and emetic, after the smarting has been checked with the cold water, or by any other means, and in all respects, treated as in any other bad case of disease.

CANCER.

A CANCER is an ulcer of the very worst kind, with an uneven surface, and ragged, painful edges generally spreading rapidly, discharging a thin acrimonious matter that excoriates the skin around the sore, and has a very fœtid smell.

A cancer is usually preceded by a hard, or what is technically termed a scirrus, swelling of the part, especially if it be seated in a gland, such as the female breast, the glands of the

arm pit, &c. And it is to the glands that cancers are mostly confined; though they are sometimes met with in the uterus, as likewise on the face, and other parts that are thinly covered with flesh, and which are at the same time a good deal exposed to external irritation, such as the lower lip, the angles of the eyes, the organs of vision, the middle cartilage of the nose, the tongue, and penis.

Cancer usually begins with a small swelling in the gland, or if it be seated in some other part, as the face, hand, &c., with a small swelling that sometimes resembles a wart or pimple, unaccompanied by pain or any discoloration of the part. It gradually increases in size and hardness, and, sooner or later, is attended with darting, twinging, or lancinating pains, as if pricked with a sharp instrument, and with swellings of the veins, and an uneasy painful sensation in the vicinity of the part. Sometimes it remains in this state for a length of time, even for years; but at other times it proceeds on to suppuration with great rapidity, and forms an ulcer. Its progress will, however, depend much on the state of the person's health, constitution, and other like causes.

During the stage of cancer of which we have just been speaking, the pains recur at very irregular intervals, sometimes longer, and sometimes shorter. This irregular recurrence of the pains which invariably attends a true cancerous affection, depends upon causes which, as yet, remain unknown. If the cancer be seated in the female breast, and the woman be of such an age that the menstrual flux has not ceased, she will commonly suffer a considerable increase of the painful symptoms at each return of this evacuation. The tumor will also during this period probably increase in size, in a ratio proportioned with the increased violence of the other symptoms.

As the disease advances, it is very common, when the breast is the seat of cancer, for one or more of the axillary* glands on the same side of the body, to become enlarged.

When the disease approaches near the surface, the skin, which hitherto retained its natural appearance, begins to look puckered, or as if drawn together in folds. From this cause, if its seat be the female breast, the nipple will be sometimes so retracted or sunk, that its existence might be overlooked by a superficial observer.

When the disease advances further, the skin becomes inseparably united to the tumor, and in a little time longer, it assumes a slight degree of redness, with other symptoms of inflammation. After a while the whole surface of the diseased part puts on a purple shining appearance, and in this state continues with

* From axilla, the arm pit.

but little change until ulceration is about taking place; when all the symptoms become much worse, and induce a feverish action in the blood.

At length it breaks out into an ulcer, and the violent symptoms experience a temporary abatement from the discharge of a small quantity of thin corrosive matter. In a short time the ulcer penetrates deeply into the central part of the tumor, whilst the edges appear hard and elevated The surrounding skin assumes a livid appearance, and from the surface of the sore there is now a considerable discharge of an irritating corrosive matter, which excoriates, or as it were, scalds the skin around the sore, and is, at the same time, of a peculiar and highly offensive smell. Matter of a true purulent, or healthy appearance, is scarcely ever discharged from a cancerous sore.

If the ulceration be extensive, it will be observed that while one part of the sore is undergoing the ordinary sloughing process, another will be found active in producing luxuriant granulations of a loose spongy nature. These different appearances or changes, sometimes alternate with each other, and in their further progress give rise to considerable hemorrhages from the erosion of the blood vessels.

At length, from the morbid derangement which is occasioned in the functions of the lungs, when the cancer is seated in the breast, there gradually comes on a difficulty of breathing, attended with a cough, and some degree of emaciation, which symptoms are usually followed, at no great distance, by a fatal termination.

Cancers in other parts of the body, usually appear first in the form of a small bluish colored pimple, attended by twinging pains, which is succeeded by a train of symptoms quite similar to those which have just been described as taking place in the female breast.

Treatment.—The moment any kind of tumor makes its appearance, with evident symptoms of cancer, no time should be lost in adopting the most efficient means of restoring a healthy tone to the system if the general health be impaired, and promoting the absorption of the tumor before it breaks forth into an ulcer.

To restore the general health, the common course of medicine ought to be resorted to, and repeated as circumstances require, using between the courses, a tea of pipsisway, wild lettuce, narrow dock root; and probably the sassafras will be useful together with the bitter tonic and the diaphoretic powders. The cancer balsam, recommended by Dr. Thomson, may also be applied externally over the tumor, and renewed as it becomes necessary. The juice of the root of the narrow leafed dock, dried in the sun to the consistency of wax, may also be spread on paper.

and applied to the part, and is said to have performed some remarkable cures.

But if, after doing all that has been recommended, the tumor breaks out into an ulcer, or if it be in this state when medical aid is first called, we must not abandon the patient as being in a situation of utter hopelessness. The course of medicine should be resorted to, together with the use of the bitter tonic, diaphoretic powders, dock root, pipsisway, &c., as being the best means of changing the cancerous habit or tendency of the fluids, and promoting a healthy vigorous action in all parts of the system.

Dr. THOMSON remarks, that in one case he applied a poultice of butternut shucks, to dissolve the cancerous tumor, and seemed likely to accomplish his object, when his hopes were blasted by the death of his patient in consequence of a fever.

If the ulcer be much inflamed, the common poultice may be applied, wetting it occasionally with cold water or a tea of some of the astringent articles. At each dressing, or renewal of the poultice, wash first with mild soap suds, and then with a tea of pipsisway, wild lettuce, dock root, or some of the astringent articles. When the inflammation has abated, apply the salve, or if the tumor be not dissolved, the cancer balsam will probably be better, which ought to be continued until the cancerous tumor is entirely gone.

An ointment or salve, made by boiling the common wood or sheep sorrel in hogs' lard, has been known to have a very decided influence on cancerous ulcers of the very worst kind. Or the juice dried in the sun, and applied, spread on a piece of bladder or paper, will be more powerful, and is highly recommended. The juice of the dock root, prepared in the same manner, has also been found beneficial, in numerous cases.

In case a cure of cancer is attempted before it has broken out into an ulcer, it is recommended by some to penetrate the skin to the hard diseased part, by the application of a caustic, made by boiling, for some time, the best wood ashes, or what has been more highly recommended, the ashes of black ash bark; then settle and pour off the clear lye, and boil it down to the consistence of thick tar; to this, it is recommended to add a little spirits in which camphor has been dissolved, or a little honey. This caustic is to be spread on a piece of cloth, of a size proportioned to that of, but less than the cancer, and applied to it. If it becomes too painful it may be taken off for a short time and again replaced; and if necessary the plaster may be renewed.

When a sufficient opening has thus been made, the wood-sorrel salve may be applied, and renewed night and morning until the cancerous tumor can be separated and removed from

the sound parts. The application of this salve or plaster causes the cancerous tumor to turn black, and in some instances produces severe pain. If it becomes too severe, the plaster may be left off at night and in place thereof apply the common healing salve or any other mild application. As a wash, to be used at all times, when the ulcer is dressed, equal parts of prickly ash bark or of zanthoxylon, bayberry, and golden seal, steeped strong, may be advantageously employed.

In a disease so obstinate and painful, and at the same time so difficult to cure as cancer, we feel ourselves justified in drawing upon every source which offers any thing likely to remove the complaint, or even only to mitigate its symptoms. With these views we make the following quotations from a late work, by Elisha Smith, "President of the New York Association of Botanic Physicians:"

"If the cancer has become open, and ulceration commenced, pply *cat-skins*, newly stripped off and warm; or the flesh of resh killed chickens. These will extract the fever and acrimonious poison astonishingly, and become in the course of two or three hours, perfectly rotten and corrupted with it. They should then be changed for a fresh application. This method should be continued till the poison and life of the cancer, is extracted, when the whole substance of the tumor will become a dead mass, and may be taken out with ease, and without pain. If it is not convenient to obtain the skins or flesh to apply continually, they may be alternated with poultices of charcoal and yeast, which also extracts putridity. The flesh of any animal is good, but I consider cat-skins, or chickens, preferable.

"Angle-worms, or fish worms, as they are called, are not inferior to either of the above applications; they should be laid on alive, and remain till they become dead and putrid, when they should be changed. Snails, also, answer the same purpose. Many other animals, particularly frogs and toads, draw powerfully when placed on a cancer, and may be used when more convenient. These remedies may not appear very scientific, or fashionable, but in a disease as stubborn as this, we should not be delicate about the means, if we can only save life.

"Few things contribute more to the healing of foul sordid ulcers of any kind, than keeping them thoroughly clean. This ought never to be neglected. The best application for this purpose seems to be the carrot poultice. The root of the common carrot may be grated and moistened with as much water as will bring it to the consistence of a poultice. This must be applied to the sore, and renewed twice a day. It generally cleans the sore, eases the pain, and takes away the disagreeable smell, which are objects of no small importance in such a dreadful disorder. The charcoal and yeast poultice has the same effect. In

every species of open cancer, the air should be excluded as much as possible.

"No benefit can be expected from any medicine in this disease, unless it be persisted in for a long time. It is of too obstinate a nature to be soon removed, and a radical cure must be brought about by inducing an almost total change of habit, which must always be a work of time. From four months to a year, or even more may be requisite to perform a substantial cure; and the patient must make up his mind, as he values his life, to persevere steadily in a course of cleansing medicines till a cure is effected, let it take what time it will. Many discouraging symptoms and unpleasant sensations may arise in the progress of the cure, and they may even appear quite alarming at times. but they generally pass off in a little time, and should not be allowed to impair our confidence in a final cure.

"Among the medicines found useful in eradicating cancer, are: yellow dock root, in decoction, for a daily drink; and also applied externally as a poultice. Also poke or coke root, in decoction and poultice. A salve composed of the expressed juice of sorrel, poke leaves or berries, and yellow dock dried away in the sun, has been highly recommended."

Since the publication of the first and second editions of this work, a new article, discovered by Dr. Reichenback, of Germany, has been recommended for cancer. The name given to this medicine is *kreosot*, and is extracted from tar and smoke. It is also highly recommended for wounds and sores in general, and in surgical operations as a preventative of inflammation and the most powerful styptic known. Recently it has been said that soot from the chimney was equally valuable as the kreosot.

CARBUNCLES.

Different descriptions have been given of carbuncles, by writers; though all agree that they are a large, painful, burning tumor, much inclined to mortification, and difficult to cure. It most frequently happens, however, that they commence with the formation of a hard substance in some fleshy part, often in the back or thigh, with a violent throbbing pain and burning heat. They frequently occur with old persons, or follow putrid fevers; though they often appear without any previous disease.

A carbuncle frequently commences with a small pimple, similar in its appearance and progress to a common boil, rising a little above the skin, and commonly contains a bloody water. At first the tumor is of a red color, with a spongy appearance, and as it advances, it becomes black and even putrid.

TREATMENT.—It is recommended to puncture or open the tumor freely, and press out the contents, when the elm and ginger poultice should be applied, and renewed once in twelve or twenty-four hours. At each renewal of the poultice the ulcer must be washed with a tea of wild lettuce, zanthoxylon, or bayberry, and then with a tea of cayenne, or tincture of myrrh, or both conjoined. This last application is necessary to promote suppuration, that the head or core may be loosened and taken out.

Internally cayenne pepper, bitter tonic, diaphoretic powders and tincture of myrrh, may be freely taken four or five times a day or oftener as the symptoms may be, to guard against mortification. If mortification, however, should threaten or actually occur, a course of medicine must be immediately resorted to, and repeated as often as necessary until the bad symptoms abate; continuing also the other internal remedies. A poultice should likewise be made of sassafras bark or of smart weed bruised fine, boiled and thickened with corn meal, and applied to the part, or a yeast and charcoal poultice may be used instead of it, to prevent mortification. Fomentations of the smart weed bruised and boiled and applied hot, are also highly recommended to prevent mortification.

CHICKEN POX.

THIS disease, like the measles, small pox, and some other eruptive diseases, depends upon what is termed a specific contagion, and affects the same person but once.

The eruption is sometimes preceded by chilliness, which is succeeded by flushings of the face, and heat, pains in the head and back, thirst, restlessness, and a quick pulse; whilst at other times no such symptoms are perceptible. About the second or third day the pustules or pimples, become filled with a watery fluid, which is never converted into yellow matter, as in the small pox; and about the fifth day, they usually dry away, and are formed into crusts or scabs.

TREATMENT.—It is not considered that any danger ever attends this complaint. But should the fever run high, the common means for promoting perspiration should be used, such as bathing or soaking the feet in warm water before a hot fire, and drinking some warm teas, or taking the diaphoretic powders, or cayenne.

If this does not remove the difficulty and render the patient more comfortable, a course of vapor bath should be resorted to, and if necessary, repeated. The like treatment will also be proper for the swine pox, which is only a species of the chicken pox.

CHOLERA MORBUS OR VOMITING AND PURGING.

FREQUENT and violent vomiting and purging of bilious matter, constitute cholera morbus.

In warm climates it occurs at all seasons, and is very frequent; but in cold climates, it prevails most frequently in autumn when there is excessive heat, or sudden transitions from heat to cold; and the violence of the disease has usually been observed to be greater in proportion to the intenseness of the heat.

Cholera morbus usually comes on with nausea, soreness, pain, distention, and wind, in the stomach, and acute griping pains in the bowels; which symptoms are soon succeeded by a severe and frequent vomiting and purging of bilious matter, attended by heat, thirst, hurried breathing, and a frequent but weak and fluttering pulse.

When the disease is not violent, these symptoms, after continuing for a while, gradually cease, leaving the patient in a debilitated and exhausted state: but when it proceeds with much violence, and there arises great depression of strength with cold clammy sweats, much anxiety, a hurried and short respiration, cramps in the legs, coldness of the extremities, and hickups, with sinking and irregularity of the pulse, the disease will, in general, quickly terminate in death; an event that not unfrequently takes place within twenty-four hours from the commencement of the attack.

Cholera morbus may be distinguished from diarrhœa and dysentery, by the matter which is discharged being pure bile, unmixed with blood or mucus, and with but very little mixture of natural fæces. From other complaints of the bowels, it may, in general, be distinguished by the evacuations being both upward and downward at the same time.

TREATMENT.—Mild attacks of this disease may often be removed by a few doses of brandy, or of Dr. THOMSON'S No. 6, or the tincture of myrrh. As this complaint frequently arises from a sourness of the stomach, draughts of pearlash water, or of white lye, will commonly, if administered at the commencement of the disease, remove the difficulty. Alkaline draughts ought often to be given in all cases of this disease. Pulverized chalk, in table-spoonful doses, is said to be a certain remedy in cholera morbus.

The cholera syrup, in doses of a table-spoonful, every thirty minutes, may be regarded as an invaluable medicine in this disease.

The diaphoretic powders, ought also to be freely given, at the same time bathing the patient's feet in warm water, before the fire, if able to sit up for that purpose. Flannel cloths wrung out

of warm water, may be applied to the region of the stomach, and renewed as they become cool ; or the stomach may be bathed with tincture of cayenne or any other stimulating wash, or both may be done at discretion. Injections of a tea of some astringent article, with the addition of one or two teaspoons full of the tincture of myrrh, should often be administered ; or they may be made of slippery elm, and used alternately with the others. The nervine tincture should also be freely used, in one or two tea-spoonful doses.

But in more violent attacks, or where the means just recommended fail of producing the desired effect, a regular course of medicine ought immediately to be resorted to, as delays in this complaint are to be regarded as highly dangerous. After the evacuations are stopped or relieved, care must be taken that a relapse does not take place. The patient should take of the bitter tonic, diaphoretic powders, cayenne, or cholera syrup, several times a day, until he is out of danger.

Mint tea, or the anti-emetic compound, are also good auxiliaries to check the vomiting in this as well as all other complaints attended with vomiting. But in case the stomach is so extremely irritable that nothing can be retained long enough to produce any sensible effect upon it, an emetic should be administered by injection ; which may be done by putting from three to five teaspoons full of a strong tincture or tea of lobelia into a tea cup full of warm water, pennyroyal or bayberry tea, without any cayenne, and throwing it into the intestines with a syringe, which must be repeated at intervals of from ten to twenty minutes until the stomach is sensibly affected by it.

In the American practice we find the following very highly recommended :—Take of the best Turkey rhubarb, bruised or pulverized, half a dram, salæratis or pearl-ash half a dram, peppermint plant half a dram ; grind all together in a mortar, and put the powder into a tea cup, with loaf sugar enough to sweeten ; then add half a pint of boiling water, and when cold, two table spoons full of brandy. Dose, two table spoons full every half hour, or as often as vomiting and purging takes place. The effects of this medicine, says Dr. Beach, are truly surprising, it being seldom that a patient will vomit up more than one dose of it.

COLIC.

Colic is a painful distention of the whole of the lower region of the belly or abdomen, with a kind of twisting around the navel, often attended by vomiting, costiveness, and a spasmodic contraction of the muscles of the abdomen.

This complaint is produced by various causes, such as crude

or indigestible food, a redundancy of bile, costiveness, colds, worms, poisons, hysterics, &c. Colic has received different names according to attending circumstances, as flatulent or wind colic, bilious, hysteric, &c.

Colic may be distinguished from inflammation of the intestines by the spasmodic contraction of the muscles of the belly; by the trifling degree, or total absence of fever; and by the diminution or lessening of the pain by pressure upon the bowels.

In flatulent or wind colic, there is costiveness, attended with pain, soreness, and griping of the bowels, distention of the stomach, an inclination to vomit and belch wind, with coldness of the extremities.

In bilious colic there is loss of appetite, bitter taste in the mouth, with thirst and some fever; costiveness and vomiting of bilious matter, with an acute pain about the navel; and as the disease advances, the vomiting becomes more frequent, and the pain more lasting. The dry belly-ache seems to be only a slight modification of bilious colic, and is attended by very similar symptoms.

In the hysteric colic there is sickness of stomach accompanied with severe spasms, costiveness, and dejection of spirits.

When the pain attendant upon colic, remits or abates, or shifts its situation, not being obstinately confined to one place, and when the patient experiences considerable relief by a discharge of wind, or by a stool, we may expect a favorable termination: but the sudden cessation of pain, after the disease has been of some hours or days duration, with the continuance of obstinate costiveness, cold sweats, a weak tremulous pulse, frequent fainting and hickups, denote a fatal termination.

TREATMENT.—MILD cases of colic may commonly be removed by the essence of peppermint, anise, or any other aromatic or warming vegetable; by a hot sling, raw spirits; by the colic or anodyne drops, ginger tea, capsicum, or by any of the astringent articles which may be found in our materia medica. Dogwood blossoms are likewise recommended by many, in this complaint. Injections may also be very advantageously added to the use of any of the above means; and in bad cases they are indispensably necessary. The application of a hot board, or of cloths wrung out of hot water, or friction and bathing the bowels with any hot stimulating wash, are also useful auxiliaries or assistants to the means recommended, and may be resorted to if necessary.

But if these means fail, or if the attack should be violent, the patient should be taken through the common course of medicine; which must be repeated, as the circumstances of the case appear to require. After, or between the courses, the patien should take the bitter tonic three or four times a day to strength-

en the tone of the intestines; and if the costiveness continues, the injections should be repeated at proper intervals, until the bowels become regular. The diaphoretic powders, or capsicum, should also be given, to promote perspiration and stimulate the bowels, which may likewise be bathed with tincture of myrrh or pepper and vinegar.

Care should be taken in all bad cases of colic, of whatever kind, to open the bowels by the frequent use of laxative injections, as directed for the treatment of costiveness. This is peculiarly necessary in bilious colic, and what is termed the dry belly-ache.

CONSUMPTION.

Pulmonary consumption, as the disease under consideration is technically termed, is accompanied by general emaciation, pain in the side or chest, some difficulty of breathing, especially after walking or speaking, and a cough, which usually proves most troublesome during the latter part of the night or in the morning. In its advanced stages, an expectoration or spitting of purulent matter, with hectic fever and diarrhœa, ensue.

Consumption seldom occurs before mature age; and is oftener met with in the haunts of gaiety, fashion, and folly, than in those walks of life, where comfort is allowed to predominate over vanity and pride. Women are said to be more subject to it than men, as well from their going more thinly clad, as from the greater delicacy of their organization.

The circumstances which predispose to consumption are numerous; the following are the most common:—Particular formation of the body, indicated by prominent shoulders, long neck, and narrow chest; hereditary predisposition, derived from parents; certain diseases, such as inflammation of or bleeding from the lungs; scrofula, small pox and measles; particular employments, in which the individual is exposed to dust, as needle pointers, stone cutters, &c., or to the fumes of metals, as chimists, &c.; playing much on wind instruments; great evacuations from the body; continuing to suckle too long under a debilitated state; the use of mercury or arsenic as medicine; the application of cold to the body, either by changing the apparel from a thick to a thin dress, or by keeping on wet clothes, lying in damp beds, or in any way giving a considerable check to perspiration; and by tight lacing, or wearing corsets.

Consumption, we conceive to be, in its first stages, a local disease, confined to the lungs; but as it progresses, its effects become more general. It is simply an ulcer in the lungs, and may arise from two different conditions of these organs; either

inflammation, or what are termed tubercles, which are small tumors having the appearance of hardened glands, of different sizes, and often existing in clusters. Their firmness is usually in proportion to their size, internally of a white color, and in consistence approaching a cartilage. Consumptions arising from tubercles are more difficult of cure than those arising from ordinary inflammation of the lungs.

This disease when proceeding from the latter cause, commonly begins with a short, dry, hacking cough, though nothing is spit up for some time but a frothy mucus that seems to come from the fauces or back part of the mouth. The breathing is at the same time impeded, and upon the least exertion is much hurried. A sense of oppression at the chest comes on; and leanness or emaciation takes place, with languor and indolence, dejection of spirits, and loss of appetite.

This state is sometimes of short duration, but frequently it continues a considerable time; during which, however, the patient is more readily affected by slight colds; and finally, perhaps from a bad cold, the cough becomes more troublesome and severe, particularly by night. At length, along with the cough an expectoration or raising of matter from the lungs takes place, which is most free and copious during the latter part of the night and in the morning. By degrees the matter which is expectorated becomes more viscid or sticky and opaque, assuming a greenish color and purulent appearance, and is often streaked with blood.

The breathing at length appears more difficult, and the weakness and emaciation increase. The patient becomes sensible of a pain in some part of the chest or breast, which is more particularly distinguishable on coughing. The pulse is now full, hard, and frequent; the face flushes, particularly after eating; the palms of the hands and soles of the feet are affected with burning heat; the breathing is difficult and laborious; fever becomes obvious at evening, which by degrees assumes what is termed the hectic form.

At the commencement of the hectic symptoms the bowels are usually in a costive state; but as the disease advances, a diarrhœa or looseness comes on, and the fever is succeeded by profuse sweats.

There is almost from the first, a peculiar countenance, and hollow tone of voice; but at this stage of the complaint they are much increased, insomuch that an observing person who has seen several consumptive patients, would, from these symptoms alone, readily suspect the disease.

The patient now has the appearance of a walking skeleton, his flesh being so much wasted; his countenance is often ghast-'y; his cheek bones are prominent; his eyes look hollow and

languid; his hair sometimes falls off; his nails turn of a livid or blue color, and are incurvated; whilst his feet and ancles become swelled. To the end, the senses commonly remain perfect, and the mind is full of confidence and hope. It is indeed a happy circumstance for persons afflicted with consumption, that they are seldom apprehensive of any danger; and it is no uncommon thing to meet with patients in its most advanced stages, flattering themselves with the idea of a speedy recovery, and forming distant projects under that delusive hope.

The extremities now are cold; a clammy sweat breaks out on the body; the pulse becomes imperceptible; the tide of life ebbs apace, and death closes the scene!

Such is the but too common history of the means by which the last enemy of mortal man accomplishes his object. Consumption has always been a most fatal disease, and of late years has become a far more common one than it was at more remote periods. The cause of this fatal increase has given rise to various speculations both in Europe and America, some attributing it to one thing and some to another. But those who attribute it mainly to the pernicious fashions and customs of the day, in our opinion, are nighest being correct. These may be summed up in a few words—thin dress, with almost naked bosom, so common with females; corsets with tight lacing; evening parties, and balls; late hours, and lying long in bed.

These pernicious, and manytimes destructively fatal customs, have too often been uselessly opposed and condemned, in the most eloquent strains of piety and reason, for us to think of staying their mighty and disastrous march, by the utterance of our warning voice.

"While the empire of fashion," says Dr. GUNN, "bears so arbitrary a sway, and the followers of pleasure are bound by the fascination of example, and the contagious influence of that spirit which insinuates itself into the bosom of each and every one of its votaries, so long will the sage precepts of wisdom be unheeded, till the emaciated form, the glassy eye, the hectic blush, speak in language too strong for utterance," that disease has sapped the foundation of life, "and the yawning grave stands ready to receive its devoted victim."

TREATMENT.—A radical cure of consumption has so long been considered impossible, that we are fearful of hazarding the imputation of enthusiasts or of dealers in the marvelous, should we assert any thing to the contrary. But we are constrained to declare our belief, that many cases of this most fatal malady may be cured, in almost any stage but the last, by pursuing a judicious course with the use of proper means.

Many cases approaching a consumption may be removed by the use of the expectorant powders, with the bitter tonic or

diaphoretic powders, or both. The bitter tonic must be taken three or four times through the day, in tea-spoonful doses; and the expectorant and diaphoretic powders, in similar doses, at night. The tincture of lobelia, in nauseating (sickening) doses, commonly from half to a whole tea-spoonful is sufficient, or the root of the skunk cabbage in half to whole tea-spoonful doses, in some instances of affections of the lungs, appear to have a better effect than the expectorant powders; and cases which do not seem to be much benefited by one, may perhaps be by another, and, therefore, either may be used at discretion.

But the best way of attacking this formidable disease is with repeated courses of medicine. These should be administered, if an attempt at cure is made in the latter stages, every day, perhaps, for a while, or every other day, until the most urgent symptoms are subdued, when they may be longer neglected according to the circumstances of the case. But the strictest and most unremitting attention must be paid to relapses; and if they occur the patient should immediately submit to a full course of the medicine and steaming, as nothing else will effectually check his downward march to the grave.

The lungs are never completely at rest, but are always in use, day and night, asleep or awake; and are consequently exposed continually to the irritation of their own action and to the influence of the atmosphere, both of which circumstances are known to retard the cure of ulcers situated upon the external parts of the body; and we think it fair to infer that like causes will produce like effects in the lungs. In case of an ulcer upon the arm or leg, these organs can be kept in a state of rest, and poultices or salves may be applied, whereby the healing process will be vastly accelerated; but no such helping means can be applied to the lungs. Medicines can only affect them by restoring a general healthy action to the whole system.

Hence we might very naturally infer, what is an absolute fact, that consumption is a complaint more difficult to cure, as well as more liable to relapse, than almost any other. It therefore requires the strictest measures in its treatment, and the most guarded watchfulness against relapses.

The moment a relapse is discovered, a thorough process of the medicine should be gone into, however averse to it the patient may feel; as the neglect of it might be his destruction, whilst its prompt administration may be the means of prolonging life. And as this disease is more difficult of cure than most others, so relapses are attended with a corresponding danger; and even in curable cases the too long neglect of them will be productive of fatal consequences. No physician ought to attempt the cure of a consumptive case without being so situated as to be able to give his daily personal attention to it.

During the intervals between the courses of medicine, the patient should have frequent doses of such articles as the bitter tonic or the diaphoretic powders, and at night a dose of the expectorant powders, tincture of lobelia, or powder of skunk cabbage root. Or these medicines may be alternated with either the tonic cordial or expectorant syrup, sometimes using one and sometimes another. It will be a matter of the highest importance in this complaint, to keep the system regularly and constantly under the influence of some of the remedies which we have recommended; and to administer a course of medicine as often as may be necessary to keep the patient in a state of convalescence, that is, in a state of improving health.

Traveling in a mild and healthy climate will have a very salutary influence over consumptive patients; but they ought, by all means, to avoid any exposure to wet and cold, as well as the confined pestilential air of large towns or cities. Every situation and circumstance should be carefully avoided which has a tendency to obstruct the breathing, or to increase the circulation of the blood beyond a healthy standard. The confined air of a city has an oppressive influence upon the breathing of a person in good health; and any one accustomed to the country air, if he be not sensible, during his stay in town, of an oppression of the chest, will certainly find his breathing more easy on getting into the free air of the country: with the consumptive patient the effects of confined air are far more sensible and highly injurious.

Immoderate exercise, as it increases the breathing and circulation of the blood, ought by all means to be avoided, whilst gentle daily exercise either in a carriage or, particularly, on horseback, will prove highly beneficial. A voyage at sea has long been regarded as amongst the best means of curing a consumption, and by those whose circumstances will permit, may advantageously be undertaken. Another circumstance, essentially necessary to be attended to, is the wearing of such apparel as the inclemencies of the season may require. Flannel next the skin in winter ought never to be neglected; whilst the outer garments, both in winter and summer, should correspond with the temperature of the weather.

CONVULSIONS OR FITS.

Systematic writers treat of this complaint under the appellation of tetanus or cramp. It is a most terrible disease, whether we regard its painful effects upon the system, or the difficulty which has hitherto attended its cure.

Fits are often caused by exposure to cold, sleeping in the open air and on damp ground, by the presence of irritating sub-

stances in the stomach or intestines, such as worms; or by some irritation of the nerves produced by local injuries, such as running nails into the feet, incisions or cuts with edge tools, and lacerated wounds.

Some persons appear to be naturally predisposed to fits, which occur on the application of causes which with persons who are not subject to this complaint do not produce them, such as hard labor, overstraining, &c.

With females who are subject to fits, they often occur about the periods of the monthly turns, more especially if they happen to take cold at this time.

Convulsions or fits, come on, in some instances, with great violence; but it commonly happens that the symptoms manifest themselves more slowly, first by a slight stiffness about the shoulders or in the back part of the neck, which gradually increases until the patient cannot turn his head without turning his whole body.

An uneasy sensation is now sometimes felt at the root of the tongue, together with some difficulty of swallowing, and stiffness of the jaws. A pain is next felt in the stomach, darting at times towards the *ensiform* cartilage, (extremity of the breast bone,) and thence shooting to the back; and all the previous symptoms are increased. The jaws perhaps now become set, and if the cramp extends no further, the complaint is termed lock-jaw.

The *pathognomonic* or characteristic symptom of common convulsion fits, is the spasm under the breast bone, which increases with great vehemence and rapidity. The muscles of the back part of the body contract, and forcibly draw the body backward. The jaws now are set or violently convulsed; the tongue is also affected by spasm, and being convulsively darted out of the mouth, is often much injured by the teeth being suddenly and forcibly snapped together, which ought to be prevented by holding a spoon handle covered with rags, a piece of soft wood, or some other substance between the teeth.

The spasms are, however, not uniform in their severity; but increase at intervals of different lengths from a few seconds to many minutes. But even in the intervals, the spasmodic action prevails so that it is often difficult for the limbs to be bent in any thing like an easy position. The breathing is quick and laborious; the face sometimes pale, but oftener flushed; the whole countenance evinces the most marked signs of deep distress; swallowing is accompanied with great difficulty, or is totally interrupted; the senses sometimes remain entire, but are often annihilated, whilst every organ of the system is literally on the rack, from the antagonizing action of the muscles. Desportes gives a case, says Dr. Good, in which both the thigh bones

were broken by the violent contraction of the flexor muscles during a momentary relaxation of the extensors.

The exertions are now so laborious that the patient sweats profusely: the pulse is small and irregular; the heart throbs so violently that its palpitations may be seen; the eyes are sometimes watery and languid, but more commonly rigid and immovable in their sockets; the countenance becomes hideously distorted and expresses great distress; the strength is exhausted; the pulse is very irregular; and one universal spasm at length puts a period to a most miserable state of existence. Sometimes the muscles of the fore part of the body are equally affected with those of the back, when the patient, instead of being drawn backward, is rigidly extended in a straight line, and rendered incapable of being bent in any direction. The arms, also, in this case become violently affected, and are rigidly extended, as well as the body.

There is one thing a little extraordinary in this complaint, which we have not found recorded by any author. It often happens that persons who are subject to fits, when they feel the premonitory symptoms of this complaint, also feel a disposition to retire to some sequestered spot where they may endure the agonies of this painful disease alone. Individuals who are subject to fits ought to be narrowly watched whenever any suspicion is entertained that they are threatened with an attack, as instances have often occurred of persons leaving the house and family, and suffering the horrors of this dreadful malady, without any person to render that care which they so much need.

TREATMENT.—Those who are liable to this complaint should be careful to avoid all the exciting causes which produce it; and as preventives, tonic remedies, such as the diaphoretic powders, or bitter tonic, to which the vapor and cold bath will be powerful auxiliaries, may be resorted to. When the patient feels symptoms of the fits coming on, he ought immediately to take a tea-spoonful of nervine tincture, the good effects of which may be increased by the addition of a fourth to a half, or even a whole tea-spoonful of capsicum, which should be repeated as the symptoms may require. But this ought to be administered at the onset of the first symptoms, and if it should not very soon afford relief, or if the symptoms increase, immediate recourse should be had to the anti-spasmodic tincture, in doses of half to a whole tea-spoonful, repeated as often as the circumstances of the case may require. Whilst this is doing, however, preparations should be making to take the patient through a course of medicine; not forgetting to administer injections, which are highly important in this disease.

Bathing the parts about the pit of the stomach with cayenne and vinegar or brandy, or the anti-spasmodic tincture, we think

might be productive of much benefit to a person in a fit; or even before convulsions occur, as a preventive.

We have the fullest confidence, however, in asserting our belief in the curative powers of the anti-spasmodic tincture, taken internally, in ordinary cases of fits; though it may sometimes fail. In such instances the only alternative is a course of medicine, which ought to be repeated as often as the case may require, until the general health is so far restored that the vital organs are capable of resisting the causes which produce the disease. Between the courses of medicine, the common means of keeping up a healthy action, and restoring tone to the system, should be used, such as the bitter tonic, diaphoretic powders, together with the nervine compound two or three times a day, in half tea-spoonful doses, to strengthen the nervous system.

If the general health has become impaired from the recurrence of the fits, or from any other cause, every means should be used to improve the health, not only by the use of tonics, as just stated, but by general courses of medicine, repeated at proper intervals; and, in the mean time, if symptoms of convulsions occur, they should be treated as we have heretofore stated.

We have known one case of convulsion fits, of thirty years standing, cured by the use of those means which we have recommended; the patient not having had one attack since the first dose of medicine was administered at the commencement of the convulsive symptoms, in a threatened attack, which it effectually checked. The medicines administered in this instance were simply a dose of the diaphoretic powders, followed by the tincture of lobelia or its pulverized seed.

CORNS.

These are hard, horny excrescences or tumors, growing about the joints of the toes, and sometimes, though seldom, on the sides of the feet. They are caused by pressure upon the affected part from small shoes; being exceedingly sore and painful as well as difficult to cure.

Treatment.—Dr. Thomson recommends that the foot be bathed or soaked in warm water until the corn becomes soft, when it should be shaved down thin; though not, we will add, so as to produce pain or bleeding. Then take a narrow strip of bladder or suet skin, eight or ten inches long, rub it until soft; then plunge it into rattle snake's oil or nerve ointment, and wrap it around the toe that has the corn, on which it must be kept until the bladder is worn out. "If this does not cure, repeat the same until the corn is removed."

Instead of the rattle snake's oil or the nerve ointment, some

recommend opedeldoc, balsam of fir, or simply raw cotton. Others advise weak lye to immerse the feet in, previous to paring down the corns, "after which apply a plaster of the extract of Prince's pine, or fresh blood root pounded, or Seneca oil." But no application will be likely to avail much unless the shoes are roomy; by which precaution these painful companions might generally be avoided.

COSTIVENESS.

Costiveness of the bowels seldom occurs unconnected with some other disorder of the stomach or liver, or both. It is almost always attendant upon indigestion or dyspepsy, in which complaint, as in all others in which it is apt to occur, it is a troublesome symptom.

Sedentary persons are peculiarly liable to this complaint, especially those who are of what is termed a sanguineous and choleric temperament; and such as are subject to hypochondriac affections.

Costiveness is frequently occasioned by neglecting the usual time of going to stool, which has a tendency to check this salutary excretion. It may also be caused by habitual copious sweating; or by eating improper food; by the occasional or habitual taking of opium, and by the use of wine.

The common effects of costiveness are sickness of the stomach, want of appetite, flatulency or wind in the stomach and intestines, headache, some degree of fever, general dulness, and melancholy or dejection of spirits.

Treatment.—When constipation of the bowels depends upon some other disease, as dyspepsy, or an affection of the liver, attention must be paid to these complaints, whilst the costiveness should be attempted to be obviated by a diet of ripe fruits and vegetables, which have a tendency to loosen the bowels. The bitter tonic, with the addition of a portion of the bitter or the black root, should be taken three or four times in a day, or oftener, which will not only relax, but give tone to the intestines; and in all obstinate cases, injections of warm water with the addition of the fourth of a tea-spoonful of capsicum, or of some laxative preparation, should often be given.

Cases of extreme obstinacy of this complaint occasionally occur with persons otherwise in good health, but more often in bilious colic. In these cases injections strongly impregnated with the extract or syrup of butternut, should be frequently given; or a decoction of the bark or boughs of the butternut may be made by boiling either a short time in soft water, or any other, if soft cannot be readily procured These should be

repeated perseveringly until relief is obtained. Some instances have occurred in which it was found necessary to remove the hardened fæces by mechanical means, such as introducing the finger into the *rectum* or fundament, or using a surgical instrument termed a scoup; but no necessity for such an indelicate operation as this would, in our opinion, ever occur, if the use of injections were timely resorted to.

It is a very common custom with persons who are subject to costiveness, to resort to the use of purgative medicines; but this is a practice of most injurious tendency. The use of every purgative medicine, says Dr. THOMAS, creates a necessity for its repetition, and by its repetition the bowels lose their energy. Purgatives act by stimulating the intestines with greater force than their natural contents do, which lessens their excitability or capacity of being excited, and hence the necessity of following one purge by another, and another, &c. In short, the use of purgative medicines has a tendency in all cases to weaken the tone of the intestines, but more particularly so in cases of costiveness. The cause of this difficulty is a loss of tone, and the true indication of cure is the use of such articles as have a tendency to restore a healthy tone to the intestines. This indication can best be answered by the use of the bitter tonic, combined with a small portion of either the bitter or black root, which is at the same time mildly laxative and powerfully tonic.

In some cases, however, it may be advisable to give a cathartic to afford relief, and then follow up with laxatives, such as bitter-root, gentian, minispermum, etc. Bathing the bowels with pepper and vinegar, or with the bathing drops, will be found very serviceable; or a paper may be wetted in the tincture of myrrh, or in vinegar, and sprinkled with cayenne, and applied over the region of the bowels. Brisk frictions upon the abdomen are considered by many persons to be of great utility and may be resorted to when thought necessary, in addition to the means above prescribed.

Common charcoal has also been highly recommended in constipation of the bowels. It may be taken in tea or table spoonful, or even larger doses, according to the exigencies of the case, mixed with melasses; repeating it as often as may appear necessary.

Persons who are habitually subject to this complaint, should, at regular hours every day, solicit an evacuation; and by all means attend, immediately, to every inclination of going to stool, whenever it may arise. The daily use of a quantity of bran, as will be found more particularly treated upon hereafter, will be highly serviceable, and likewise brown bread.

CROUP.

Croup is an inflammatory affection of the mucous membrane of the trachea or wind pipe, and in some instances extends to the lungs.

Children are peculiarly liable to this complaint, which is accompanied by a peculiar wheezing sonorous breathing, compared by some to the crowing of a cock, and a similar sound in coughing or speaking, with thirst, fever, and great difficulty of respiration.

The application of cold (catching cold) seems to be the general cause which produces this complaint, and therefore it occurs more frequently in the winter and spring, when the weather is cold and variable, than in the other seasons. It has been said to be most prevalent near the sea coast, where the air is loaded with moisture; but it is often met with in inland situations, particularly those which are low and marshy. It is more frequently to be found in cold than in warm climates.

A day or two previous to an attack of croup, the child appears drowsy, inactive, and fretful; the eyes are somewhat suffused and heavy, and there is a cough, that, from the first, has a peculiar shrill sound; which, in the course of a day or two, becomes more violent and troublesome as well as more shrill. Every fit of coughing agitates the patient very much, from the pain and difficulty attending it; the face is flushed and swelled; the eyes are protuberant, that is, stand out of the head; a general tremor takes place, and a convulsive endeavor to renew the breathing at the close of each fit of coughing.

As the disease advances, the difficulty of breathing increases, accompanied by a swelling and inflammation of the palate and adjacent parts, and the head is often thrown back in the agony of attempting to escape suffocation.

There is not only an unusual and peculiar sound produced by the cough, but breathing is performed with a hissing noise, as if the wind pipe were closed up by some light spongy substance through which the air was obliged to force its way. The cough is generally dry; but if any thing is spit up, it has either a purulent appearance, or seems to consist of films resembling portions of membrane. Sickness of the stomach and vomiting sometimes prevail. There is also much thirst and an uneasy sense of heat over the whole body, a continual inclination to change from place to place, with great restlessness and frequency of the pulse.

In a more advanced stage of the disease, breathing becomes more harsh and difficult, with some degree of spasmodic affection; the intervals between the inspirations become longer, and

finally death comes as a friend, to relieve the little sufferer from its agonizing torture.

The croup must be regarded as a dangerous complaint, and sometimes terminates its career in a few hours; or, from being only a slight disease, its symptoms become suddenly and unexpectedly aggravated, and it very soon puts a period to existence. Parents should be extremely careful when their children have any of the common symptoms of croup, especially if they are subject to the complaint, not to leave them, particularly at night, without the attention of some person capable of extending the proper care to them, in case the symptoms should suddenly augment. Instances have occurred, in which children have been lost for the want of timely attention, in consequence of the absence of parents. Nor is there any cause to doubt that many cases of children being found dead in bed, have been caused by croup.

Treatment.—In bad cases, or violent attacks of croup, the child should have from half to a whole tea-spoonful of the tincture of lobelia given to it, and repeated at intervals until relief is obtained. A tea-spoonful of the diaphoretic powders should also be steeped in a tea cup two thirds full of boiling water, made very sweet; of which a large spoonful, with the addition of some cream if the child be very young, should be also occasionally administered; at the same time keeping it warm to promote perspiration. If the use of these means, together with injections, does not afford the desired relief, a course of medicine must be resorted to, which will rarely fail of removing the most urgent symptoms, and commonly effects a cure. But if this should not relieve the complaint, doses of the tincture, diaphoretic powders, &c., should be repeated until relief is obtained; or, if necessary, another course of medicine may be resorted to, at the discretion of the parent or physician. The tincture of lobelia, however, will almost always relieve this distressing and often fatal complaint. In violent cases, enough must be given to produce vomiting. And, says Dr. Thomson, "If the saturated spiritous tincture of lobelia does not readily produce copious vomiting, to throw off the tough viscid phlegm that occasions the troublesome and dangerous obstruction, immediate recourse should be had to the infusion of the emetic herb in warm water, or to the expressed juice of the green plant when it can be obtained."

Mild cases of croup may commonly be removed by the onion syrup; or by butter, vinegar, and honey steeped together, and by many other articles which are good for coughs or colds. A tea of Seneca snake root is also highly recommended; but, by some, it is considered as being poisonous, though others think it not; it should, therefore, be used cautiously, if used at all.

The roots of the common mullen, (*Verbascum thapsus*) steeped in a strong tea, sweetened, and given in frequent doses, is said to be a good remedy in croup.

DEAFNESS.

Deafness is occasioned by any thing that proves injurious to the ear, as loud noises from the firing of cannon, violent colds particularly affecting the head, inflammation or ulceration of the membranes of the ear, hard wax, or other substance interrupting the sound; too great dryness or too much moisture in the ear; or by any circumstance which may weaken or injure the auditory nerve, by which we mean the nerve which communicates the impression of sound to the brain. In some instances it is caused by other diseases, such as fever, syphilis, &c., and in others it depends upon an original defect in the structure of the ear. In the last instance, the person is born deaf, and, of course, is likewise dumb.

It is often difficult to remove deafness, but more especially where it arises in consequence of wounds, ulcers, or inflammations of the tympanum or drum of the ear. Where it proceeds from a defect in the structure of the ear it admits of no cure.

When deafness is occasioned by hard wax sticking in the ear, a little thin oil may be dropped into it, evening and morning; or it may be syringed with mild soap suds, or warm milk and water, to which the application of the oil may also be added after each washing; keeping the ear stopped with cotton or wool. If these means do not remove the wax, a little of the tincture of myrrh, or the anti-spasmodic tincture may be dropped into the ear.

When deafness is caused by cold particularly affecting the head, the head should be carefully kept warm by night; the good effects of which will be increased by taking a dose of the diaphoretic powders, and sitting by the fire, previous to going to bed. Indeed, from whatever cause the deafness may originate, it will be proper to keep the head warm.

If deafness be owing to too much moisture in the ear, it should be syringed out with a decoction of some of the astringent articles, first used warm, to cleanse the ear, and then cold, to brace and strengthen its internal parts.

Should deafness, however, be caused by too great a dryness of the ear, by defective energy in the auditory nerve, by debility of the organs, or by a nervous affection, the application of equal parts of the tincture of myrrh and tincture of lobelia will be the main dependence. The administration of a few doses of the nervine tincture, might be useful; and if the complain

resist those remedies the occasional application of a few drops of the antispasmodic tincture may perhaps be resorted to, with advantage. We have also known deafness to be much relieved by repeated courses of medicine, which had been prescribed for the cure of other complaints; and, therefore, a few courses might be tried, if nothing else appeared likely to succeed.

We will close our account of the treatment of deafness, by describing the method of using tobacco smoke, which, says Dr. Thomas, has been employed in some cases of severe and long continued deafness, with great success and efficacy:

"The mode of using it is to fill the mouth with the smoke of the strongest tobacco, instantly closing the mouth and nose, and then for the person to make all possible effort, as if he meant to force the smoke through his nose, which must be prevented by holding the nostrils very tight: this forces the smoke through the *Eustachian* tube into the ear. These efforts are to be repeated until one or both ears give a seeming crack, immediately on which the hearing returns."

This process is simple and cheap, and probably without hazard; and, therefore, may be tried by any one who chooses to do so.

DIABETES.

This complaint is characterized by a free and often profuse discharge of urine, of a violet smell and sweet taste; with great thirst and general debility.

Diabetes may be occasioned by the use of strong diuretic medicines, intemperance in drinking, severe evacuations, immoderate use of acid drinks, excessive labor, or any circumstance which produces general debility. Hence, persons of shattered constitutions, and who are in the decline of life, are most subject to its attacks. It has, however, taken place, in many instances, without any apparent cause.

The common attendant symptoms of this disease are, weariness, sense of weakness, disinclination to motion or exertion, dryness and harshness of the skin, costiveness, great thirst, voracious or greedy appetite, with gradual emaciation of the whole body.

The immediate affection of the body which gives rise to diabetes, has long been a subject of controversy amongst medical men; but the conclusion which Dr. Good seems to arrive at, is, "that diabetes is a disease seated in the kidneys alone, and dependent upon a peculiar irritability or inflammation of these organs."

An increased flow of the urine may, however, occur, without

those distinctive characteristics given in the first paragraph; but as the treatment in either case is so very similar, we do not deem it necessary to make a separate subject of it.

Treatment.—We may attempt the cure of this inveterate complaint, by the use of the ladies' slipper, in doses of one tea-spoonful of the pulverized root three or four times a day; or if the nervine tincture is preferred, this may be given in doses of two or three tea-spoons full, the same number of times. The diaphoretic powders must also be administered occasionally; or a tea of the bayberry, or some other astringent article may be substituted. The bitter tonic should also be taken regularly three or four times a day; and the whole surface of the body may be sponged or washed once a day, with a weak solution of pearlash in water, to moisten and relax the skin. The diet should consist of a large proportion of animal food, as this affords less sugar than vegetable aliment, and at the same time yields more nourishment to the feeble powers of the system. Though it is said, that an animal diet, in some instances, has aggravated the disease.

An acquaintance of ours, in whom we have the utmost confidence, informed us that he had often prescribed the *water-agrimony*, in diabetes; and in every case it had effected a cure. Another recommends a strong tea of sumach leaves as an excellent remedy in this disease.

After pursuing the plan which we have recommended for a reasonable time, and the complaint does not appear to be subsiding according to our wishes, or if it be a bad case, or of long standing, we should take the patient through a course of medicine; and repeat it at proper intervals until he be cured.

Between the courses, the same plan should be pursued as recommended in the first instance.

DIARRHŒA OR LOOSENESS.

Diarrhœa consists in frequent and copious discharges from the bowels, accompanied by griping, and sometimes by slight vomiting.

In this complaint there is evidently an increase of the peristaltic motion, which may be produced by a variety of causes, applied either to the body in general, or which may act solely upon the intestines.

Of those causes which act generally upon the body, we may notice catching cold, which gives a check to perspiration, and thus determines the flow of the fluids to the intestines, instead of permitting them to escape by the skin; certain diseases, as teething, gout, rheumatism, fever, &c., as likewise passions of the mind.

Of those causes which act directly upon the intestines, may be enumerated; first, substances taken into the stomach, and acting upon the organ by over-charging it; or which from their nature, produce a morbid effect upon the stomach and intestines, such as vegetable substances which are apt to ferment and become sour, &c.; secondly, the animal fluids generated in the body, and poured into the intestines, as acrid bile, &c.

The stools in diarrhœa assume various appearances; and hence have originated many different names according to those appearances. Sometimes they are of the common color, but very loose and copious; sometimes they are of a bright yellow; sometimes white and frothy; sometimes they consist of mucus; sometimes they are quite fluid or watery; and at other times they consist of food and drink passed without being digested. We regard these different appearances of the stools, however, as matters of small consequence, as the plan of cure must be the same in all cases.

Treatment.—Common cases of diarrhœa may generally be removed by a few doses of the tincture of myrrh, diaphoretic powders, bitter tonic, bayberry, or any of the astringent articles mentioned in the materia medica, or the cholera syrup. The butternut syrup, black root, bitter root, rhubarb, or any other cathartic which we shall hereafter recommend, may be resorted to, if the other articles do not readily remove the complaint; or if none of them are likely to answer the purpose, a thorough emetic must be resorted to, and repeated as occasion may require. Friction and bathing the bowels are also highly useful.

The bitter tonic and other means should be continued as the symptoms may demand.

DISLOCATIONS AND BROKEN BONES.

TO RELAX THE MUSCLES, IN ORDER THAT THE BONES MAY BE READILY REDUCED OR PUT IN THEIR PROPER PLACE.

The world, so far as we know, is indebted to Dr. Thomson for the following method of relaxing the muscles, in cases of joints getting out of place, or of bones being broken. The mode which he recommends, possesses the double advantage of preventing, to a great extent, the excruciating pain which usually attends the reduction of fractures of the bones and dislocations of the joints, and of being simple and the means either always at hand or readily obtained.

He directs the patient to have a dose of cayenne pepper and the powder of lady's slipper root, to promote perspiration, prevent fainting, and quiet the nerves. Then having a kettle of hot

water, wet a large cloth in it and apply as hot as can be borne around, and for some distance both above and below, the injured part, if it be on one of the limbs. This being done, hold a vessel under, and pour water as hot as can be applied without pain, on the wet cloth, and so continue for fifteen or twenty minutes, when the cloth must be taken off, and the bone or bones placed in their proper position by some skilful person. If the case be a broken bone, it must be splintered; but if it is a joint out of place, nothing more will be necessary than to pour cold water on the part, which will contract the muscles, and keep the bone in its proper position.

In reducing either dislocated or fractured bones, to their proper place, much less skill is necessary than many suppose.

Any person of common sense knows how the bones ought to be when *not displaced;* and by exercising a little mechanical ingenuity, after the muscles are relaxed, he will be able to return them to their proper situation. It must also be carefully remembered not to extend the limb, as is the common practice, but bend or draw it towards the body. Any individual may satisfy himself of the relaxing effects of a bent position of the arm, by first extending one of his own, at full length, then grasp it with the other hand, when he will find the flesh tense and hard. Now if he will incline his arm towards his body he will find, on grasping it again, that the muscles, that is, the flesh, are relaxed and soft. This is, therefore, the proper position for the limbs in reducing either a dislocated or a broken bone, instead of being extended, as is commonly practiced by bone-setters.

DROPSY.

Dropsy is an accumulation or retention of serous or watery fluid in some part of the body; to which different names are given by systematic writers, according to the part of the body in which the water is lodged.

When it is collected in what is called the cellular membrane, which is situated between the skin and flesh, it is termed *anasarca*, or dropsy of the cellular membrane. When the water is collected in the thorax or chest, it is called *hydrothorax*, or dropsy of the chest. When in the cavity of the abdomen, it is called *ascites*, or dropsy of the abdomen, &c.

Dropsy sometimes appears to arise from family predisposition; it is also caused by frequent salivation, or the occasional use of mercury; excessive or long continued evacuations; a free use of spirituous liquors; affections of the liver, spleen, pancreas, mesentery, &c.: it also often ensues as a consequence of other diseases, as jaundice, diarrhœa, dysentery, consump

tion, intermittent fevers, &c., or the sudden suppression of some accustomed evacuation, the striking in of eruptions of the skin, and by whatever has a tendency to weaken the powers of the system.

Anasarca, or dropsy of the cellular membrane, which is the most common form of the disease, shows itself first by a swelling of the feet and ankles, which is most visible at evening, and disappears during the night.

The tumefaction or swelling, is soft but inelastic; hence, when it is pressed upon with the finger, the mark or pit that is made remains for some time in the skin which becomes paler where the end of the finger rested than any where else.

By degrees the swelling ascends upward, affecting the thighs, trunk of the body, and finally the face and head. The internal parts now, perhaps, become affected, and, from the effusion of water in the cellular tissue of the lungs, the breathing will be difficult, especially when lying down. The patient now also has a cough, accompanied with an expectoration of a watery fluid; the urine is commonly in small quantity, high colored, and deposits a reddish sediment; the bowels are generally costive, the perspiration obstructed, the countenance yellow, with much thirst. To these symptoms succeed torpor, heaviness, and a slow fever.

In some cases the water oozes through the pores of the skin; whilst in others, it being too gross to pass through the cuticle or scarf-skin, it raises it in blisters. Such an accumulation sometimes takes place, that the skin of the legs, being incapable of bearing further distention, bursts asunder.

Any disease of the internal organs arising in the advanced stages of dropsy; or great emaciation, St. Anthony's fire, much drowsiness, dark or purple spots or swellings, discharges of blood, hot fever, great thirst, and a quick small pulse, are to be regarded as very unfavorable symptoms.

This disease is always to be considered as of more easy cure, when it arises from weakness or debility, than when it is caused by obstructions of the liver or any other of the abdominal viscera; as likewise when recent, than when of long standing.

The skin becoming moist, with diminished thirst, and increased flow of urine, may be regarded as favorable symptoms.—In some few cases, the disease goes off spontaneously, either by a vomiting, purging, profuse perspiration, or an unusual discharge of urine; but this does not often occur.

Ascites, or dropsy of the belly, is attended by a tense swelling of the abdomen. The water, in this form of the disease, is usually collected within the *peritonæum* or internal lining membrane of the abdomen, and is consequently diffused amongst the intestines; though sometimes it is found between the perito

æum and external parts or walls of the abdomen. The same causes, in general, which produce anasarca, may produce ascites.

Ascites is often preceded by loss of appetite, sluggishness, inactivity, dryness of the skin, oppression at the chest, cough, diminution of the natural discharges of urine, and costiveness of the bowels. Shortly after the appearance of these symptoms, a swelling is perceived in the lower part of the abdomen, which, as the disease advances, gradually extends itself, and keeps on increasing, until the whole belly or abdomen becomes uniformly swelled and tense.

This complaint may be distinguished from ordinary bloating or inflation of the bowels with wind, by the elasticity in the one case, and the fluctuation which attends the other. In general, he fluctuation of the water, in dropsy, may be felt by placing the left hand on one side of the abdomen, and then gently striking on the other with the right. In this experiment the water may be felt, by the left hand, to move or rush from one side of the belly to the other. In some cases this rushing or fluctuation will be obvious to the ear.

As the collection of water increases, the breathing becomes difficult, the countenance exhibits a pale or bloated appearance, an immoderate thirst arises, the skin is dry and parched, and the urine is scanty, thick, high-colored, and deposits a brick colored sediment. The pulse is variable, being sometimes considerably quickened, and at other times slower than natural.—Sometimes fever attends this complaint; but it is often absent.

This species of dropsy may always be regarded as of difficult cure. The urine having been originally but little diminished, or becoming more copious; the swelling of the belly subsiding, the skin becoming moist, the respiration more free, and the strength having been but little impaired, may be regarded as favorable circumstances: on the contrary, intense local pain, great emaciation, with fever, and the disorder having been induced by a diseased state of the liver, or other viscera of the abdomen, must be looked upon as unfavorable symptoms.

Hydrothorax, or dropsy of the chest, is distinguished by an oppression in breathing, particularly after any exertion or when lying down, difficulty of lying upon one side, sudden starting from sleep, with anxiety, palpitations of the heart, irregularity of the pulse, cough, occasional faintings, paleness, anasarcous (dropsical) swellings of the legs, thirst and diminution of urine which is high colored, and on cooling deposits a pink or red sediment; but the most certain distinguishing symptom of hydrothorax is a sensation of water perceived by the patient, in the chest, on certain motions of the body, or as if the heart were moving in a fluid.

The accumulation of water in the chest may also be tested by striking with the hand upon the chest, when the patient is standing upon his feet, or by pressure upon the abdomen, either of which will increase for the moment the sense of suffocation or difficulty of breathing, as well as the other symptoms attending this commonly fatal disease.

The causes which immediately give rise to hydrothorax, are much the same with those which produce the other kinds of dropsy. In some cases it comes on without any other dropsical affection being present, but it is often an attendant of other complaints of this character. It is frequently a disease of old age, and, like other dropsies, it often succeeds debility, arising from any cause whatever. It is most common to males who have addicted themselves to free living, and especially to the use of intoxicating liquors. Those who have long suffered from gout or asthma, are peculiarly liable to hydrothorax.

This complaint frequently becomes considerably advanced before it is very perceptible; and its presence is not readily known, because the symptoms are generally obscure.

It often comes on with a sense of uneasiness at the lower end of the sternum, (breast bone,) and difficulty of breathing, which is much increased by any exertion or motion, and is always worse when the patient is in bed. Along with these symptoms there is a cough, at first dry, but which, after a time, is attended with an expectoration of thin mucus. There is also a paleness of the complexion, and a dropsical swelling of the feet and legs, together with thirst, and diminished flow of urine. Sometimes the face swells and pits under the finger, especially in the morning, with a sense of debility and loss of flesh. When such appearances as these are met with, we have just grounds to suspect that there is a collection of water in the chest. The symptoms which have been described, gradually increase, but their progress is slow, and a considerable time commonly elapses before the disorder is fully formed.

The difficulty of breathing at length becomes excessive.—The patient is unable to lie down for any considerable time, and the head and trunk of the body must be supported almost erect. The sleep is frequently interrupted on a sudden by alarming dreams, out of which the patient quickly starts up in bed, with a sense of suffocation. These paroxysms are attended by convulsive breathing resembling an attack of spasmodic asthma, with violent palpitations of the heart, which are frequently excited by the most trifling voluntary motion, or by a fit of coughing.

In this distressing situation the patient is under the necessity of having his body in an erect posture, with his mouth open, and he betrays the utmost anxiety for fresh air. The face and extremities become cold; the pulse is feeble and irregular; and

a pain, or numbness, frequently extends itself from the heart, towards one or both shoulders. Excepting a livid hue of the lips and cheeks, the countenance is pale and ghastly, and indicates a peculiar anxiety; whilst the upper part of the body is covered with a profuse clammy sweat. Drowsiness, or delirium, frequently attends the latter periods of hydrothorax; and occasionally a sensation of water flowing about can be distinctly perceived by the patient, on any sudden change in the position of the body.

The difficulty of breathing increases until the action of the lungs is at last entirely interrupted by the quantity of water in the chest, when death puts an end to the sufferings of the patient.

We have now given a general description of the most usual forms of dropsy, and we deem it proper further to add, that each may exist separately, or any two, or even all may be combined. Hydrothorax can rarely, if ever, be cured; ascites, or dropsy of the abdomen, can often be relieved, though it seldom admits of cure; whilst anasarca, or general dropsy, in its early stages may almost always be cured, if properly and perseveringly treated. But if all three of these forms of dropsy are combined, as is sometimes the case, the complaint is rendered desperate.

Treatment.—The object to be aimed at in the treatment of dropsy is to evacuate the water, and then to increase the vigor and tone of the system, so that its future accumulation may be prevented.

To answer the first intention, thorough courses of medicine should be administered, and in order to assist in carrying off the water, the application of the vapor bath, or steaming, must be long continued, and every means adopted which may have a tendency to promote a free and copious perspiration.

Dr. Thomson, who has treated this complaint, with a success surpassing by far any former example, informs us that he sometimes took dropsical patients through three courses of his medicine in two days, and in ordinary cases, a course every day. We would recommend the same mode of treatment, or at least the daily use of the vapor bath, if not a full course of medicine. No other means equal to the vapor bath can be used to remove the water, and when to this is added the whole course of medicine, we have the double advantage, of discharging the water from the cellular tissues, and of increasing the vigor of the system.

In the intervals between the courses, the powers of the system must be sustained by the use of the bitter tonic, which may be taken three times a day, in tea-spoonful doses, and the diaphoretic powders twice a day, in similar portions.

Frequently bathing the abdomen with tincture of myrrh, bathing drops, tinctures of cayenne and lobelia, equal parts, or

almost any stimulating article, will have a very good effect, and ought always to be resorted to.

Cathartics have often been known to produce a good effect in dropsical cases, and may, therefore, be resorted to occasionally, if found beneficial; for this purpose, some of the purgative preparations, hereafter mentioned, may be used. But whether purges are resorted to or not, the utmost attention should be paid to keeping the bowels open by the daily use of injections, if necessary.

In order still more to facilitate the removal of the water, we may use such remedies as increase the discharge of urine. For this purpose, various articles have been employed. The clivers or clevers, in strong tea, is often used with advantage. A decoction of the inner or green bark of the common or white elder, infused in cider or white wine, is also recommended as a good diuretic. A few drops, or more, of the spirits of turpentine on sugar, has often been used with advantage to promote the discharge of urine. A number of diuretic articles will also be found in our materia medica, from which a choice can be made.

Our remarks thus far, upon the treatment of the complaint under consideration, apply to dropsies in general; and in anasarcous dropsy, that is, dropsy of the cellular membrane, or general dropsy, the means which we have recommended will commonly effect a cure. In ascites, or dropsy of the belly, and in hydrothorax, the event will be far more doubtful.

Dropsy of the belly will often require the operation of tapping, and even then, the prospect of cure will be by no means certain. To perform this operation, an instrument termed a *trocar* is employed in a very simple manner. It is about three or four inches long; either flat or round. On one end is a handle, and the other is made very sharp. The part between the handle and edge, is covered by a silver tube which in size is just sufficient to admit the trocar into it.

To perform the operation of tapping, the patient may either sit in a chair, or lie on the edge of a bed, when "a long cloth or towel should be passed round the upper part of the abdomen, and be securely fixed behind, by an assistant; this presses the fluid downwards, and at the same time gives support to the diaphragm, (midriff,) preventing its sudden descent, which would otherwise be very apt to produce fainting. The operator seated in front on a low chair, takes the trocar, previously smeared with oil, in his right hand, and holding the handle firm in his palm, he places on the tube his fore finger, which not only prevents the trocar entering too far, but also serves as a guide to the instrument. The point of the trocar is then to be applied to the abdomen, about one inch and a half below the navel in the *linea alba*, and steadily pushed through the skin and muscles of the

abdomen, giving it a slight half kind of rotary motion, (turning first a little one way and then the other,) as it is pushed forward. Its entrance into the cavity of the abdomen is rendered evident by the cessation of resistance, which the operator will be sensible of immediately on the point of the instrument entering the abdomen, when he must desist from further pushing it forward.

"The operator then, with the thumb and fore finger of the left hand, gradually pushes forward the tube of the trocar, while with the same fingers of the right, he withdraws the trocar, leaving the tube for the water to flow through, which may be receiv ed in some proper vessel, which must be at hand to receive it As the water continues to flow, the towel or cloth which is around the abdomen, must be drawn proportionably tighter. Should the tube become stopped by lymph or the caul, it must be removed by a blunt probe, which, for the want of a metallic one, may be made of a tough piece of hickory, made very smooth, and small enough to pass through the tube.

"The water being evacuated, the tube is to be taken between the thumb and fingers of the right hand, and slowly withdrawn, while with the fingers of the left, the edges of the wound are forced together. A pad of lint should be placed over the wound, and a broad bandage applied round the abdomen to give sufficient compression to the bowels, and which may also in some measure prevent a re-accumulation of the water."

The water being now evacuated, every effort should be made to increase and keep up the vital force of the system, and restore the tone of the organs. To prevent the re-accumulation of the water, diuretics will be very useful, and the vapor bath, or a full course of medicine, should be often resorted to and faithfully persevered in, until health is fully restored. The tone of the organs may be improved, as heretofore noticed, by the use of the bitter tonic and the diaphoretic powders; and to promote the flow of the urine, the bitter tonic may be taken in cider, if it can be procured, a dose of which may be put into such quantity of warm cider as the patient can drink at a time.

DROWNING.

The act of drowning illustrates the principle which we set forth in the first volume of this work, that life is a forced state. When a person is immersed in water, the breathing is entirely interrupted; hence the living stimulus derived from the air, is cut off, and life is very soon extinct. But the living machinery does not immediately become so much impaired, or, in other words, the organs do not so lose their tone but that on the application of suitable stimulants, the wheels of life may again be put in motion, and vitality restored.

In drowning, the person struggles violently, and attempts to inhale air, but soon forces the little which may remain in his lungs out, and bubbles rise to the surface of the water: the struggles then become more violent, the person rises to the top of the water, and inspiration is again attempted; he then sinks, and the air is expelled from the lungs. During these struggles a small quantity of water is swallowed; the pupils of the eyes become dilated; the eyes protrude and are glassy; the tongue and gums assume a leaden or livid color, and death follows generally in the space of from one to four minutes. Whilst these circumstances are taking place, the circulation of the blood becomes gradually more slow and feeble, and great anxiety is felt about the front of the breast; and after a short time convulsive spasms arise, the organs of respiration cease to act, and the person expires; soon after which the skin becomes purple, particularly about the face and neck.

It is supposed by most persons that in the act of drowning, the lungs become filled with water; but experience has shown that this is not the fact; the quantity being found, upon examination by dissection, to be very inconsiderable.

Dissections of drowned persons do not show that any of the organs essential to life are injured; but that the *right* cavity of the heart, together with the veins and arteries leading to and from that cavity, are filled with blood, whilst every other part of the blood-vessels is almost entirely empty.

Livid and dark brown spots on the face, with great rigidity and coldness of the body, a glassy appearance of the eyes, and flaccid state of the skin, are said to denote a perfect extinction of life; but the only certain sign is the actual commencement of putrefaction; and therefore, in all cases where this symptom is not present, and we are not acquainted with the length of time the body may have been under water, every exertion should be immediately made for restoring it to life; because, for aught we know, the machine may only be stopped, and nothing more may be necessary than to give it a new impulse, to enable it to renew its functions.

Treatment.—Immediately on taking the body of a drowned person out of the water, it should, in the most easy and speedy manner, be conveyed to the nearest convenient, or suitable house, stripped of the wet clothes, and wiped dry with warm linen or flannel, when it should be laid between blankets made warm before a fire, or with a warming pan. During this, if there be no fire in the room, one should be made sufficiently large to warm the apartment thoroughly, minding also to admit enough air to keep the atmosphere pure and fresh.

Care should be taken both in conveying the body to the house as well as afterwards, not to let the head hang either back or for

ward, but to keep it in the most natural position; and so soon as possible, an injection must be administered, composed of warm water, or of pennyroyal, or any other warm tea, to either of which must be added the fourth of a tea-spoonful of capsicum, and the same quantity of the pulverized seeds or the tincture of lobelia, and a tea-spoonful of the tincture of myrrh. This must be kept in the rectum for some time, by the application, if necessary, of a cloth or by some other means. The injection should be repeated at such intervals as may be judged necessary by the physician or other skillful attendant.

Whilst some of the assistants are attending to what has just been advised, others should be preparing the necessary means of applying the steam bath as expeditiously as possible. To do this, place three or four chairs side by side, over which a thick blanket must be spread in such manner as to allow it to reach to the floor, at the front of the chairs, in each of which let a person be seated, and take the drowned person wrapped in a thin blanket on their knees. Another thick blanket is then to be spread over the body so as completely to cover it, and reach down to the floor; two small spiders, kettles, tin pans, or any other convenient vessels, containing a small stone previously made hot, and enough hot water to make a moderately warm steam, must be placed under the last named blanket which will confine the vapor to the body of the drowned person. And in order to facilitate its application to the whole surface of the body, the blankets should be held up by the assistants loosely from it.

It must be carefully borne in mind, not to increase the heat of the steam too suddenly, or the patient may by this means be lost, even after symptoms of life have made their appearance. The steam should at first be but moderately warm, and gradually and slowly increased as the signs of returning life successively make their appearance.

After the body has been placed over the steam, as just described, another dose, consisting of a half or whole tea-spoonful of the anti-spasmodic tincture should be administered, and repeated at the discretion of the physician, or other discreet attendant. Blowing into the lungs, and then pressing on the abdomen to force the air out again, so as to imitate, as near as possible, the natural breathing, is much recommended by most authors; but the practice of doing this with a bellows, is highly disapproved of by Dr. Thomson, who has been very successful in resuscitating drowned persons. Bleeding, which has also been customary, should not be permitted; as likewise the old custom of rolling the patient upon a barrel, or upon the ground; of violently shaking, or carrying him on the shoulder of another person, with the head hanging down, because either has a powerful tendency to seriously injure the patient.

The signs of returning life are, according to Dr. THOMSON, a muscular motion about the eyes, and in the extremities; to which may be added, water and froth issuing from the mouth and nostrils; feeble, irregular, and convulsive efforts to breathe; and gasping. The pulse beats at intervals, and is small, quick, and weak; the face becomes less livid, and is sometimes distor ed or violently convulsed; a rumbling is heard in the bowels, and by degrees the breathing becomes more free, and the pulse more regular. Vomiting will sometimes take place spontaneously, but oftener from the effects of the anti-spasmodic tincture, if that has been given; whilst sense and motion gradually return.

When the senses have become completely restored, and the person has obtained the control of his limbs, he should be put into bed and kept in a moist sweat for ten or fifteen hours, by giving the diaphoretic powders, or cayenne pepper and the application of hot stones or bricks, &c. But should he continue dejected, silent, and listless, he should be taken through a regular course of medicine, and, if necessary, repeated as circumstances may require.

DYSENTERY, OR BLOODY FLUX.

THIS complaint consists in frequent and painful discharges from the bowels, of mucus and bloody stools; though sometimes they are nearly natural in appearance, but in small, hard balls, which are termed by medical writers, scybala, attended by griping pains, and commonly with fever.

Dysentery occurs chiefly in autumn, or the latter part of summer, though it is often met with at other seasons, and is frequently occasioned by cold and moisture quickly succeeding to intense heat or great drought, whereby a sudden check is given to perspiration, and a determination of the fluids is made to the intestines. It is also occasioned by the use of unwholesome and putrid food, and by noxious exhalations and vapors from marshes and stagnant waters. It is also alleged by many eminent writers, that the most prolific cause of dysentery is contagion; whilst many others equally eminent, disbelieve in the contagiousness of this complaint altogether. The probability is, that in some instances and under certain circumstances, it may be contagious; and one case, and only one, has fallen under our notice, which seemed to have been caused by contagion; but in general, we think, dysentery is not a contagious disease. The free use of fruits has been assigned, says Dr. THOMAS, as one cause productive of dysentery, but erroneously, for they have quite a contrary effect, and tend to preserve from it those who partake moderately of them.

Dysentery is much more prevalent in warm climates than in cold ones, and particularly during the rainy seasons. It may readily be distinguished from a diarrhea by the appearance of the stools, and by the peculiar painful griping, and *tenesmus*, attending dysentery.

This complaint is sometimes preceded by a loss of appetite, costiveness, sickness at the stomach, and slight vomiting, attended with chills which are succeeded by heat, and frequency of the pulse. Then come on griping pains, and an increased propensity to stool; though it sometimes happens that these symptoms appear first. And it may also happen in mild cases, that there will be no fever or other derangement of the system, than the affection of the intestines.

As the disease progresses, the stools become more frequen. and less abundant, and in passing through the inflamed parts of the intestines, they cause severe pain, so that every evacuation is preceded by great distress.

The stools vary both in color and consistence, being sometimes composed of frothy mucus streaked with blood, and at other times, with an acrid or burning watery fluid, resembling the washings of meat. Sometimes a thick glassy mucus is voided, and at others pure blood; and occasionally lumps of coagulated mucus, resembling bits of cheese, are evacuated, and in some instances a quantity of purulent matter is passed.

So long as the stools exhibit those various appearances, and are voided frequently, it is seldom that any natural fæces can be perceived amongst them; and when any thing of the kind does appear, they are in small hard balls, called scybala, which being passed, gives some temporary relief from the griping and tenesmus.

Tenesmus is an almost constant inclination to go to stool, without the ability of voiding any thing that affords much relief and is a most troublesome and distressing symptom in dysentery

When the symptoms which have been described, run high, and are attended by a hot fever, pain of the stomach and whole abdomen, great prostration of strength, strangury, hickup, or with a tendency to putrefaction and fœtid and involuntary discharges by stool, the disease must be regarded as of a highly dangerous character, and may terminate fatally in a few days. But when the symptoms are more mild, the complaint is frequently protracted to a considerable length of time, producing great emaciation and debility.

If dysentery attacks persons laboring under scurvy, consumption, or whose constitutions have been much impaired by any disease whatever, it will be pretty sure to prove fatal. It also sometimes occurs with intermittent and remittent fevers, which also renders it much more dangerous and difficult of cure.

Severe griping pains, with great tenesmus, frequent inclination to go to stool and but little voided, the evacuations being very fœtid, great debility, violent fever, or cold clammy sweats, hickups, coldness of the extremities, livid or dark colored spots on the skin, and a weak, irregular pulse, may be regarded as very unfavorable if not fatal symptoms. Whereas the inclination to go to stool becoming less frequent, and the evacuations of a more natural consistence, with a diminution of the fever, griping and tenesmus, are favorable signs; but a relapse is very liable to occur from any exposure to cold, wet, or fatigue.

Dissections of those who have died of dysentery, show that the internal coat of the intestines, but more particularly the lower parts, termed the rectum and colon, are affected by inflammation, and its attendant consequences, such as ulceration, erosions, contractions, scirrosities, and gangrene. The *peritonæum*, and other internal parts of the abdomen, have also an inflammatory appearance.

Treatment.—Dysentery, in a great many instances, may be cured by the most simple treatment, and in a surprisingly short time, whilst in others it is one of the most difficult diseases to manage which humanity is afflicted with.

On the first attack of this complaint, a table-spoonful of the tincture of myrrh, with half the quantity of the bark of the root of the bayberry, should be taken, which, in many cases of slight attack, will effect a cure; or a large swallow of the tincture of myrrh alone, may have the same effect. But if one dose does not remove the complaint, it should be repeated at intervals of from thirty to sixty minutes, according to the symptoms; and if this course does not produce the desired effect in a short time, an injection must be administered. This may be composed of a tea of bayberry, beth root, hemlock, blackberry root, or any other astringent article, with the addition of a little cayenne, and two or three tea-spoons full of the tincture of myrrh, and repeated, together with the other articles directed to be taken into the stomach, at suitable intervals, until a cure is effected.

When this disease is attended with much tenesmus, weak alkaline injections made of white lye, or pearlash water, may be given in addition to the one just above described; and are said to allay this symptom like a charm. Mucilaginous and oily injections are also highly useful to shield the bowels from their acrimonious contents. For this purpose take a suitable quantity of slippery-elm mucilage or decoction, with a little sweet oil, castor oil, or butter and molasses; mix and administer warm as can be borne.

The diaphoretic powders, and the bitter tonic, or the tonic cordial, may also be advantageously employed, with the means just recommended, at the discretion of the practitioner.

But if this treatment should not afford the desired relief, a course of medicine ought to be resorted to; or if the attack be violent, or if dysentery prevail epidemically and is in general obstinate, in either case, the patient should be immediately taken through a thorough course of medicine, and repeated at discretion, until the urgent symptoms have subsided. Between the courses of medicine, the patient must have the bitter tonic, diaphoretic powders, and tonic cordial, alternately, or in any way which the judgment may dictate as best. A strong tea of bayberry, or in case there is much blood discharged, witch-hazle leaves or beth root may be substituted for the bayberry, or mixed with it, and administered in half tea cup full doses, and the same may be given by injection, at intervals, until the disease is removed. A tea of the dewberry root, is also highly serviceable in dysentery; and brandy and loaf sugar burnt together may likewise be used occasionally, either at the commencement or in after stages of the complaint.

The abdomen may be bathed with pepper and vineger, or the tincture of myrrh, with the addition of a little cayenne, to make it more pungent, or with equal parts of the tincture of myrrh and lobelia; and it should be applied with much friction or rubbing with the hand. Fomenting the bowels with cloths wrung out of hot water, may also be resorted to, and will often afford relief from the pain which attends this distressing complaint.

Dr. John Thompson, of Albany, recommends the following: —"Take one tea-spoonful of pulverized maple charcoal, mix it well with a table-spoonful of molasses, then add two table-spoonsful of fourth-proof West India rum, and half a glass (wine glass we suppose) of sweet oil; mix the composition well together, and for an adult let it all be taken at two doses. If it does not stop the complaint, (as it seldom fails), take a smart dose of castor oil, and after it has operated, repeat the above composition. This is decidedly the most effectual remedy that we have ever used in inveterate cases of dysentery, or any complaint of the bowels."

Purgative medicines may likewise be resorted to, and by some are thought highly advantageous. The butternut syrup, castor oil with the addition of half or a whole tea-spoonful of spirits of turpentine, or Bunnell's, or any other of the pills hereafter recommended, are thought to be the best articles for this purpose. But injections ought mostly to be relied upon, and should be frequently administered through the whole course of the disease.

In the American Practice, a work replete with much that is valuable, we find the following recommended as the first prescription in every stage of the disease; and we have no doubt of its utility:—Take of best Turkey rhubarb root, bruised, sal-

eratus, peppermint plant, and cinnamon, pulverized, of each two scruples; mix and rub altogether in a mortar; then add half a pint of boiling water, and sufficient loaf sugar to sweeten, and when cool, two table-spoonsful of best French brandy.

"Of this preparation, give a table-spoonful every hour until the passages are changed in their appearance and consistence." "It should be repeated according to the urgency of the symptoms, duration of the disease, and other circumstances; but generally after it has once acted upon the bowels, a table-spoonful three times a day is sufficient."

"This medicine in a short time entirely changes the complexion of the complaint. It relieves the spasms and tenesmus; corrects and lessens the fetid discharges; and, in short, brings about a healthy action throughout the whole extent of the intestines."

We have also known some cases of dysentery cured by the use of ripe fruits, especially peaches, and perhaps they might be useful in all cases of this complaint.

To restore the strength, after the disease is overcome, we may use the tonic cordial, in doses of from one or two great spoonsful to the fourth of a tea cup full, two or three times a day, and the bitter tonic, an equal number of times, in half tea-spoonful doses, which should be continued until the cure is completed.

DYSPEPSY, OR INDIGESTION.

This complaint, it is said, chiefly arises in persons between thirty and forty years of age; and often continues for years, without any perceptible aggravation or remission of the symptoms.

Excessive grief and uneasiness of mind, intense study, profuse evacuations, indulgence in strong drink, excess in eating, and above all, the too common use of poisonous medicines, such as calomel, arsenic, opium, &c., which by destroying the tone of the stomach and intestines, weaken the digestive powers, are the common causes of dyspepsy.

A long and disagreeable train of symptoms attends this complaint, such as loss of appetite, sickness at the stomach, heartburn, flatulency, sour, fœtid, and otherwise disagreeable eructations or belchings, a sense of gnawing in the stomach when empty, with pains in it or the side; great costiveness, with chilliness or increased sensibility to the impressions of cold; paleness of countenance, languor, unwillingness to move, lowness of spirits, and disturbed sleep. To these may be added, intolerable feelings, especially in the morning; weak, faint, and trembling sensation in the stomach, sometimes extending to the

intestines; bad taste in the mouth, more especially in the morning, disagreeable breath, &c., &c.

Dyspepsy has become a much more common complaint of late than it was formerly; and almost every deviation from common health is now ascribed to indigestion, which has given rise to the appellation of "fashionable complaint," as a burlesque upon the common herd of dyspeptics.

Every thing taken into the stomach, of a poisonous nature, must unavoidably injure its tone, and thus weaken its power of digesting the food. Hence we find the history of the greater number of dyspeptic cases to be simply this: "so long ago, or such a time, I had the fever, and was salivated by mercury, and have not enjoyed any health since." And what a frightful picture of the disastrous and deadly effects of this one article might be presented to the world; and happy would it be for the human race if this had been the only article which the medical faculty have arrayed against the health and happiness of the family of man.

With regard to the *improvements in cookery*, we have else where said, that they were like the pretended improvements in medicine—refinements in error. The thousands who have fallen victims to the modern system of cookery, the object of which is to whet the appetite by dainties, could they be told, would astonish the ignorant and confound the wise. The original purpose of cooking was to prepare food for its more easy mastication, and digestion; but this object has become perverted and the design now is to prepare the food so as to make it mos agreeable to the taste; in doing which it is often rendered far more indigestible and unwholesome; whilst at the same time, in consequence of its having been rendered more palatable, we are induced to eat too much. We thus have our stomachs filled not only with indigestible food, but likewise overloaded; and even if it had not been rendered indigestible in the process of cooking, the overloading of the stomach overstrains the digestive powers, and lays the foundation for that dismal train of symptoms which are attendant upon the dyspepsy.

The daily filling of the stomach even with wholesome food, in greater quantity than the digestive powers can dispose of, or than the body requires, may be compared to the overburthening of any kind of machinery; it must the sooner wear out and become incapable of performing its office. And every kind of machinery, it is at once evident, can have the capacity of performing only a certain amount of labor or business; just so with the digestive organs; and all that is demanded of them beyond this, is impairing their capacity of performing their natural healthy functions, and brings on the train of symptoms which always attend the complaint under consideration.

Good wholesome food, taken in moderate but sufficient quantity, and proportioned to the employment or other circumstances of the individual, is most conducive to health; and all persons should beware of eating so much at any time as to produce any unnatural fullness, or any other unpleasant sensation about the stomach. As a general rule, all persons should stop eating before the appetite is completely satisfied; and they should more over eat slow, and chew their food well before swallowing it.

TREATMENT.—One of the first things to be attended to in the cure of dyspepsy is to regulate the bowels, which are almost always in an obstinately costive state. The best means of keeping them loose, is the eating of a handful or more of clean wheat bran, once, twice or three times each day, or so much as will keep the stomach and bowels clean and in good order. This is the most simple, safe, and efficacious method of cleansing the stomach, and removing the costiveness attending indigestion, of which we have any knowledge. One cause of this complaint is the eating of superfine flour, which approaches so near to the nature of starch, as to be partly indigestible. This clammy viscous food, as well as sweet-meats and other such pernicious articles, causes a redundancy of acidity, and a cold viscid phlegm in the stomach, and clogs the intestines by its tenacity; hence the mixture of a sufficient portion of bran, is found by experience, if persevered in, to neutralize and absorb and carry off those acid and viscous substances, and by its roughness, scours and cleanses the stomach and bowels, and by mixing with the other articles of food, prevents the tenacity or stickiness which constipates the bowels and destroys their healthy action.

Many persons who know no better, are in the habit of taking physic to obviate costiveness; but this is a bad practice, as the intestines becoming habituated to the stimulation of the physic, thereby lose their tone and the difficulty is rendered worse. Bran, on the other hand, acts in harmony with the laws of nature, as food does, and removes costiveness; without producing any injurious effects whatever upon the intestines.

Our own experience since the year 1816, has confirmed all that we have said respecting the virtues of bran, and it could be attested perhaps by hundreds of others, who have since, from our recommendation, adopted its use. In the early part of life, the publisher of this work, was afflicted for eight years with a grievous chronic dysentery or bloody flux, which he finally cured by the constant use of cayenne pepper and sweet potatoes. But the debility which this long and wasting complaint induced, particularly the loss of tone which the intestines sustained, eventually produced an obstinate state of costiveness which has followed him to the present time. After trying every thing which his own mind could suggest, or the ingenuity of the Faculty

devise, and after he had despaired of ever enjoying health, and even considered himself at the brink of the grave, the idea of using bran first occurred to him, and he immediately commenced the experiment; and to his inexpressible satisfaction, found it to answer his fullest expectations. From that to the present time, he has been in almost the daily use of bran, and finds it the only thing that regulates his bowels in harmony with the laws of life.

Bran may be taken in the hand, and from the hand into the mouth, taking a few swallows of water, to wash it down; or it may be stirred into a bowl of coffee or tea, and eaten with a spoon, as may best suit the patient. The most proper time to take it, is in the morning before eating, or at breakfast; and the quantity necessary to loosen the bowels must be ascertained by experience; but from one to three handfuls, taken once or twice a day, according to the obstinacy of the case, will probably be found sufficient. In conjunction with the bran to regulate the bowels, the daily use of common salt, in tea-spoonful doses dissolved in a half tumbler of cold water, taken in the morning, fasting, has been highly recommended, and is no doubt worthy of a trial.

Another remedy which has also been advantageously used in costive habits, is parched corn, which should be pounded fine in a mortar, and eaten with milk, or in any other way which may suit better. Using the *brown bread*, instead of that made of superfine flour, is also one of the best means of loosening the bowels. This bread is made in the same manner as other, only the flour is ground coarsely and not bolted.

Whilst pursuing the course just recommended to remove the costiveness which almost always attends indigestion, the patient should also take of the bitter tonic, or other bitters, to which ought also to be added a quantity of the black root or bitter root, proportioned to the degree of costiveness. Injections should likewise be used, together with such means as are advised under the head of costiveness.

As the functions of the liver are always morbidly affected in this complaint, either the cathartic or antibilious pills may be occasionally administered, which will have a very beneficial influence on the liver, exciting it to a healthy action and thus be a means of obviating the costiveness of the bowels. These pills may be taken at bed time once or twice a week.

To correct the acidity of the stomach usually attendant upon indigestion small potions of white lye or super carbonate of soda, salæratis, or pearlash, dissolved in water may be occasionally taken.

If after continuing the use of the means which we have recommended for a reasonable length of time, the complaint

does not yield, the patient should be taken through a course of medicine, which must be repeated as the circumstances of the case may demand. Two or three times a week, will commonly be often enough; minding between the courses, to pursue the means recommended for removing the costiveness, and regularly taking the laxative bitter tonic or the wine bitters three or four times a day until the costiveness ceases, and the food is well digested.

EAR-ACHE, OR INFLAMMATION OF THE EAR.

Ear-Ache, in some instances, is attended by an excessive throbbing pain in the ear, though rarely any fever. The pain, however, is sometimes very mild, attended with but little inconvenience, and goes off without the aid of medicine.

But in the more violent forms of inflammation of the ear, attended with excruciating throbbing pains, disposition to sleep, delirium, and sometimes convulsions, the most active measures should be adopted, or suppuration will undoubtedly take place, and perhaps the hearing be destroyed. Ear-ache is caused by the same circumstances, in general, which produce other inflammations, and particularly by partial exposures to cold.

Treatment.—If the case be mild, nothing more perhaps may be necessary than filling the ear with cotton or wool wetted with the tincture of myrrh; or a little of the tincture may be dropped into the ear. An ointment made by slicing up onions, and frying them in lard, and then strained, is an excellent remedy in all cases of ear-ache. A little of it must be dropped into the ear, and the ear filled with cotton or wool. On going to bed, a hot stone wrapped in a cloth, should be placed near the ear; and the head covered so as to steam the ear and side of the head; or the head and whole body may be steamed with water and hot stones, in the usual way.

If the pain, however, continues, a few drops of the anti-spasmodic tincture must be occasionally dropped into the ear, minding to keep the hot stone to the side of the head, for the purpose of warming and softening the affected part. But if all this does not afford the desired relief, and the pain continues severe, with other bad symptoms, we must administer a lobelia emetic, and repeat it if necessary; and if suppuration is likely to take place, it should be promoted by the application of poultices.

It sometimes happens that insects find their way into the interior of the ear; in such cases they may be destroyed by pouring into that organ a little tincture of myrrh, or spirits of camphor, or any other kind of spirits or harmless fluid; and afterwards syringing the ear with warm water to remove them from it.

FAINTING, OR SYNCOPE.

FAINTING consists in a decreased action and sometimes total cessation of the pulse and breathing. It is often preceded by anxiety about the breast, a sense of fulness ascending from the stomach towards the head, vertigo or confusion of ideas, dimness of sight, and coldness of the extremities. Sometimes, however, it comes on without any premonition, and occasionally without any apparent cause. The attacks are frequently either attended with, or end in, vomiting, and sometimes in epileptic or other convulsions.

Fainting is caused by sudden and violent emotions of the mind, such as joy, grief, or fear; and by pungent, disagreeable odors; derangements of the stomach and intestines; debility from disease or from loss of blood, either spontaneous or artificial, or by drawing off the water in dropsy. Another fruitful cause of fainting is the tight lacing, and wearing of tight corsets, so common with females in the fashionable walks of life.

TREATMENT.—During a paroxysm of fainting, everything tight about the waist must be loosed, and the face or bosom, or both, may be sprinkled with cold water, which in many instances will be sufficient to rouse the patient and restore the lost action of the heart and lungs. Stimulating the nostrils with hartshorn or volatile salts, will also be very proper and useful. This may be done by holding an open bottle of either of those articles near the nose, or by rubbing some about the nose or upper lip. Camphor may also be used if neither of those articles be at hand.

But if these means fail, we must have recourse to stimulants, such as essences of peppermint, cinnamon, or winter-green; or a dose of cayenne or of the anti-spasmodic tincture, may be given, and repeated as the circumstances of the case may require Stimulating injections will also be highly serviceable in cases of long continued faintings, and may be safely resorted to on all occasions of this kind.

If the complaint appears to be connected with or caused by a disordered state of the stomach, an emetic should be given, and, if necessary, repeated between the fainting fits, where they recur periodically or frequently; and also using proper means for restoring the energy and tone of the system, such as cayenne, the bitter tonic, diaphoretic powders, &c.

It should, however, be remembered that in cases of fainting from either the intentional or accidental loss of blood, little more need be done than to lay the patient down on his back or side, sprinkling the face or breast with cold water, and applying stimulating substances to the nose. To restore the lost energy of the system which the loss of blood always occasions, stimu-

lants and tonics, as above recommended, with a rich nourishing diet, must be resorted to, and continued a suitable length of time. We scarcely need add, that every cause known to excite fainting, should be avoided.

FALLING OF THE FUNDAMENT.

This complaint is most commonly met with amongst children of a weak habit, or who have been much afflicted with frequent and severe purgings. It is also sometimes met with in grown persons, who have a peculiar weakness of the part.

Prolapsus of the fundament may be a troublesome though not a dangerous disease.

Treatment.—In all cases of a falling of the fundament, whether of young or old, the part of the gut which is protruded, should be washed with a strong tea of witch hazle leaves, pond-lily, or some other astringent article; and injections of the same may also be administered, when the protruded part must be gently forced back with the finger, which may be smeared with oil to prevent any irritation.

It will also be advisable to make use of bitter and astringent tonics, in the stomach, and astringents by injection, until the complaint is removed.

The cold bath will also be highly serviceable in this complaint. It can be applied either to the whole body, or cold water may be poured upon or near to the part affected, or both may be resorted to at discretion.

FALLING SICKNESS OR EPILÆPSY.

In epilepsy there is a sudden deprivation of sense, accompanied with convulsive motions of the whole body.

This disease attacks by fits, which after a time go off, leaving the patient most commonly in his usual state; though sometimes a degree of stupor and weakness remain after the fits, especially if they are of frequent occurrence. It is oftener met with amongst children than grown persons, and boys are said to be more subject to its attacks than girls.

Fits of epilepsy return periodically, and the paroxysms occur more frequently in the night than the day; by which it would appear that this complaint was in some measure influenced by that state of the body peculiar to sleep. It is also sometimes said to be counterfeited in order to extort charity, or excite compassion.

Epilepsy is distinguished, by systematic writers, into sympathetic and idiopathic; being considered as sympathetic, when

produced by some other disease, such as acidities in the stom ach, worms, teething, &c. and as idiopathic when it is a primary disease, being neither dependent upon nor proceeding from any other complaint.

The causes which give rise to the falling-sickness are blows, wounds, fractures, and other injuries done to the head by exter nal violence, together with lodgments of water in the brain, tu mors, concretions, &c. Violent affections of the nervous system, sudden frights, fits of passion, great emotions of the mind, acute pains, worms, the irritation of teething, poisons, &c. are causes which likewise produce epilepsy.

An attack of epileptic fits is sometimes preceded by a heavy pain in the head, dimness of sight, noise in the ears, palpitations of the heart, wind in the stomach and intestines, with weariness, and some degree of stupor; at other times there is a sense of something like a cold vapor or aura arising up to the head; but it more commonly happens that the patient falls down suddenly without much if any previous notice; the eyes are distorted, or turned so that only the whites of them can be seen; the fingers are closely clenched, and the trunk of the body, particularly on one side, is much agitated; the patient foams at the mouth, and thrusts out his tongue, which often suffers great injury from the muscles of the lower jaw being affected; he loses all sense of feeling, and not unfrequently voids both urine and fæces involuntarily.

The spasms after a while abate, and the patient gradually recovers, but feels languid and exhausted, and retains not the smallest recollection of what passed during the fit.

When the disease arises from a hereditary disposition, as it sometimes does, or if it comes on after the person has arrived at mature age, or if the fits recur frequently, and are of long duration, it will probably be difficult to effect a cure. But when it attacks at an early age, and is occasioned by worms, or an accidental cause, it may in general be removed without much difficulty. It has in some instances been entirely carried off by the occurrence of fever, or a cutaneous eruption. It has also been known to terminate in apoplexy, and in some instances to produce a loss of the mental powers, and end in idiotism.

Treatment.—When epilepsy is caused by worms, teething, or injuries of the head, &c., these difficulties should be removed by pursuing a proper course of treatment, at the same time making a free use of umbil or the nervine tincture, to give tone to the nervous system. And where the general health is otherwise impaired, proper measures must be taken to restore it; to do which the common course of medicine, with the bitter tonic, &c., must be resorted to, and persevered in till the general health is restored.

In all cases where the patient is sensible of the approach of the fits, he should take freely of the nervine tincture, or a dose of the anti-spasmodic tincture, which will have a tendency to prevent a recurrence of the fits, and thus break the chain of morbid association.

During the fit, injections should be given of catnip tea, or any of the astringent articles recommended in the materia medica, to which should be added a tea-spoonful of the anti-spasmodic tincture, or instead of this, cayenne and the pulverized seeds of lobelia, in proper quantity. From half to a whole tea-spoonful of the anti-spasmodic tincture should also be occasionally given by the mouth, all of which will have a tendency to shorten the fit, and break the habit to which the system has become subject.

In cases where the time of the return of the fits is known to a degree of certainty, the taking of the patient through a course of medicine at that time will tend to prevent the return of the fit, and thus destroy the connection of the disease.

We are well aware that cases of epilepsy which occur after mature age, are very difficult of cure, but they are, nevertheless, not all of the same hopeless character; we may, therefore, in most instances, attempt the cure, on the principles laid down; varying the mode of treatment at discretion, to suit any peculiarity which may attend each or any particular case.

FELONS.

Felons are suppurative swellings which appear about the joints of the fingers, and give an idea to the unhappy sufferer of the most exquisite pain and torture to which the human frame is liable.

This most distressing malady is supposed usually to proceed from a bruise which by some means or other injures the *periosteum* or membrane which surrounds the bones, producing inflammation and suppuration. The excruciating pain which always attends a felon, arises in consequence of the matter being deeply seated in the flesh which cannot give way to make room for it as it forms, as is the case when suppurative swellings arise on or near to the surface.

Treatment.—A variety of means have been proposed for alleviating or curing this intolerable disease. Some have practiced holding the affected finger in boiling tallow or boiling lye, until the pain has subsided. This, although it may seem like a painful operation, is said by those who have tried it, not to be so.

Another remedy is to take several pieces of woolen cloth and cut a round hole in each piece the size of the painful part,

which are then placed over the felon and the felon itself covered with tar. Two irons having been previously made red hot, one of them is to be held as near the felon as can well be borne, and when this becomes too cool it must be returned into the fire, and the other employed in its stead, and so continuing to apply the irons alternately until the pain and throbbing cease; renewing the tar as it dries away. The woolen cloths are for the purpose of preventing the hot irons from burning the sound parts, as it is necessary to hold them very close in order to have the full benefit of the operation.

When the pain and throbbing have ceased, the cloths and tar are to be removed, and the felon covered with a plaster made in the following manner:—

Take castile or good shaving-soap, shave it down very fine, and mix with it a little new milk, to the consistence of a plaster or salve; spread it on a cloth, apply it to the part, and renew it as it becomes dry. The whole of this process is to be gone through with whether the felon has been opened or not, and will, as our informant assures us, effect a cure.

Another remedy with which we have been acquainted from early years, and have repeatedly proved its efficacy, is as follows:—

Take salt, common soft soap, and sage, green or dry, bruised or pulverized, equal quantities of each, well mixed together into a poultice, and applied to the part, which must be moistened or renewed as often as it becomes dry, and continue until relief is obtained.

From the depth at which the matter is seated in case of felons, it is all important to give it vent as soon as possible; and whenever this is done, immediate relief is experienced. The common method is to lay it open with a lancet or knife; but this is highly disapproved of by some, and *caustics* recommended instead of the knife. But on the whole, we think that Dr. Thomson's method is probably as good, if not better, than any other, for this purpose. In pursuing the plan which he recommends, we avoid all hazard of hemorrhage, and moreover make a much smaller sore than is usually produced by the knife. His method is as follows:—

Take a piece of spunk, (punk,) about the size of half a pea, and burn it on the most painful part, which process may be repeated if it be thought that the flesh is not deadened down to the matter. A needle is then to be plunged deeply into the skin and immediately out again, in the part which has been burned, by which means the skin and flesh will be very much elevated, when, with a sharp knife, the part that is raised by the needle must be cut out. In performing this, care must be taken to cut out as small a piece of skin as convenient, and at the same time

cut as deeply into the flesh as possible, in order to let ou the matter. If the cutting, however, does not reach the matter, it ought to be still further opened with a lancet as we conceive, although Dr. THOMSON has given no instructions further than to cut out the piece as aforesaid; but he takes the precaution to say that it should be sufficiently deep to answer the purpose. After this is done, apply the poultice or salve, whichever seems most proper; but if there be much pain still remaining, after the operation, a poultice will be preferable, and ought to be often wetted with cold water. We may also observe, that a botanic physician who had often performed the operation, informed us that he usually applied, immediately after the burning, a cloth which he kept wet for some time with cold water, before cutting out the flesh.

To those who have never experienced the torturing effects of a felon, nor been accustomed to witness their painful progress, the idea of *burning* and *cutting* will perhaps appear horrible; but persons who have been afflicted in this way, are aware that almost any thing promising relief can be cheerfully submitted to; and moreover the pain caused by the burning is said by those who have tried it, to be, comparatively speaking, but trifling.

Another method of treating felons, recommended by good authority, is to bathe the part affected in lye water; then take the yolk of an egg, six drops spirits of turpentine, a few beet leaves cut fine, a small quantity of hard soap, one tea-spoonful of burnt salt, one of corn meal, and one of snuff; mix these articles well together and apply to the part. This is said to be an unfailing remedy.

When nothing else assuages the pain, the hand may be steamed over a decoction of herbs, such as horehound, tansey, wormwood, or catnip, and hops, either altogether or the hops with one or more of the other articles. A handful of each may be steeped strong and the hand held over it shielded from the air with a blanket, and a lively steam kept up by means of red hot stones or bricks until the pain ceases, and repeated whenever the pain returns. Dr. BEACH recommends the addition of a small quantity of soft soap to the decoction.

The means resorted to by Dr. BEACH for opening a felon also deserves notice. After poulticing until there appears a white spot indicative of a ripeness for puncturing, he recommends a large needle the point of which to be applied to the white spot, and then by giving it a rotary or drill-like motion force it, with but little pain, through the flesh to the matter. In this way of opening, however, the hole is so small that it may be necessary occasionally to reopen in the same manner with either a needle or probe.

FRESH WOUNDS.

By these we mean wounds made with sharp instruments, as edge-tools of every description. Many of these, however, are too trifling to need any kind of treatment only the most simple binding up with a cloth or bandage. But should the wound be large or much blood be discharged, it ought to have the blood washed away with cold water, then place the edges of the wounded flesh as near together as possible, carefully bind it up, and occasionally wet it with either the compound or simple tincture of myrrh, and with cold water. This course if properly pursued, will prevent inflammation, and induce the wound in a short time to heal. Very large wounds ought to have their edges confined together by a few stitches taken with a needle and thread, or by the application of the adhesive plaster, as directed under that head.

If a small artery should be wounded, in which case the blood will not flow in a continued stream but by spurts, and if it is on the limbs, the wounded part should be kept elevated above the heart or head, washed with cold water, tightly bound up, and continued in that position, often wetting it with the coldest water, until the bleeding is completely stopped. When larger arteries are wounded so as suddenly to endanger the life of the patient, an experienced surgeon ought immediately to be sent for, and in the mean time the flow of blood must be stopped by pressure with the finger or some solid substance on the bleeding vessel. The application of the spider's web, it is said, scarcely ever fails to stop the flow of blood, and should therefore always be resorted to where bleeding is profuse; or either of the styptics, mentioned under the proper head in this work, may be applied.

Wounds are to be treated, after the first dressing, in every respect the same as simple ulcers. If they do not become inflamed, all the application that is necessary will be the healing salve; and if inflammation takes place, treat them with poultices and cold water.

GIDDINESS OR VERTIGO.

Giddiness is a swimming of the head, in which everything appears to the patient to go round, and he staggers and is in danger of falling down.

Vertigo proceeds from different causes, such as an over determination of blood to the head, foul stomach, dyspepsy, hypohondriasis, and hysterics.

Little or no danger attends this complaint, unless it proceed from an over-fullness of blood in the vessels of the brain it

which case, if it be not timely relieved, it may terminate in apoplexy or palsy.

Where giddiness arises in consequence of some other disease, it will disappear on the removal of the other difficulties; but in all cases where it proceeds from an over determination to the head, means should be used to divert the blood to the other parts of the system, whereby the head will be relieved.

Treatment.—In order to restore an equable action to the blood, the patient should have repeated doses of the cayenne or nervine powders, and be steamed, or have red hot stones cooled so as not to burn the bed, and then wrapped in a wet cloth and applied to the feet and legs. And if he is steamed he ought to have a hot stone placed at his feet in bed, to keep up a perspiration; as by this means the vessels of the body and extremities become relaxed, and allow the blood to pass more freely through them. A potion of some mild physic might also assist in diverting the blood from the head.

Should the means, however, which have been recommended fail of the desired effect, an emetic and laxatives or cathartics must be resorted to, and especially if there be sickness at the stomach. After the course of cathartics, the bitter tonic, nervine powders, or capsicum, should be continued, and if any symptoms of giddiness remain, the patient must continue in bed with the application of hot stones as before directed. The use of stimulating injections will also be highly proper in any stage of this complaint.

GOUT.

The gout is a very painful disease, the most distinguishable symptoms of which, are severe pains at some joint, particularly the great toe, and also of the hands, which return by paroxysms, most commonly in the spring or beginning of winter.

Gout is divided by systematic writers, into the regular, the atonic, the misplaced, and the retrocedent.

The regular gout chiefly affects the feet and legs; the atonic, the stomach; the misplaced, is attended by inflammations of some internal parts; and the retrocedent, is a translation of the gouty humor or inflammation, from the joints to the internal parts of the system.

The only disease for which the regular gout can be mistaken, is the rheumatism; and cases may occur in which there may be some difficulty in distinguishing between them; but the most certain way of discriminating the two complaints is to give due consideration to the habits of life of the patient, the symptoms which have preceded the attack, the parts affected, and the symptoms which take place during the paroxysm.

In the gout, the pains generally attack the small joints, and are less liable to shift than in rheumatism; but when they do, they commonly fix upon the same joints of the other limb, or on some internal part; the part affected, is also more red and swelled than it is in rheumatism, and the dyspeptic symptoms, which rarely precede rheumatism, are present in a considerable degree for some days preceding an attack of gout.

Rheumatism and gout are, however, sometimes combined; in which cases a distinction is neither necessary nor possible.

The gout chiefly attacks men, and particularly those who indulge in high living and lead a sedentary life; and also those who are engaged in literary pursuits; and such as keep late hours, or are in the decline of life; though it is sometimes met with in females of a full and robust habit of body. Men who are employed in constant bodily labor, or who live coarsely, and drink but little wine or other fermented liquors, are seldom afflicted with the gout. Attacks of this complaint rarely occur before the age of thirty-five or forty.

The immediate exciting causes of a fit of the gout, are intemperance in eating or drinking, late hours, intense application to study, long want of rest, grief or anxiety of mind, great sensuality, long continued fatigue, exposure to cold, wet feet, a sudden change from a full to a spare diet, excessive evacuations, &c., &c.

The most common causes which predispose to the gout, are a full diet of animal or other rich food, with a free use of spirituous and fermented liquors, particularly of wines abounding with tartar, together with indolence and inactivity, which are principally to be met with amongst the rich; and hence their susceptibility to this disease; whilst the poor, who are obliged to labor and live sparingly, are scarcely ever afflicted with this painful malady.

A paroxysm of regular gout sometimes comes on suddenly, without any warning; whilst at other times it is preceded by an unusual coldness of the feet and legs, and they become numb and the perspiration in them is suppressed; and sometimes a sense of pricking all over the feet and legs takes place; and with these symptoms the appetite is diminished, the stomach is troubled with wind, and dyspeptic symptoms occur; a feeling of torpor and languor over the whole body; great lassitude and fatigue are experienced after the least exercise, the bowels are costive, and the urine pale.

Some sensible affection of the stomach occurs in almost all cases of gout, previous to the accession of the paroxysm.

A fit of the gout usually comes on in the night; the patient generally going to bed without suspecting an attack so soon; but after a few hours is awakened by a severe pain, most com-

monly in the first joint of the great toe; though sometimes it attacks other parts of the foot, the heel, or the calf of the leg, or perhaps the whole foot. The pain resembles that of a dislocated or disjointed bone, and is attended with the sensation as if cold water was poured upon the affected part; and the pain becoming more violent, is succeeded by rigors or chills, and other feverish symptoms, together with a severe throbbing inflammation of the painful part. Sometimes both feet become swelled and inflamed so that neither of them can be put to the floor; nor can the patient endure the least motion without suffering excruciating pain.

Towards morning, however, he falls asleep, and a gentle moisture breaks out, and terminates the paroxysm, a number of which constitute what is termed a fit of the gout. The duration of the fit will be longer or shorter, according to the predisposition of the body to the disease, the season of the year, and the age and strength of the patient.

When a paroxysm of the gout takes place, although there is an alleviation of the pain in the morning, still the patient is not entirely relieved from it; and for several evenings in succession, he has a return of both the pain and fever, which continue with more or less violence until morning. The paroxysms, however, usually become more mild each succeeding evening, till the disease at length goes entirely off, either by perspiration, urine, or some other evacuation; the parts affected also become itchy, the cuticle falls off in scales, with some degree of lameness remaining. At first an attack of gout occurs, perhaps, only once in two or three years; it then probably comes on every year, and at length becomes more frequent and severe, and is of longer duration at each succeeding fit. In the progress of the disease, various parts of the body are affected, and the complaint removes from one joint, or limb, to another; and after frequent attacks, the joints lose their strength and flexibility, and become stiff and immoveable. Concretions or lumps, of a chalky appearance, are likewise formed upon the outside of the joints; and affections of the kidneys arise from a deposite of the same kind of matter in them, which, although fluid at the first, becomes gradually dry and firm.

This effusion occurs, not only during fits of the gout, but likewise in the intervals, and as the extremities, particularly the hands and feet, are the principal seats of the gout, it is there that the greatest accumulations of the chalky matter take place This matter is never enclosed in a cyst or little bag, like pus in an abscess, but is usually deposited in the cellular membrane, the *bursa mucosa*, or in the cavities of the joints.

It sometimes happens, that although a gouty diathesis or disposition prevails in the system, yet from some cause or other

no inflammatory affection of the joints takes place; in which case, the stomach becomes the principal seat of the malady, and the patient is troubled with flatulency, indigestion, violent pain, loss of appetite, eructations or belchings, nausea, vomiting, and a peculiar sense of coldness in the region of the stomach; which affections are often accompanied with dejection of spirits, and other hypochondriacal symptoms. In some instances, the head is affected with pains and giddiness, and occasionally with a tendency to apoplexy; and in other cases the heart or lungs suffer, which gives rise to palpitations, faintings, cramps, and asthma. This is what is called the *atonic* gout.

It likewise happens sometimes, that after the inflammation has occupied a joint, instead of continuing, the usual time, and then going off gradually, it ceases suddenly, and is translated to some internal part. The name of *retrocedent* gout is applied to cases of this kind.

In the *misplaced* gout, instead of the inflammatory affection being seated upon the joints, it is fixed upon some internal part, and is attended by the same symptoms which occur in other inflammations of the same organs. Cases of this kind are rare.

In fits of the *regular* gout, there is seldom any immediate danger; it is only when the disease appears in its irregular form that danger arises, and in which the stomach, heart, lungs, or head are affected. In some cases, however, the whole system becomes weak and languid, dyspepsy and syncope ensue, and the disease terminates in palsy, asthma, or dropsy, which is most commonly in the form of hydrothorax or dropsy of the chest.

In the irregular forms of the gout, much more danger is to be apprehended, and particularly in the retrocedent form of the disease, in which there is violent pain, sickness, vomiting, &c. in which cases patients have been known to die in a few minutes after the attack.

The gout appears to be much under the influence of fear, as individuals suffering with it, and unable to walk, have, in consequence of their houses taking fire, or from some other alarming cause, been immediately relieved and enabled to walk. We recollect of reading, some years ago, an amusing anecdote of a gentleman being cured by fright, which we will relate from memory. He was lying on his bed in an upper room, suffering the most exquisite agony, and expressing his wishes that the devil would come and fly off with his legs. Just at this moment a chimney sweeper who had been sent by his master, unknown to the gentleman to sweep his chimneys, was endeavoring to improve himself in his art, descended, by mistake, into the gentleman's room. He instantly discovered his error, and by way of apology for his intrusion, made a bow, adding, "your servant sir—my master will be here presently," and im-

mediately vanished up the chimney. This unexpected visit from a lad, black and grim with soot, connected with the wishes which he almost at the same moment had expressed, created in his imagination the idea that his wishes were about being fulfilled; and probably fearing that his body might go along with his legs, he instantly bounded from his bed, and retreated to the lower part of the house to seek the aid of his family, perfectly cured of the gout.

TREATMENT.—Although much might probably be done, especially in old or debilitated constitutions, to prevent a return of the gout, by using mild means, yet during the continuance of the fit it is by no means likely that any thing but the free use of the vapor bath with the whole course of medicine, would do much towards checking the disease.

When the complaint goes off naturally, it is commonly by perspiration, and hence we have, from nature, an unerring indication that the vapor bath is one, at least, of the surest and best means of cutting short the fits of this most painful malady. The affected part should also be bathed with the compound tincture of myrrh, made more stimulating by the addition of a quantity of capsicum, or with the bathing drops, or a wash of pepper and vinegar. This should be applied so as to produce a warm or burning sensation on the skin, or it will avail little or nothing in affording relief. If these washes, however, fail of producing this effect, place a few pods of the common red pepper in warm water until perfectly softened, then open and apply them with the inside of the pod to the part affected, which will rarely fail of creating a powerful sensation.

A free use should also be made internally of the cayenne, both during the course of medicine as well as afterwards.—The bitter tonic must likewise be freely used, and the course of medicine repeated as often as necessary until a cure is effected.

If the attack be mild, however, we may attempt to give relief by the application of hot stones or bricks to the affected part, and by giving repeated doses of the cayenne; at the same time bathing the part as just directed. After persevering in this manner for a reasonable time, if relief be not obtained, a full and thorough course of medicine must be resorted to.

The application of cold water has been highly extolled in gout. The water may either be poured on the affected limb, or the limb may be immersed in the water. General bathing of the whole body has also been advantageously practiced by some.—If the foot or hand become much swelled, a poultice made by simmering bran in vinegar, may be usefully applied.

As a preventive, the nervine powders, bitter tonic, or capsicum may be used at discretion, and persisted in until the symptoms are removed. To relieve the acidity of the stomach which

so uniformly precedes an attack of the gout, pearlash water or white lye, should be frequently used, and the employment of the bitter tonic at the same time will strengthen the stomach and check the production of the acid. Should these means not remove the gouty symptoms, a regular course of the medicine must be resorted to as the only probable chance of preventing a recurrence of the complaint.

In addition to what has just been recommended, the wrapping of the part affected, as well as the whole body, in flannel, will be found a good preventive of the gout. The causes which produce it, such as indolence and the use of wine or other fermented liquors, should be avoided; and temperance and active exercise rigorously enforced. By strictly observing these rules, most persons might undoubtedly avoid the necessity of suffering from this painful malady.

GRAVEL AND STONE.

By gravel we understand the formation in, and passage from, the kidneys, of small sandlike concretions or stones; but if they are formed of so large a size that they cannot pass the *ureters* nor *urethra*, the complaint is then called the stone. It is a singular fact, however, that the discharges of small gravel rarely terminate in stone. Many have had them during a long life, without experiencing any other inconvenience than the pain attending their passage along the urinary canals; whilst the stone is a disease chiefly occurring between infancy and the age of fifteen. Women are less liable to these complaints than men; and the children of the poor, more so than those of the rich.

The gravel and stone being so nearly allied, and the treatment being the same in both cases, we shall include both diseases under one common head.

The cause which produces the formation of gravel and stone, or calculi as they are termed, is still imperfectly known, though commonly attributed to an acid principle in the urine, termed the uric acid, which seems confirmed by the benefit derived in cases of this kind from a course of alkaline medicines.

Those who are in the decline of life and who have been engaged in sedentary employments, or who are much afflicted with the gout, are most liable to the gravel. Persons who reside in cold climates are also much more liable to this complaint than those who live in warm ones.

A fit of the gravel is attended with a fixed pain in the loins or small of the back, sometimes shooting down to the thighs; numbness of the thigh or leg on the side affected, retraction of the testicle, nausea and vomiting, with sometimes a slight suppression

of urine. As the gravel removes from the kidneys down through the ureter, it sometimes produces such acute pain as to occasion faintings and convulsive fits.

When a stone forms in the bladder, too large to pass, there arises a frequent disposition to make water, which flows in small quantity, often drop by drop, attended towards the end, and afterwards, by excessive pain. The patient cannot bear any kind of rough motion; nor can he make use of severe exercise without enduring great torture; and perhaps bringing on either a bloody discharge of urine, or a temporary suppression of it.—With these symptoms he has a pain in the neck of the bladder, tenesmus, frequent nausea, and sometimes a numbness of one or both thighs, and retraction of the testicles.

TREATMENT.—Various remedies have been recommended for this painful malady, and many cases have been reported verbally, of the stone being dissolved by them; but there are no well attested cases of this kind, that we know of, on record. Writers, therefore, prescribe no other means of performing a cure of the stone than by *lithotomy;* an operation always attended with much danger, especially when the patient is advanced in years, the disease complicated with other affections of the parts, and the general health much impaired. Under such circumstances it should never be attempted.

The gravel and stone, in one sense, form an exception to the general rule, that disease may be removed by one general remedy. Although they may be produced by the same causes, in common, that bring on other complaints, which, as we have heretofore shown, is a failure of the living power, yet, when a stone is once formed in the bladder, we do not expect that the common stimulants and tonics, which act upon the *living* machine, will dissolve it.

We do not, however, deny, that the same remedy which dissolves the stone, may also act otherwise beneficially upon the system; but it does not necessarily follow, that because a remedy acts in a healthful manner upon the living fiber, it will also dissolve or act beneficially upon a dead substance. But nevertheless, our confidence in the goodness of Deity is such, that we believe a remedy has been provided to dissolve the stone, as well as to cure all other complaints; and under this impression, we will throw before the reader the most important means which have been recommended to cure both stone and gravel. We may also further remark, that we have selected such as will be likely to do no harm, and, therefore, any or all of them may be tried, if necessary, in any or all cases of this nature; and eventually, perhaps, something may be found that can be relied upon in most gravelly complaints.

Previously, however, to noticing those remedies which are

supposed to act specifically upon the parts immediately affected, we will observe that the gravelly diathesis or disposition, may be, in common, effectually checked by the use of such means as have a tendency to strengthen the powers of the system, and restore a healthy action to the organs, and particularly to correct the formation of, or to neutralize when formed, the uric acid which is supposed to be principally concerned in the composition of those gravelly or stony substances in the kidneys or bladder. Alkaline preparations, such as pearl-ash, soda, or even wood ashes, will neutralize the acid; and the common course of medicine, with the use of the capsicum, bitter tonic, &c., will correct the secretion, and thus prevent its formation.

As a solvent of the stone, the juice or decoction of garden radishes has been known to perform wonders; in some cases after an entire stoppage of urine had existed for many days, and in one case, after the patient had been given over to die and taken leave of his friends. The virtues of the radish, it is said, were discovered by accidentally allowing a cut root of this article to lay during the night in contact with a stone which had been taken from the bladder of a person who had died from this complaint, and in the morning the stone was partly dissolved. This led to the trial of the juice or tea of the radish in cases of gravel; and in many instances which have been reported to us, its use was attended with complete success. We think, therefore, that this remedy merits a trial.

The injecting into the bladder, of substances which will dissolve the stone, has been recommended by Fourcroy, and perhaps the employment of the radish juice, in this way, might be useful. The method recommended for this operation, is for the patient first to discharge his urine; wash out the bladder by injecting warm water into it, and then discharging it; when the radish juice or tea, about blood warm, should be injected, and retained for half an hour or longer. Weak alkaline preparations have also been recommended and used by way of injection into the bladder. These preparations should be so weak as to be held in the mouth or swallowed without inconvenience; and if the stone contains uric acid, it will be readily dissolved if the injections are persisted in at proper intervals. The injections should be thrown in very moderately.

A tea made of Indian corn, has also been recommended for the gravel; but with regard to this remedy, we are like Naaman, the Syrian, when directed to wash in Jordan to be cured of his leprosy, we think it too simple; yet, like his servant, we would recommend a trial.

The man root, (*Convolvulus panduratus*,) either in tea or tincture, is recommended as a valuable remedy for gravel.—It should be taken in moderate doses, several times a day.

Another remedy, obtained from Ira Finch, Esq., whose authority we consider as highly respectable, is as follows: Take of the fibrous roots of the Queen-of-the-meadow, as much as will lay on the palm of the hand, and pour a quart of boiling water on it, which is to be drank freely and frequently. Then take the same quantity of the fibrous parts of pool-root, and a piece of the root of masterwort as large as the finger and about two inches long, sliced up, and put all into a quart bottle which must be filled with equal parts of whiskey and water. As soon as the liquor has imbibed the virtues of the roots, the patient must take a wine glass full of it three times a day before eating. If, however, it produces a burning sensation in the stomach, which it sometimes does if much weakened by disease, less of it must be taken, and the dose gradually increased as the stomach will bear it. This course must be pursued until a cure is effected. which, if the case be a mild one, will require but a few days; the stone, as it dissolves, will be discharged with the urine, like sand.

The following mode of treating the gravel, is from Dr. J. D. Cornell, a respectable practitioner, now residing in Lexington, Kentucky:

He directs a tea of the Queen-of-the-meadow to be used, as above stated, which is to be continued until the urinary discharges appear like chalk. At the same time that the patient is pursuing this course, injections into the bladder should be made of the following preparation: Take equal parts of red raspberry leaves and the inner bark of slippery elm, and steep a strong tea of it; to a tea cup full of which, add two tea-spoonsful of the tincture of myrrh. In using these injections, we would recommend the same course to be pursued as heretofore noticed.

The patient should also drink frequently through the day of a decoction of poplar and hemlock bark.

We have also been very obligingly favored with the communication of a highly recommended remedy for the gravel and stone, by Dr. Horatio R. Keyes, the most material part of which was obtained from the Indians, in Tennessee, which is as follows: Take a handful of the roots of the common blackberry brier, and a small quantity of the virgin* snake root, more commonly called colic root, and steep them into a strong tea. Whilst this is preparing let the patient take a small dose of cayenne pepper, or diaphoretic powders; and as soon as the decoction of the blackberry roots is sufficiently steeped, half a tea cup full of this must be taken, and in fifteen minutes after half a tea-spoonful of the powder of stone-break, more usually called pleurisy root, in a tea cup full of boiling water sweetened.

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* In the first edition, this was printed by mistake, *Virginia* snake root

The same medicines must be repeated in the same manner every hour and a half until relief is obtained, which will usually be within twenty-four hours; during the whole of which time the patient is to be kept in a moist sweat. After adminis tering the fourth course as stated, give a dose of castor oil.

When the stone is dissolved, the patient will experience a cessation of pain, after which he must drink plentifully for a few days of a tea of the garden parsly roots to carry off the sediment from the bladder.

In violent paroxysms of pain so often occurring in gravelly complaints, fomentations made by applying to the painful part, flannel cloths wrung out of hot water in which hops have been steeped, will be found useful; or the vapor bath may be resorted to. Injections should also be administered, at the same time using freely of the nerve powder or its tincture. But if, notwithstanding the use of these means, the pain increases, or does not abate, threatening inflammation, a full course of medicine must be resorted to, which will remove the inflammation and tension of the parts. The patient should also drink freely of a tea made of two parts of poplar bark and one of slippery elm, to strengthen and soothe the affected organs.

Persons afflicted with gravel, should avoid the use of fermen ted liquors, such as cider, beer, and especially wines abounding with tartar, and all sour substances; and at the same time giving a preference to soft rather than hard water, for ordinary drink.

It is a matter of common observation, that acids, as well as such drinks as are inclined to turn acid or sour in the stomach, aggravate gravelly compliants, whilst alkaline substances relieve them.

The reader is also referred to the materia medica, article "*Onosmodium hispidum*," first introduced into the 3rd edition.

HEADACHE.

This complaint is caused by foulness of the stomach, costiveness, the want of free circulation through the head, long exposure to the rays of the sun, want of proper rest, or lying too long in bed, sourness of the stomach, intense application to study, and by too great a determination of blood to the head. It is often an attendant symptom of other diseases, such as fevers, hypochondriasis, hysterics, &c.

Headache in some instances is general over the whole head; at other times it is confined to some particular part; and cases occasionally occur, in which the pain is confined to so small a space that it may be covered with the end of the finger. Affections of this kind are denominated, in the jaw-wrenching language of medical science, *clavis hystericus*.

When the headache is symptomatic of some other disease, it will be pretty sure to go off with the complaint which gave rise to it, as in case of fever; but when it comes on suddenly, is acute, and attended with noise in the ears, giddiness, and loss of speech, it denotes an attack of palsy, or apoplexy. When it takes place in persons who are subject to hypochondriacal or hysterical affections, is very acute, and attended with much throbbing of the temporal arteries, it is apt to terminate in madness. If a headache arises in consequence of some obstinate nervous affection, the patient will be liable to frequent returns of it, and it will be more difficult to cure than most other cases.

Treatment.—In many cases the most simple means will afford relief. A little bayberry or bitter root snuff; or taking a dose of the bayberry, diaphoretic powders, nervine, or cayenne, will, in a great many instances, remove the complaint.

If it arise from a sour stomach, pearlash water or white lye will give relief; and if from a foul stomach, an emetic should be administered. When costiveness appears to be the cause of it, the laxative bitter tonic, aided by injections, or a cathartic, should be used; and if an over determination of blood to the head causes the headache, a free cathartic ought to be administered.

Cases of what are termed sick headache, may be relieved and generally cured by taking an emetic, with cayenne and nerve powder, whenever the disease returns; and ought to be followed, for a few days at least, with the use of the bitter tonic, at the same time paying strict attention to the state of the bowels, endeavoring to keep them regular by the use of the laxative bitter tonic, injections, bran, parched corn, or any other simple means. By pursuing this course at each attack of sick headache, many inveterate cases have been entirely cured.

HEARTBURN.

This complaint most commonly arises in consequence of dyspepsy, though it often times occurs with individuals who are otherwise enjoying good health.

Heartburn in its worst form, is a very unpleasant complaint; and cases have even been reported in which it produced death. Its long continuance, when of a very severe form, will induce emaciation and weakness.

The cause of this complaint is evidently either a debility or inactivity of the stomach, or a vitiated secretion of the juices or fluids which are concerned in the digestive process. Hence eating any thing hard to digest or that is inclined to ferment, will usually produce the heartburn in those liable to it.

TREATMENT —To obtain a temporary relief, recourse must be had to alkaline preparations, which will neutralize the acid, and thus correct the acidity for the present. But if we wish to eradicate the complaint, suitable measures must at the same time be taken to give energy and tone to the stomach, and produce a healthy secretion of the gastric juices.

In ordinary cases, the bitter tonic, taken three or four times a day, will be sufficient, in addition to some of the alkaline preparations, to restore the tone and activity of the stomach, and healthiness to the juices. But if the case be a bad one, or if it prove obstinate of cure, a full course of the medicine should be resorted to, and repeated if necessary, until the difficulty is removed. The alkalies and bitter tonic must be continued after the course of medicine, until the symptoms of heartburn are entirely relieved. Bathing the region of the stomach with the tincture of myrrh, bathing drops, or other stimulating wash, will also be serviceable.

Persons who are subject to the heartburn should also be careful about their diet; rejecting such articles as they find are apt to become sour in the stomach. Animal food and shell fish, when they can be procured, not being liable to ferment, ought to form a large proportion of the food of individuals who are afflicted with this troublesome complaint; whilst vegetables, as much as consistent, should be avoided.

Experiment has also proved the fact, that the saliva swallowed along with our food, greatly prevents its fermentation; wherefore persons liable to the heartburn should be very careful in well chewing their food before swallowing it.

HICKUP.

THIS is a spasmodic affection of the stomach and diaphragm, arising from some peculiar irritation; and is most common to youth and old age. It is also met with in hysterical women, and at the close of acute diseases or after mortification, in which latter cases it may always be regarded as the forerunner of death.

TREATMENT.—The common hickup of youth or of old persons, may generally be removed by drinking a few small swallows of cold water in quick succession, or by exciting some degree of fear or surprise. A tea-spoonful of sharp vinegar is likewise a pretty sure remedy; or a little essence of peppermint added to the vinegar will increase its medicinal powers.

If the complaint prove obstinate, however, or severe, give a few doses of the nerve powder, or the nervine tincture; or in case these means do not afford relief, administer an emetic or a full course of medicine. A strengthening plaster might also be useful.

applied to the pit of the stomach, or instead of this, the part may be bathed with tincture of myrrh, bathing drops, or pepper sauce.

HYDROCELE.

This complaint is confined to the testicles of males, and consists in a collection of water within the scrotum. It is rarely unconnected with some other complaint, though it sometimes exists in persons who are otherwise in good health.

In hydrocele, the scrotum becomes enlarged, sometime to a very inconvenient size; has an equal appearance, is soft, with a doughy kind of feel, retains the impressions of the fingers the same as other dropsical swellings. The countenance yellow; the appetite fails; the urine is deficient in quantity; the legs swell; the bowels are hard, and the patient has mucous stools.

Treatment.—If there appears to be a general debility of the system, or even only a slight derangement of the living functions, a course of medicine ought to be resorted to, and repeated as often as the symptoms of the case seem to demand it. Bathing the affected part with either the tincture of lobelia or of myrrh, will be beneficial, and should be daily attended to. At night on going to bed, a hot brick or rock wrapped in a wet cloth, should be placed near the part affected to promote the absorption of the water.

If notwithstanding this treatment, the water should not be carried off, a very slight puncture or opening must be made with the point of a lancet, sufficient, however, to drain off the water. When this is accomplished, the puncture should be covered with lint, which must be confined with a bandage around the part. Should the puncture, however, become inflamed, an elm and ginger poultice must be applied, and managed in every respect the same as any other ulcer.

After the operation of tapping and drawing off the water from the scrotum, the patient ought to be carried through a course of medicine, and if necessary repeated, which will have a powerful tendency to preclude the reaccumulation of the water and prevent inflammation and mortification of the puncture, which sometimes take place. Diuretics may likewise be useful, for which see under the proper head; and if the scrotum should continue to fill with water, the tapping may be repeated, pursuing the medical treatment as herein laid down, until a cure is effected.

IMMODERATE SWEATING.

Immoderate Sweating is commonly an attendant upon some other complaint, though it is sometimes an original disease. It

is always the effect of weakness, accompanied by an unusual determination to the surface of the body.

The effect of profuse perspiration, when it prevails as a disease, is to increase the debility by which it is caused. It is most commonly met with in the last stages of consumption, and during the sweating stages of intermittent fevers, when much weakness and debility of the cutaneous vessels prevail; and especially during sleep.

Treatment.—The use of bitter and astringent tonics, will be highly useful in cases of debilitating sweats, but the remedy most to be relied upon in such cases is cold bathing. The patient should take a dose of cayenne, or hot bitters, when he must be stripped, and have a quart or two of cold water poured on his shoulders, so that it will run down over the whole surface of the body, and then be wiped dry, and go to bed. Showering in this way may be done before the patient goes to sleep, or after he awakes, or both, as may seem most prudent. In the colliquative sweats which attend the last stage of consumption, no method of cure can be relied upon.

INFLAMMATION OF THE BLADDER.

Tension or hardness, and great pain in the region of the bladder, a frequent desire to make water, with difficulty in voiding it, and sometimes a total suppression, together with tenesmus and fever, and a hard pulse, are the distinguishing symptoms of this complaint. There is frequently sickness at the stomach and vomiting, and in some cases delirium.

Inflammation of the bladder is rarely a primary disease; arising most commonly in consequence of inflammation of the adjacent parts, or from stone in the bladder. It may also sometimes be occasioned by a great distention of the bladder, in consequence of a suppression of urine from any cause whatever.

Treatment.—In the treatment of this complaint, care should be taken to keep the bowels loose, and to prevent any accumulation of the fæces in the rectum. For this object, laxative injections should be freely used, and if necessary, some laxative medicine taken into the stomach. To answer either of these purposes, castor oil, slippery elm, or the butternut syrup, may be employed.

The slippery elm taken into the stomach, will also have an effect to shield and soothe the inflamed part; and thus have a tendency to allay the irritation attendant upon this complaint.—Frequent doses of the cayenne and nerve powder, should also be taken, and a hot stone placed near the part affected.

Bathing the region of the bladder with the tincture of myrrh,

or any other stimulating wash, will also have a good effect.—Fomentation with cloths wrung out of a hot decoction of hops, may also be very serviceable in allaying the intense pain.

But if these means do not afford relief, or if the attack be very violent, nauseating doses of lobelia should be resorted to immediately, and repeated as the circumstances of the case may require, as being the most certain means of speedily arresting the inflammation The plan above recommended, should be pursued until relief be obtained.

INFLAMMATION OF THE BRAIN, OR PHRENSY.

Phrensy, properly speaking, is either an inflammation of the brain, or of any of the membranes which surround it within the *cranium*.

The characteristics of this complaint are, high fever, severe pain in the head, redness of the face and eyes, intolerance of light and sound, watchfulness, and violent delirium.

This disease, like many others, is sometimes a primary affection, but oftener symptomatic of some other complaint; being primary or idiopathic, when it exists independent of any other disorder; and symptomatic, when it arises in consequence of some other disease, as fevers, &c.

Violent fits of passion, intense study, excessive venery, external violence, such as blows on the head, concussions, fractures of the skull, an immoderate use of strong drink, long continued exposure to the rays of the sun, &c., &c., are the most common causes which give rise to idiopathic inflammation of the brain.

Primary phrensy is usually preceded by long continued and almost constant wakefulness or watching, or if the patient inclines a little to sleep, he has frightful dreams; acute pains at first in the neck and back part of the head, which afterwards extend to the whole head; deep breathing comes on, with inability to recollect circumstances which have lately happened, suppression of urine, and an irregular pulse.

As the disease advances, the eyes sparkle, and are violently agitated, attended by a ferocity of countenance, with universal restlessness, deafness, great confusion of ideas, violent ravings, intolerance of light, visible pulsation in the arteries of the neck and temples, with the most furious delirium. The tongue is dry, rough, and of a yellow or black color; the face is of a deep red, and the pulse is small, quick, and hard.

When inflammation of the brain arises in consequence of some other disease, such as acute fever, or some inflammatory affection, it is usually accompanied with inability to sleep, con-

stant watching, delirium, picking at the bed clothes, redness and fierceness of the eyes, wild look, and deep breathing.

This complaint is distinguished from madness, by the quickness of the pulse, the attendant fever, and pain in the head; and from that kind of delirium which occurs in low fevers unaccompanied with inflammation, by the appearance of the countenance and eyes; for in the true phrensy the face is red, the features are rather enlarged than shrunk, and the eyes stand out of the head and sparkle; whereas in the delirium of low fevers, the face is pale, the features shrunk, and the eyes are pearly.

Phrensy, whether primary or symptomatic, is always to be regarded as a dangerous and alarming complaint; frequently proving fatal between the third and seventh day; or if long protracted often terminates in madness and great prostration of strength, or in stupor and insensibility.

Grinding of the teeth, white or ash-colored stools, suppression of urine, startings of the limbs or twitchings, convulsions, cold sweats, fluttering pulse, and coma or sleepiness, denote a fatal termination.

But, on the contrary, if there comes on a copious hemorrhage or bleeding from the nose, mouth, lungs, or urinary passages; if the delirium is relieved by sleep, and the patient remembers his dreams; and if the perspiration becomes free and general; with the deafness diminished or removed; the pulse less frequent, but fuller and soft, and the feverish symptoms more mild, then there are hopes of a recovery.

Treatment.—Whenever an attack of phrensy is perceived, no time should be lost in adopting the most energetic measures to allay the inflammation. In the first place, three or four cathartic pills should be administered, to operate as a purge; and if the bowels are costive, stimulating injections should be used to forward the operation.

Whilst we are waiting for the pills to produce the desired effect, the patient should have repeated doses of the cayenne, which will not only have a tendency to promote the operation of the pills, but will also assist in keeping up the strength of the patient, and in promoting perspiration.

Milk porridge, broth, or soup, should also be given to the patient whilst under the influence of the physic to prevent the debility which attends the active operation of cathartics; and if the pain in the head be very violent, cold water, or snow or ice and water, may be applied to it by means of wet cloths, and repeated as often as they become warm.

Immediately after the operation of the pills, if the symptoms be not very much abated, the patient should be taken through a full course of medicine, which must be repeated at suitable intervals until he is out of danger. Between the courses, he

should have frequent doses of cayenne, whilst every other means of promoting perspiration should be carefully attended to; and also frequently administering injections, or if the bowels do not continue quite loose, another dose of the pills should be given after two or three days. The head should also be kept cool with water or vinegar, and raised as high as the patient can comfortably permit. The feet should also be occasionally bathed in warm water, to which has been added a little pearl-ash or white lye; and have either hot bricks or drafts, of the leaves of common cabbage, skunk cabbage, or horse radish, wilted by the fire, applied to them.

During the whole course of the disease, the patient must be kept as quiet as possible, having the light excluded from him; with nourishing food and cold drink, which, if he prefer it, may be acidulated with vinegar.

INFLAMMATION OF THE EYES.

Soreness of the eyes may arise in consequence of some other disease, or it may be occasioned by other circumstances.

The most common causes of sore eyes are external injuries, such as blows, bruises, or other wounds on or about the eye; extraneous or foreign bodies getting under the eye-lids; some of the eye-lashes growing too near the inner edges of the lids, or the ends turning inward and irritating the eye; exposure to cold or to cold dry winds; acrid fumes, such as the smoke of coal, wood, or turf; exposure of the eyes to a strong light; intemperance in drinking; reading or performing any kind of work requiring close attention of the eyes by candle light; and it is supposed sometimes to arise from an acrimony in the blood. It is also thought occasionally to take place from contagion; and often prevails as an epidemic, in which case it must proceed from a vitiated state of the atmosphere.

Inflammation of the eyes often comes on with a sensation as if sand had by some means got into the eye, which is especially the case at evening. In some instances this complaint proceeds no further but gradually goes off. But at other times it is followed by, or accompanied with, heat, redness, and pricking, with darting pains. Sometimes they continue in this situation through the whole course of the disease; whilst in other cases, the eye-lids swell, the vessels of the eye become full and enlarged; great pain is excited in moving the ball of the eye; the patient cannot bear the light, and water issues from the eye of so acrid a nature that it seems like scalding the skin whereever it touches; and in the highest stages of inflammation, the whole eye seems as if filled with hot water.

In extreme cases of inflamed eyes, if the inflammation can-

not be speedily checked, suppuration will ensue which has sometimes ended in the complete destruction of the eye-ball and loss of sight.

Treatment.—As many cases of sore eyes no doubt occur from the circumstance of *wild hairs* growing in the eye without the fact being suspected, it would be well in all cases which do not occur epidemically, and especially when but one eye is affected, to inspect the eye critically before applying any kind of medicine; as we have found in many instances, after the patient had been tortured with washes and eye-waters to no purpose, that the whole difficulty was caused by very fine hair or hairs growing in such a way as to come in contact with the eye-ball. These wild hairs, as they are termed, are often so extremely fine and delicate as to be imperceptible to the best eye only when placed in a certain position to the light: therefore, if they are not readily discovered, the inflamed eye should be placed in different positions, and thus the hairs may ultimately be perceived. A little practice will be very beneficial in enabling a person to discover them with facility. These hairs are to be removed by plucking them out with small forceps or tweezers, when the soreness of the eye will soon cease.

A vast many external remedies have been recommended and used for inflamed eyes, sometimes one and sometimes another appearing to afford relief; whilst at other times nothing has seemed of any avail.

Washing the eyes with salt and water, or with sweet milk and water, will often reduce the inflammation and remove the pain; and in those cases where there is a sensation of sand in the eye, with little or no inflammation, the application at evening, of a little soft tallow from the candle will give ease.

A very good eye-water may be made by steeping the leaves which remain on the beech tree during the winter, and applying it cold, by means of a rag, to the eye; or the pith of sassafras may be steeped in cold water, and applied in the same way.

We have also heard a wash for the eye highly spoken of, prepared nearly as follows: Take of the limbs and twigs of sassafras, and steep a strong decoction, which must be strained and a portion of mare's milk added to it.

Dr. S. Thomson directs an eye-water to be made in the following manner: Take white pond-lily, marsh-rosemary, witch-hazle, and red raspberry leaves, make a strong tea of all or either of these articles, and add one third the quantity of No. 6, and a small portion of cayenne pepper. A little of this is to be introduced into the eyes several times a day; and every morning wash the eyes by holding the face in clear water, and open and shut them until well washed. Instead of the No. 6, the tincture of myrrh may be used.

Dr. W. H. Anderson, of Warren county, Ohio, makes a very valuable eye-water by mixing at discretion the tincture of lobelia, water, and golden seal roots, finely pulverized, which in a day or two, may be carefully poured off, and kept in vials for use. A little of this may be dropped into the eye, or it may be introduced into it any other way, several times a day.

Some remarkable cures have been performed, by washing the eyes in water in which potatoes have been boiled.

A decoction of the golden seal alone, is highly extolled as an eye-water by many.

Poultices made of slippery elm, or of lynn or basswood bark, mixed with cold water, applied to the eyes, and renewed as often as they become warm, have often proved highly beneficial. Before they are laid on the eyes, a thin cloth should be spread over them, to prevent the poultice from coming in immediate contact with them.

Other highly valuable preparations for the eyes, may be found under the head "*eye-waters*," in this volume.

But if these external applications fail of the desired effect, we can recommend nothing better than Dr. Abernethy's rule, which he laid down for all diseases, viz: "take care of the stomach." The common course of medicine, in bad cases, which do not yield to other means, such as mild cathartics, with the astringent and bitter tonics, must be resorted to, minding also to continue the external applications to the eye until the inflammation and soreness are gone.

In some instances, the eyes, although the soreness is entirely removed, remain weak and diseased for some time. In these cases, the eye-water should be made more stimulating with the addition of cayenne or brandy.

INFLAMMATION OF THE INTESTINES.

The characteristics of this complaint are, sharp pains in the bowels, spreading round the navel, nausea, vomiting, obstinate costiveness and fever; and it is principally to be distinguished from colic by the quickness, hardness, and smallness of the pulse, and by the pain being increased by pressure on the abdomen, whilst in colic this will afford relief.

The causes of this complaint are, principally, acrid or irritating substances in the intestines, such as hardened fæces, or acrid bile, &c. &c.; but more frequently the application of cold to the feet, or the abdomen itself. This disease is more apt to occur with old than young persons, and is very liable to a relapse It also frequently proceeds with great irregularity; the patien being at times comparatively easy, and then again in much distress.

Inflammation of the bowels comes on with an acute pain, extending in general over the whole abdomen, but more especially around the navel; the pain being greatly aggravated on pressure. These symptoms are attended by belchings, sickness at the stomach, a vomiting of bilious matter, obstinate costiveness, thirst, heat, great anxiety, and a quick, hard and small pulse.

As the disease progresses, the pain increases, the bowels become affected with spasms, the whole region of the abdomen is highly painful to the touch, and appears as if drawn together in knots; the most obstinate costiveness prevails, and the urine is voided with great difficulty and pain.

This complaint is to be regarded as one of much danger, and may either go off by resolution, or the inflammation may progress, and finally terminate in ulceration, scirrus, or mortification. Death may also take place during the inflammatory stage; and mortification sometimes occurs within a few hours from the commencement of the disease. This is known to have commenced, by a sudden remission of the pain, sinking and irregularity of the pulse, shrinking of the features, cold sweats, fainting, suppression of urine, hickup, and distention of the belly, which gives a sound on being struck with the finger.

If the pain abates gradually, if the costiveness gives way and the stools appear natural, if a universal perspiration takes place, and the pulse becomes firm and equal, or if a copious discharge of loaded urine, with the same kind of pulse, comes on, a resolution and favorable issue may be anticipated.

Its termination in ulceration, which is uncommon, can only be known by an abatement of the feverish symptoms, attended by occasional pains and rigors, and a discharge of pus with the stools.

Treatment.—We may commence the cure of inflammation of the intestines with the free use of injections, and bathing the whole abdomen and even body with the anti-emetic drops, and cloths may be wet in the same and laid on the bowels. This last will not only materially assist in reducing the inflammation, but will also help to loosen the bowels, and promote the operation of other medicines.

After the administration of a few injections, some of which should be composed of slippery elm bark steeped in catnip tea, no time should be lost in taking the patient through a thorough course of medicine; and whilst under the operation of the emetic, care must be taken to keep a hot stone or brick near the bowels. If the course of medicine do not remove the pain, frequent doses of the diaphoretic powders and cayenne, as well as injections, must be administered, and all other suitable means adopted to keep up a lively perspiration. Bathing the bowels should also be repeated, as often as is necessary, to keep the excitement on

the skin, to which may be added fomentations with hot cloths, bitter herbs, or hops.

Purgative medicines are highly improper in inflammation of the intestines, and should never be administered.

The course of medicine must, if necessary, be repeated at discretion, according to the violence of the symptoms; and the strength and appetite restored, by the use of the bitter tonic.

As this complaint is exceedingly liable to a relapse from the slightest causes, the greatest care and circumspection should be observed after the disease is removed. Improper food and exposure to cold must be carefully avoided, and if costiveness occur, it ought to be immediately removed by injections.

INFLAMMATION OF THE KIDNEYS.

This complaint is considered of two kinds, which are no way different only in the causes which produce them, and in the seats of the inflammation. One kind is occasioned by the gravel or stone, and is seated in the internal parts; the other is produced by the common causes of inflammation, and is seated principally in the membrane of the external part of the kidney; which last is the disease we intend to treat of here; the other having been sufficiently noticed under the head of gravel.

Inflammation of the kidneys may be distinguished from colic, by the pain being seated far back, and by the urine being of a deep red color, voided frequently, and in small quantity at a time; and it may be known from rheumatism, by the pain not being much increased by motion.

From the inflammation attending the gravel or stone, this complaint may be known by the fever which attends it from the first, and by the absence of some of the symptoms attending the gravel, such as numbness of the thigh, retraction of the testicle, &c.

The causes which give rise to inflammation of the kidneys are, external bruises, strains of the back, acrid substances conveyed to the kidneys in the blood, violent and severe exercise, either in riding or walking, exposure to cold, &c., &c. There seems in some an evident predisposition to this complaint, particularly in persons of gouty habits.

Inflammation of the kidney is attended with a sharp pain on the affected side, extending downward along the course of the ureter, and there is a frequent desire to pass the urine, with much difficulty in voiding it; the bowels are costive, the skin is dry and hot, the patient feels great uneasiness when he attempts to walk or sit upright, he lies with most ease on the affected side, and is often afflicted with nausea and vomiting, costiveness, and colic pains.

When this complaint continues beyond the seventh or eighth day and the patient feels an obtuse pain in the affected part, has frequent returns of chilliness and shiverings, then there is reason to apprehend that matter is forming in the kidney, and that suppuration will ensue.

Remission of the pain, fever, and tension, followed by a copious discharge of high colored mucous urine, universal sweating, or a flow of blood from the *hemorrhoidal* veins, are favorable symptoms.

The terminations of this complaint are similar to those of other inflammations, either by resolution, suppuration, scirrus, or mortification, though the latter is rare. In some cases of dissection after death, it has been found that abscesses had been formed by which nearly the whole substance of the kidney was destroyed; and a few instances have occurred in which the kidney was scirrous and prodigiously enlarged; whilst others have been met with in which it was nearly wasted away.

Treatment.—This disease must be treated by bathing with some stimulating wash, by injections, and by courses of medicine, similar to what was directed for inflammation of the intestines. In addition to this, a moderately strong decoction of the peach tree leaves or bark, may be taken in the quantity of a pint or so, in a day, as directed in the treatment of bloody urine.

INFLAMMATION OF THE LIVER.

This disease is generally considered as of two kinds; the acute and chronic; the acute exhibiting the ordinary symptoms of inflammation; whilst in the chronic they are often scarcely perceptible. Dr. Clutterbuck, however, discards the idea of such a distinction, and considers them "only different degrees of the same affection."

Besides the causes producing other inflammations, such as the application of cold, external injuries, &c., this complaint may be produced by passions of the mind, by violent exercise in which the liver may receive heavy concussions or jars, by intense summer heats, by long continued intermittent and remittent fevers, and by solid concretions, termed gall-stones, in the substance of the liver. But it is more frequently produced, of late years, by that scourge of civilized man, the use of mercury!

In hot climates the liver is more often the seat of inflammation than any other part of the system; and hence its common prevalence in the East and West Indies.

In severe cases of liver complaint, or in that kind termed acute, there is a pain sometimes in the left side, but more commonly in the right, which is increased on pressing upon it with

the fingers. There is also a pain in the top of the right shoulder, and sometimes in the clavicle or collar bone; and with these symptoms there is a cough, oppressive breathing, and difficulty of lying, excepting on the side affected. Nausea and vomiting of bilious matter often attend, and in one case we saw, in the latter stage, the matter thrown up, as well as what passed downward, resembled coffee grounds; the bowels are generally costive, though sometimes relaxed; the stools are clay-colored; the urine of a saffron color, and small in quantity; the appetite is lost, and there is great thirst, with a strong, hard, and frequent pulse, hot skin, and the tongue is covered with a white or yellowish fur. When the disease has continued for several days, the skin and eyes become tinged of a deep or dark yellow, which is particularly the case when the disease is caused by gall-stones in the liver.

The symptoms which we have just been describing, are such as attend the worst forms of liver complaint; and should we attempt to give a description of the "different degrees" of this disease, we must trace it through an almost imperceptible gradation, from the most violent affections of fever and pain, down to cases in which the diseased action is scarcely, if at all, perceptible even to the patient himself.

In ordinary cases, however, of liver complaint, there may be a slight pain in the side or shoulder, with a sense of debility and great aversion to motion, though at times the patient will feel more active and energetic. He will also often be oppressed with dull, heavy, gloomy sensations, which are generally worse in the morning, at which time there will frequently be a faint, morbid, and weak feeling in the stomach, sometimes extending below it into the intestines. There is also, at times, an unpleasant sensation produced by breathing, which is worse or better, in correspondence with the morbid feelings of the stomach. Along with these symptoms there is a most disagreeable taste, and collection of sticky, nauseous matter, in the mouth, during sleep, with a very bad breath.

The appetite is commonly impaired, though sometimes it is morbidly increased; the stools are clay-colored, the bowels costive; a weakness and trembling is often induced by slight exertion, and a general agitation of the nervous system ensues.

Inflammation of the liver may readily be distinguished from that of the lungs, by the pain in the shoulder, by the yellowness of the skin, by the less difficulty of breathing, and by the cough being in general accompanied with an expectoration of matter.

This disease, like most other inflammations, may end in resolution, suppuration, mortification, or scirrus, in which latter case, the liver becomes swelled and hard. A termination in mortification is, however, a rare occurrence. When it runs into

suppuration, the matter may be discharged externally through the side, in consequence of the liver adhering to it; or it may pass off by the biliary ducts, into the intestines, or it may be discharged into the thorax or abdomen, in which case it will soon prove fatal. It, however, very rarely ends in suppuration in cold climates Persons addicted to the use of ardent spirits are most liable to scirrosities of the liver.

TREATMENT.—Liver complaints are often obstinate to cure, and sometimes, indeed, are quite beyond the reach of medicine. The chronic form, especially, is frequently so insidious in its attacks, that it is very often suffered to go on for years before any serious attempts are made to check its progress; when it is, in many instances, too late to do any thing more than palliate the symptoms, and make the patient a little more comfortable.

In cases of inflammation of the liver, the cure may be commenced by giving three or four cathartic pills, which should be followed by occasional doses of cayenne; and if there be severe pain in the side, it should be bathed with the bathing drops, or some stimulating wash, and have a hot brick or stone applied to it. During the operation of the pills, the strength of the patient should be supported by milk porridge, broth or gruel; and after it is over, the bitter tonic, with additional doses of capsicum, ought to be freely used. If the complaint be of the acute kind, and the severe pain of the side be not abated after the pills have ceased to operate, no time should be lost in administering a thorough course of medicine, which must be repeated, at discretion, until the violence of the disease has subsided. The pills may also be repeated, if necessary, every two or three days, until the disease is removed.

If the complaint be of the chronic kind, the principal dependence to effect a cure, should be placed in the cathartic pills, given two or three times a week, with the laxative bitter tonic several times a day, to keep the bowels loose and strengthen the digestive powers. A strengthening plaster applied to the region of the liver, will also be found beneficial. We ought, however, to administer a course of medicine after the operation of the first dose of pills, and repeat it once or twice a week afterwards. To strengthen the nervous system, the nervine powder or its tincture should be taken in such quantity, and at such times, as the circumstances of the case may require.

INFLAMMATION OF THE LUNGS.

THIS complaint is characterized by a dull pain in some part of the chest, difficulty of breathing, cough, frequent and commonly full, hard pulse, white tongue, high colored urine, &c

Inflammation of the lungs is mostly caused by exposure to cold: though it is occasionally produced by violent exertions in singing, or by playing on wind instruments. It also appears as a symptomatic affection in some diseases, such as measles, catarrh, &c. Persons who have had one attack of inflammation of the lungs, are found to be predisposed to returns of it.

It comes on with an obtuse or dull pain some where in the chest, or side, great difficulty in breathing, especially if the patient attempt to lie on the affected side, hard cough, dry skin, heat, anxiety, flushing of the face, and thirst. The pain in the chest is very much increased by coughing, or by drawing a deep full breath. The pulse, at first, is most commonly full, strong, hard and frequent; but in the latter stages, it usually becomes weak, soft, and often irregular. At the commencement, the cough is frequently dry; but in some cases it is moist even from the beginning. The matter spit up is various both in color and consistence, being often streaked with blood; at which, however, no alarm need be taken.

If relief be not seasonably afforded, and the inflammation proceed with such violence as to threaten suffocation, the vessels of the neck become turgid and swelled; the face turns purple, an effusion of blood into the cellular substance of the lungs takes place, so as to impede the circulation through them, and death soon closes the scene.

Suppuration sometimes occurs, and may happen once in a while during the first week of the disease, but more usually in the second, which is to be known by an abatement of the pain and sense of fullness in the part, slight shiverings, the patient is able to lie with greater ease on the affected side, the feverish symptoms abate, and the breathing is less painful, but more oppressed.

When the collection of matter comes to maturity, it sometimes bursts into the air vessels or cells, and causes immediate suffocation; whilst at other times it will be spit up. The spitting often continues long, and the patient appears as in a consumption. Sometimes the matter bursts into the thorax, in which case there is a possibility of recovery.

The complaint is, in some instances, carried off by a great flow of urine, which deposits a copious sediment, or by a diarrhœa, by sweats, by bleeding from the nose, or by a free expectoration of matter from the lungs, without which last, inflammations of the lungs very rarely terminate.

A high degree of fever, attended with delirium, much difficulty of breathing, acute pain, dry cough, or if there be an expectoration of a very dark color, or a sudden cessation of the pain, or of the expectoration, followed by a change of countenance, or a

lividness of the lips, and sinking or irregularity of the pulse these denote great danger.

But on the contrary, an abatement of the fever, and of the pain and difficulty of breathing, taking place on the coming on of a free expectoration, or at the accession of any other critical evacuation, such as a copious discharge of urine, diarrhœa, or bleeding at the nose, we then may calculate on a favorable termination.

Treatment.—As this disease runs its course, and proves fatal, sometimes in a very few days, the most energetic measures should be taken at the very outset; as by doing this, much pain and hazard, and even life itself, may often be saved. A most thorough course of medicine should be immediately resorted to, and repeated daily until the violent symptoms are abated, and the patient out of danger. A strong tea of the butterfly or pleurisy root, taken freely, will be found to relieve the difficulty of breathing and promote expectoration, as well as to reduce the inflammation. After the course of medicine, if the bowels are in a morbid condition, a dose of some cathartic medicine should be taken, for which purpose castor oil, black root, or butternut syrup will answer a good purpose; always remembering, not only in this, but in all other complaints, to make injections answer to keep the bowels regular if possible. Bathing the region of the pain with equal parts tincture of lobelia and myrrh, or any stimulating wash, will be found very serviceable.

When the difficulty of breathing is great, frequent doses, consisting of from half to a whole tea-spoonful of the tincture of lobelia, must be administered; and if this does not afford considerable relief, the same quantity of the antispasmodic tincture must be used instead of the lobelia tincture. These directions should by no means be disregarded, as the safety of the patient, in the most violent cases, will very much depend upon it. The vapor of vinegar and water inhaled into the lungs, as hot as can be borne, will also be found an excellent method of obtaining relief from the pain and difficulty of breathing. It will likewise have a tendency to promote either the resolution or suppuration of the inflammation. This process may be often repeated, with the happiest effects. For the method of its application, see treatment of inflammatory sore throat. Slippery elm tea or other mucilaginous drinks should likewise be freely used.

In bad cases, much care must also be taken to keep up a perspiration, by the free use of cayenne, and the application of hot rocks, as a great deal will depend, in the worst forms of the complaint, on attention to this circumstance. After the disease is removed, the strength and appetite must be restored by the use of the bitter tonic.

INFLAMMATORY FEVER.

This fever is characterized by much increased heat, frequent, strong, and hard pulse; the urine is red; with but little or no affection of the brain at the commencement; although in the advanced stages, the mind may be much impaired.

An inflammatory fever is considered by the generality of medical men, as a state of the system directly the reverse of that of typhus; as in fevers of the typhus, or typhoid type, instead of the pulse being full, strong, and hard, it is small and weak, with symptoms of great debility. But, in reality, the state of the system in both cases is the same, varying only in the degree of its strength or weakness, or in the force of the living power. This variation is produced by the exciting causes of the disease and the state or condition of the system when those causes are applied to it.

For instance, if a person in the vigor of life, and in sound health, is exposed to cold which produces fever, it will almost assuredly be of an inflammatory character. On the other hand, if a person of weak lax fibers, or one who leads a sedentary and inactive life, which always impairs bodily vigor, becomes exposed to the causes that produce typhus fever, (contagion and the depressing passions) the fever will certainly be of the typhoid type or kind. These examples, we think, are sufficient to illustrate our ideas.

An inflammatory fever comes on with a sense of lassitude and inactivity, or weariness, succeeded by giddiness, rigors, and pains over the whole body, particularly in the head and back. These symptoms are shortly followed by redness of the face, throbbing of the temples, great restlessness, intense heat, thirst, oppression of breathing, and sickness at the stomach. The skin is dry and parched; the eyes appear inflamed, and are incapable of bearing the light; the tongue is of a scarlet color at the sides, and furred with white through the middle; the urine is red and in small quantity; the bowels are costive; and there is a quickness, with a fullness and hardness of the pulse, which is not much affected by pressure upon the artery. If the feverish symptoms run high, and the disease be not removed at an early period, stupor and delirium come on at a more advanced stage; the imagination becomes much disturbed and hurried, with violent raving.

The disease, if left to itself, goes through its course in about fourteen days, and terminates either by a moist sweat, diarrhœa, bleeding from the nose, or the deposit of a copious sediment in the urine; preceded usually by some variation in the state of the pulse.

If the fever runs high or continues many days with a very

quick pulse, flushed turgid face, red eyes, intolerance of light, with giddiness, or early stupor and delirium, the event may be doubtful; and if, besides these, there is a picking at the bed clothes, startings of the limbs, involuntary discharges by stool and urine, with hickups, the disease will then certainly terminate in death.

But, on the contrary, if the feverish symptoms abate, and all the others become more moderate, and a moist sweat breaks out, the urine deposits a brick-like sediment, and the pulse becomes more soft, or a bleeding takes place from the nose, or a diarrhœa comes on, we may then expect a recovery to follow.

TREATMENT.—In treating a case of inflammatory fever, the first thing to be done is to apply the *pack sheet*, which consists in enveloping the entire body and limbs in a sheet wrung out of very cold water and then covering up warmly in bed to await a thorough relaxation and sweat. In the meantime the patient should have nauseating doses of lobelia to promote the effects of the pack sheet. After this a cathartic should be administered and the bowels kept open. Should the pack sheet not bring on a free and full perspiration, lobelia may be used further, so as to cause free emesis and a thorough relaxation of the system.

In milder cases, the fever may often be reduced by bathing the whole surface of the body with a weak alkaline wash, which softens and relaxes the skin and promotes perspiration. This process may also be advantageously resorted to in worse cases, and may supersede the vapor bath, or it may be employed immediately preceding that operation, by which sweating will be the more readily induced. The alkaline wash always has a tendency to reduce the heat of fever, and is very grateful to the patient.

During the recovery, the bitter tonic ought to be used to promote the appetite and strengthen the digestive powers; and if costiveness arise, injections or some mild physic must be administered. Strict attention must also be paid to diet; scrupulously avoiding to over-load the stomach, and shun all other causes likely to produce a relapse.

INFLAMMATORY SORE THROAT.

SLIGHT cases of this complaint are commonly termed sore throat; but if it proceed further, and threaten to suppurate, it is usually called quincy or quinzy.

Inflammatory sore throat or quinzy, may be readily distinguished from the malignant sore throat, by the greater strength of the pulse, and difficulty of swallowing, and by the absence of ulcers in the throat, as well as by there being no eruption of the skin.

The causes which usually give rise to this complaint are, exposure to cold, either from sudden changes of weather or from being placed in a current of air, wearing damp clothes, sitting in wet rooms, getting the feet wet, or by coming suddenly out of a hot room into the open and cool air. It may also be occasioned by violent exertions of the voice, blowing on wind instruments, &c. &c.

It principally attacks youth, or those of a full habit, being chiefly confined to cold climates, and occurs usually in the spring or fall.

In some persons there seems to be a peculiar tendency to this disease, as from almost any exposure to the exciting causes, it is readily induced.

An inflammatory sore throat manifests itself by a difficulty of swallowing and breathing, attended by soreness, redness, and swelling in one or both *tonsils*, dryness of the throat, foulness of the tongue, pains in the part affected, hoarseness of the voice, and some degree of fever.

As the disease advances, the difficulty of swallowing and breathing becomes greater, the speech is indistinct, the dryness of the throat and the thirst increase, the tongue swells, and is incrusted with a dark fur, and the pulse is full, hard, and frequent.

When the symptoms run high, the whole face partakes of it, the eyes are inflamed; the cheeks are florid and swelled; breathing is performed with difficulty, and the patient is obliged to be supported in nearly an erect posture to prevent suffocation. Deafness, delirium, and coma, sometimes occur.

If the inflammation and swelling proceed to such a height as to stop the breathing, the face will become livid, the pulse sinks, and the disease is quickly ended by death.

The chief danger arising from this complaint is, the inflammation attacking both tonsils at once, and causing so much swelling as to prevent a sufficient quantity of nourishment being taken; or by wholly impeding respiration or breathing; which last, however, seldom happens. Its most usual termination is in resolution, more rarely in suppuration, and scarcely ever in mortification.

Slight fever, swallowing not much impeded, the inflammation being of a deep red color, moist sweat, and a copious *ptyalism* or spitting, or moderate diarrhœa, may be regarded as denoting a termination of the complaint in resolution.

But if suppuration is likely to ensue, the parts affected become more pale and less painful, a sense of pulsation is felt in them, and there are slight rigors or chills. The suppuration sometimes takes place at the lower part of the tonsils, and then the matter is discharged into the œsophagus or gullet, and passes into the stomach, which is only known to have happened by

the immediate relief which the patient experiences. At other times the suppuration takes place at the upper or front part of the tonsils, and the matter is discharged by the mouth, being of a clotted appearance, often mixed with blood, of a nauseating bitter taste, and fœtid smell.

The relief which is often obtained by the discharge of matter is very remarkable from its suddenness; for the patient, who a few moments before was not able to swallow the smallest quantity of any thing, and moreover breathed with the greatest difficulty, now feels perfectly easy, and is able to eat and drink freely.

Sometimes, however, the disease does not terminate by a proper suppuration, but by several small abscesses, which produce trifling superficial ulcers, of a white or gray color; whereas, those in the putrid or malignant sore throat, are of a dark brown, or black color.

If mortification is about to take place, the parts affected lose their red shining color, and from being tense and tumid, they become flaccid or soft and loose, and their color changes to livid or brown; the pulse, from being strong, becomes small, weak, and irregular; the face assumes a cadaverous or deathly appearance; cold, clammy sweats break out; the extremities are cold; coma and debility ensue; and death closes the scene! Terminations of this kind are, however, very rare.

Treatment.—In mild cases of sore throat, a strong tea of the witch-hazle leaves, and golden seal, with the fourth of a teaspoonful of cayenne in each dose, occasionally repeated, will generally remove it. In worse cases the throat should be gargled with the same article; at the same time keeping the neck warm by the application of a flannel cloth, or woolen cravat.—The front part of the neck, or throat, may also be bathed with pepper and vinegar, or the bathing drops; and the patient should inhale the vapor of vinegar and water, which may be applied by an inhaler, or by putting the vinegar and water hot into a coffee pot, and then dropping a small red hot stone into it, closing the lid, and holding the spout near the face of the patient, who should inhale the steam as hot as he can bear it. This process ought to be often performed, particularly where there is much pain and difficulty of breathing.

The placing of a small quantity of cayenne pepper, in powder, on the back part of the tongue, as near as may be to the part affected, the patient endeavoring so to breathe as not to take any of the pepper into his lungs, has produced the most decided and happy effects. The operation should be repeated at suitable intervals, until the inflammation is removed.

But if the use of these means does not afford timely relief, or if the attack be sudden and violent, then in addition to these, a

course of medicine should be resorted to, and repeated as often. and at such intervals, as the exigencies of the case may appear to require.

In addition to what has been recommended, a poultice of slippery elm and cracker, made very stimulating by the plentiful addition of ginger and cayenne, and applied to the throat, will always be found very serviceable; and in extreme cases, a gargle of the tincture of lobelia, with capsicum, has been used. And if swallowing be so interrupted that sufficient nourishment cannot be taken, the patient must be supported by injections of rich broths, soups, or porridge.

INFLUENZA OR CATARRH.

This disease consists in an increased discharge of mucus from the nose, throat, and wind-pipe, accompanied by a slight degree of fever.

It attacks persons of all ages and constitutions, but more particularly the young, and such as have had former affections of the lungs; and it may take place at any season of the year when there are sudden changes of the weather, but it is most common in spring and fall. It often prevails epidemically, and to this form it is, that medical writers apply the term influenza; whilst cases that occur incidentally, are called catarrh or cold. When it prevails epidemically, it undoubtedly depends upon the state of the atmosphere; though in some cases it has been attributed to contagion.

In general it comes on with a dull pain or sense of weight in the forehead, sometimes preceded by a slight chill, a redness of the eyes, and a fullness and heat in the nostrils, which is soon followed by a discharge of thin acrid fluid from the nose, together with a soreness in the wind-pipe, hoarseness, frequent sneezing, dry cough, loss of appetite, and general lassitude; towards evening the pulse becomes considerably quickened, and a slight fever arises.

In the progress of the disorder the cough is attended by an expectoration of mucus, which at first is thin, white, and thrown off with some difficulty; but becoming gradually thicker and of a yellow color, it is at length brought up with more ease and less coughing.

Influenza is seldom attended with fatal consequences, excepting with very young children, persons who are old and feeble, or those who are of a consumptive habit; but usually terminates in a few days, if not too much neglected, either by an increased expectoration, or a spontaneous sweat. It, however in some instances lays the foundation for pulmonary consump-

tion, or produces a tendency to asthma, or dropsy of the chest. Occasionally it becomes habitual, and is accompanied with difficulty of breathing, especially in winter.

The description which we have given, only applies to the worst forms of this disease, from which it may be traced, by imperceptible gradations, down to cases which do not interfere with a person's ordinary business.

TREATMENT.—In ordinary cases of catarrh or common cold, little more, in general, need be done than to avoid exposure, and even this precaution is neglected in thousands of instances with impunity: but if the health be sensibly affected, warm stimulating drinks ought to be taken, such as catnip, mint, or pennyroyal tea, or the diaphoretic powders or cayenne pepper. In addition to this, the feet and legs may be bathed in water as hot as can be borne, and as that in which the feet are immersed becomes cool more hot water must be added to keep up the temperature. The bathing ought to be done before a warm fire, and continued until the patient is in a free perspiration, when one foot must be taken from the water, wiped dry, rubbed all over with tincture of myrrh or other stimulating drops, and when these are dried in apply to the foot and leg a little cream or oil. The other foot and leg must then be served in the same way. This method of treating common colds was derived from Dr. JOHN THOMSON, and, though simple, may be regarded as valuable. He says that in cases where he had reason to believe that six courses of medicine would be necessary to cure a disease, the foregoing process had enabled him to effect it with two. Its benefits, indeed, are not confined to colds and catarrhs, but extend to almost all other complaints.

Should the foregoing means fail, recourse must then be had to the vapor bath, an emetic, or a full course of medicine, as the case may appear to require. If there be a troublesome cough, any of the expectorants may be employed, together with stimulants and tonics as in other cases of disease.

INSANITY OR MADNESS.

VARIOUS names have been given to this disease, such as derangement, mania, craziness, &c. It consists in a derangement of the mental operations of the brain, generally unaccompanied with fever.

Insanity has given rise to a great many ingenious speculations, and fine-spun theories, respecting its true definition, pathology, &c.; but as these cannot, consistently with our plan, be introduced here, we must refer those of our readers who wish to obtain a knowledge of them, to such works as have either

professedly, or incidentally, given the subject a more extensive investigation.

Writers generally divide insanity into two species, the melancholic and furious; which are again subdivided, by Dr. Good, into several varieties. But of these divisions we think it unnecessary to take much notice.

Madness is occasioned, in general, by affections of the mind, such as anxiety, grief, disappointed love, jealousy, sudden frights, violent fits of anger, prosperity humbled by misfortunes, religious terror or enthusiasm, and by abstruse study; or it may be produced by any thing which affects the mind so forcibly as to take the attention from all other affairs.

In some cases, insanity proceeds from an hereditary predisposition or constitutional bias; and of all the maladies, says Dr. Thomas, to which the human frame is liable, and which can be entailed upon posterity, mental derangement is surely the most deplorable. It is an indisputable fact, continues he, that the offspring of insane persons are more liable to be affected with insanity, than those whose parents have enjoyed sound minds; which shows that a predisposition or constitutional bias to the disease may be entailed by either parent.

The great variety of symptoms which not only attend the onset of craziness, but also occur in every stage of it, would render any description of the disease imperfect. The dissimilarity of causes which have produced it, the different propensities and habits of life of different individuals, create, of course, a great diversity of symptoms in different patients; all of which are continually modified by the circumstances which immediately surround them, or which incidentally take their attention.

The most distinguishable symptoms which attend the melancholic madness are, sadness, dejection of spirits, love of solitude, or a disposition not to move, or if the patient walks he appears to be in a great hurry, exhibiting singular gestures, with unwillingness to talk, or if he does, his remarks are often very incoherent.

In furious madness, the complaint often commences with severe pains in the head, redness of the face, noise in the ears, wildness of the countenance, rolling and glistening of the eyes grinding of the teeth, loud shouting or roaring, violent exertions of strength, absurd, incoherent, or obscene discourse, unaccountable malice towards certain persons, particularly the nearest relatives and friends, a dislike to such places and scenes as formerly afforded particular delight; and withal, sensation is so much impaired, that the unhappy patient will often bear to a most astonishing extent, the effects of cold, hunger, and want of sleep.

The common form of insanity is that which is termed inter-

mittent, in which there are paroxysms divided by intervals of quietness, or rationality; and it is said that patients who are in a furious state, recover in a much larger proportion than those who are melancholic. Under every form of the complaint, the hope of a recovery is usually proportionate to the length of time which has elapsed since the commencement of the disease. Advanced age always lessens the chances of cure; whilst youth increases them.

It has been observed, that females are more liable to insanity than males.

TREATMENT.—This disease requires both a mental and corporeal treatment; in the former of which, a great deal of skill, judgment, and acquaintance with human nature, are requisite to apply it to the best advantage.

It should always be a primary object to gain the confidence of the patient, and secure his respect and obedience, which can only be done by a mild evenness of temper, and an agreeable dignity of manners. When the confidence of the poor maniac is once obtained, a great deal will have been accomplished, and the administration of suitable remedies, in future, rendered far less difficult.

If the disease has been occasioned by troubles or misfortunes of any kind, endeavors should be used to excite a different train of thought, in order that the patient may forget the cause of his wo.

Such kinds of exercise as the individual is most fond of, should be indulged; and even hard labor has been found highly useful in removing insanity. In selecting the proper kinds of employment, strict regard should be paid to those which are least likely to produce allusions to the cause of the disease, such as are most agreeable to the patient, and which require the greatest bodily action with the least fatigue.

But in violent cases of madness, the patient should be confined alone, in a dark and quiet room, so that his mind may have the better chance of being composed, and thus become the more readily disposed to sleep. If he appears inclined to commit violence, he ought to be confined in such a way as to prevent any hazard from that source, but in such a manner as is least liable to prove a cause of uneasiness or of injury to himself. Where malevolence appears to be a prominent feature, and the person is very furious, close confinement, in the manner just detailed, is doubly necessary and should be carefully and seasonably attended to. Great care, however, ought to be taken not to confine insane persons unnecessarily, as such restraint will inevitably tend to create an irritation of mind which will protract the complaint, and render it more difficult of cure.

In prescribing medicine for lunatics or crazy persons, the

strongest tincture, or tea, of the nervine powder, has been found of great service; and in one case which has been reported to us, that and the diaphoretic powders and bitter tonic, effected a cure. This remedy gives tone to the nervous system in a more powerful manner than any other article with which we are acquainted; and as those medicines which act upon the nerves most probably do it through the brain, the nervine powder seems eminently calculated to restore the healthy functions of this organ.

We would also recommend the anti-spasmodic tincture, especially in the furious fits, which it possibly might put a speedy end to. Thorough courses of medicine should also be resorted to, and repeated at discretion, which we think would afford the best chance of correcting the morbid affection of the brain. The courses of medicine ought to be followed by the bitter tonic; and if costiveness prevail, by injections.

It has, however, been found, that removing a lunatic patient to an asylum or hospital, affords the best chance of cure; as by this means he is separated from the objects with which he is familiar, and which often call up ideas associated with the cause of his derangement; and on this account, a change of situation, and removal from his friends, will be the more advisable; for it is a fact well known to those who superintend insane persons, that patients are rarely recovered at home. It not unfrequently happens that maniacs, who have been brought from their families, and who were said to have been in a violent and ferocious state at home, become suddenly calm and tractable when placed in a lunatic asylum. And, on the other hand, it is also a fact, that there are many patients whose disorder speedily recurs after having been suffered to return to their families, although they have for a length of time conducted themselves, under confinement, in a very orderly manner.

INTOXICATION.

We deem it unnecessary to give any description of the symptoms of intoxication, as all persons, in civilized communities at least, are sufficiently acquainted with them.

Intoxication may generally be distinguished from apoplexy, by the smell of spirits, regard also being had to the circumstances attending the case as well as to the character of the individual.

Treatment.—A person apparently dead or near dying from intoxication, ought to have his clothes, particularly his neck-cloth, loosened, and if cold, should be placed in a warm though not confined situation, and have stimulating injections administered as soon as possible. These may be composed of warm

water, tea, or milk, with the addition of half a tea-spoonful of, cayenne, and the same quantity of lobelia, seeds, leaves and pods, or their tincture; or for the want of cayenne, take black pepper or ginger in larger quantity; or if no medicines are at hand, warm water may be used alone. These must be repeated until relief is obtained; and if vomiting is not produced by the injections, pour a table-spoonful of the best lobelia tincture down the throat, which will scarcely fail to cause a free evacuation of the contents of the stomach. If it should fail, however, it must be repeated until it does operate, as much may depend upon cleansing the stomach of whatever may yet remain in it.

Affusions of cold water applied to the body, and particularly to the head, have been found very beneficial in many cases.

It is also stated in the Domestic Encyclopedia, that the internal administration of the urine of a healthy person, will quickly remove the intoxicating effects of the liquor.

The application of bottles or jugs, filled with hot water, or of hot bricks, to the feet and legs will likewise be useful, or if the means are at hand, the vapor bath may be more advantageously employed.

ITCH.

The itch is a disease of the skin, and scarcely ever affects the constitution or general health, even in its worst forms.

It is most usually caused by infection, communicated by immediate contact with a person affected, or by wearing the same clothes, or by lying in the same bed, that such person has worn or laid in.

The itch first shows itself in the form of small pimples or watery pustules, about the fingers, wrists, arms, legs, and waist, in succession. They gradually assume a yellow appearance, and are attended with an intolerable itching, especially when the patient sits by the fire, or is warm in bed. Driven by the excessive itching, the individual scratches the pustules, by which they are broken, and the matter adhering to the ends of the fingers, is applied to other parts, whereby the disease is communicated to almost any part of the body. It is, however, not dangerous nor difficult of cure, unless too long neglected or improperly treated.

Treatment.—Various remedies have been employed for curing this filthy disease, some of which, however, such as mercurial ointments, we can, by no means, recommend; but on the contrary, regard them as dangerous applications.

The juice, decoction, or ointment of the root of the narrow dock, we believe is a certain remedy for the itch, if persevered in We are also informed, by good authority, that the leaves

are equally as good as the roots, and may be used by bruising and then rubbing them upon the affected parts. The broad leaved dock, it is likewise said, proves equally efficacious with the narrow kind.

The juice of the dock may be obtained by bruising and then pressing the roots, or roots and tops; the decoction, by steeping; the ointment, by boiling the roots, or roots and leaves, and straining the decoction, when a little cream, butter, or lard, must be added and simmered until the water is all evaporated. Either of these preparations may be applied to the parts affected once or twice a day; and the decoction taken internally at the same time.

An itch ointment is also made in the Southern States by melting *sweet gum* with sweet oil or lard, and is said to be very useful.

If itch has been neglected until the general health is affected, in addition to the external applications which we have recommended, a few portions of physic may be taken, at intervals of two or three days; or the patient should have a course of the alterative medicine, as dock root infusion, and be treated in other respects as for ordinary cases of fever.

JAUNDICE.

This disease is characterized by a yellowness of the skin, first discoverable in the eyes, a bitter taste in the mouth, sometimes a sense of pain in the right side, clay-colored stools, and the urine obscurely red, tinging things dipped into it of a yellowish hue.

It takes place usually in consequence of an obstruction in the gall ducts, which occasions the bile to pass again into the blood. In some cases it is supposed to be owing to a redundant secretion of bile.

The causes which produce an obstruction of the biliary ducts are, gall-stones, inspissated or thick bile, spasmodic constriction of the ducts, and the pressure made by tumors situated in adjacent parts; hence jaundice is often an attendant symptom of inflammation or scirrosities of the liver, pancreas, &c., and frequently also of pregnancy.

Immoderate use of spirituous liquors predisposes to this complaint, as likewise a sedentary life, or the indulgence in anxious thoughts.

When gall-stones are lodged in the ducts, producing jaundice, acute pains are felt in the region of the parts, which will cease for a while, and then return again; great irritation at the stomach, with frequent vomiting will attend, and the patient experiences an aggravation of the pain after eating. A pain at the

top of the right shoulder is also another symptom of concretions in the gall bladder, or its ducts.

When calculi or gall-stones are passing through the duct into the duodenum, the symptoms are less obscure and uncertain than when lodged in the gall bladder. Sometimes an attack is preceded by, or accompanied with, a sense of coldness in the back and lower extremities; the person is seized with a sudden violent pain exactly where the duct enters the intestine, which is frequently so circumscribed that the patient will often say he can cover it with his finger, and sometimes it shoots through the back and extends up between the shoulders. Persons thus seized cannot lie down in bed, but are obliged to sit up with their body bent forward, which seems to afford a slight mitigation of the pain. Nausea and vomiting commonly prevail, so that nothing can be retained on the stomach; and sometimes bile is brought up, but not always; nor is vomiting a constant attendant. The bowels are invariably bound; indeed, the whole intestinal canal seems to partake of the spasmodic action induced in the duodenum by the irritation of the gall-stones.

Although the pain attendant on the passage of a stone along the biliary duct, is more severe than in inflammation of the liver, still an inflamed state of this organ is seldom induced. Sometimes the pain continues for several hours, and then a remission takes place, either in consequence of the calculus entering the intestine or, otherwise, falling back into the gall bladder. After an interval of some days or weeks the paroxysm perhaps returns again, indicating that the obstructing cause is not yet fully removed.

Biliary calculi or stones, are of various sizes, from a pea to that of a walnut, and in some cases are voided in considerable number; being, like the bile, of a yellowish brown, or green color. They vary also with regard to their figure and hardness; some being very rough and angular, and others oval or round and smooth.

The jaundice comes on with languor and inactivity, often in the extreme; loathing of food, flatulency, acidity of the stomach, and costiveness. As it progresses, the white of the eye, and then the skin, become tinged of a deep yellow; there is a bitter taste in the mouth, especially in the morning, with frequent nausea and vomiting; the urine is high colored, and tinges linen yellow; the stools are of a gray or clayey appearance, and a dull obtuse pain is felt in the right side, which is much increased by pressure with the fingers. There is also a pain in the top of the right shoulder or in the shoulder blade; and in cases where the pain is very acute, the pulse is apt to become hard, and full, with other symptoms of fever.

Where jaundice is occasioned by concretions or stones ob-

structing the biliary ducts, or by a redundancy of bile, if taken in time, but little difficulty need be apprehended in effecting a cure.

But where it is brought on by tumors of the neighboring parts, or has arisen in consequence of other diseases, the event will be more doubtful.

A gradual diminution of the sense of weight and oppression about the breast; a return of appetite; the stools becoming copious and easily procured; the urine increased in quantity, and of a more natural color, are to be regarded as favorable symptoms.

A violent pain in the right side, or in the region of the stomach, the skin becoming of a dark yellow, attended with a quick pulse, loss of flesh and strength, with dropsical swellings of the extremities, chilliness, wakefulness, melancholy, or hickup, denote great danger.

Treatment.—In mild attacks of jaundice, a dose of the cathartic, or of cathartic pills, and afterwards taking the laxative bitter tonic three or four times a day, will remove the disease; or, if necessary, the pills may be repeated after two or three days.

If there is pain in the side, the painful part should be bathed with some stimulating wash, and have a hot brick or stone placed near it; and if there be pain in or near the pit of the stomach, the same application may be made to it. When there is nausea and vomiting, it should be allayed by the use of strong spearmint tea; and perhaps the pearl-ash water, or white lye, might also be useful. Injections must also be freely employed

Where the complaint does not readily yield to this treatment. or if the attack be violent, the patient should immediately have a course of medicine, followed by the laxative bitter tonic, injections, &c. If the disease be caused by a gall-stone passing along the biliary ducts, frequent courses of the medicine will have a beneficial influence, not only by relaxing the parts, but the act of vomiting will facilitate the passage of the stone.

Dr. Ewell says, it is believed that a mixture prepared as follows, has destroyed biliary stones, viz: Take sulphuric ether, three parts, and spirits of turpentine, two parts, mix, and for a dose, take one dessert spoonful, or from two to three tea-spoonsful.

KING'S EVIL OR SCROFULA.

This disease consists in hard, indolent tumors or swellings, of those glands termed conglobate, in various parts of the body; but particularly in the neck, behind the ears, and under the chin, which after a while suppurate and degenerate into ulcers. From these ulcers, instead of healthy pus, a white matter, somewhat resembling curdled milk, is discharged.

The first appearance of scrofula is usually between the third and seventh year, though it may arise at any time between those periods and mature age; after which it seldom makes its first attack.

Children of a lax fiber or habit, with a smooth, soft, and fine skin, fair hair, rosy cheeks, and delicate complexion, are most disposed to this complaint; but those of a different character are not exempt from it. It is also apt to attack such children as show a disposition to the rickets, which is marked by a protuberant forehead, enlarged joints, and tumid or swelled abdomen.

Scrofulous persons are often comely and handsome, and rather distinguished for acuteness of understanding and precocity of genius. They are, however, seldom robust, or able to endure hardship or fatigue, without much exhaustion.

Scrofula prevails most in those climates where the atmosphere is cold and moist, where the seasons are variable, and the weather unsteady. From latitude 45 to 60 is the principal climate of this disease.

Besides climate, and exposure to moist air and atmospherical vicissitudes, every other circumstance which weakens the constitution, or impairs the general strength of the system, may be regarded as predisposing to this disease: thus, breathing an impure, tainted air, living upon food of an unwholesome or indigestible nature, which does not afford due nourishment to the body, favors an attack of king's evil, by reducing the strength, and rendering the person weakly.

Scrofula, according to Dr. Thomas, is a disease of very frequent occurrence in England, particularly in the large manufacturing towns, appearing under various forms, and different degrees of severity, from a state of mildness, which hardly betrays any perceptible external symptoms, to a state of violence which produces the most miserable objects of human wretchedness.

The attacks of this disease appear to be somewhat affected by the seasons. They usually commence some time in the winter or spring, and often disappear or become much relieved during the summer and fall.

The first appearance of scrofula is commonly in small round, movable tumors under the skin, without pain or discoloration; which most commonly arise upon the sides of the neck, near the ear, or under the chin; though in some instances the joints of the elbows or ancles, or those of the fingers and toes, are the parts first affected. In these last instances, however, the swelling appears to be attached to, and almost surrounding, and stiffening the joint.

After a time the tumors become larger and more fixed, the skin which covers them acquires a purple or livid color; and

becoming inflamed, they at length suppurate and break into one or more little holes, from which oozes a matter in appearance somewhat healthy at first, but by degrees changes into a substance resembling curdled milk. And it is no uncommon thing to find tumors in various parts of the body, in all the different stages, from their first formation to those which are discharging matter.

As the ulcers continue to throw forth this unhealthy kind of matter, the tumors gradually subside, whilst the ulcers enlarge and spread unequally in various directions. After a while some of the ulcers heal; but other tumors being commonly formed in some other part, these soon break out; and, in this way, the disease may proceed on for years, until at last, appearing either to have exhausted itself, or the patient, it comes to an end. The scars left after the healing of scrofulous ulcers, are often of a peculiarly ugly puckering appearance.

The eyes occasionally become the seat of the disease, giving rise to painful inflammations, ulcerations, and sometimes blindness. In some instances the bones become affected at the bottom of deep ulcers, which is to be known by the black and fœtid discharges from the part, occasionally attended by pieces of bone. These should be taken from the ulcer as soon as they become detached.

Treatment.—The common course of medicine will be highly useful in every stage of this complaint, to correct and purify the fluids, and thus check the formation of tumors, or prevent their going on to suppuration.

The tumors should be bathed with highly stimulating washes to promote a healthy action in the vessels of the part, and the laxative bitter tonic taken several times a day. A good nourishing diet ought also to be indulged in, with moderate exercise, in fair weather; and if the patient be living in a low, damp situation, he should be removed to one more elevated and airy.

The use of the vapor and cold bath, will also be found highly advantageous, and ought to be daily resorted to until the urgent symptoms are removed.

Particular attention should be paid to the clothing of scrofulous patients, which ought to be of such a nature as to protect them against all inclemencies of the weather, and keep them comfortable and warm. In cold weather, a flannel dress should be worn next to the skin. Early rising is also regarded as an important thing for persons laboring under scrofula.

If ulcerations have taken place, or the tumors are any of them in an inflamed state, the common slippery elm poultice with the addition of a large portion of either bayberry or birth root pulverized, must be applied cold, and wetted occasionally with a tea of the tops and roots of wild lettuce, or of the beth-root,

or pond-lily. In warm weather these poultices ought to be renewed every twelve or eighteen hours, but in cold weather not so often.

At each renewal of the poultice, the ulcer must first be washed with mild soap suds, then with one of those teas just directed to wet the poultice with, and lastly, occasionally with the compound tincture of myrrh. If the ulcers are very deep, they may be washed out with a small syringe for that purpose; taking care not to throw the fluids in with so much force as to irritate the part and produce pain.

When this process has induced a change, and better appearance of the discharges from the ulcers, the poultices may be omitted, and the healing salve applied; or sometimes it may be advisable to lay a poultice over the salve.

By pursuing the foregoing directions, administering courses of medicine at suitable intervals, with the bitter tonic, to purify the fluids, and invigorate the system; and by judiciously treating the ulcers according to the rules laid down; and persevering a sufficient length of time, a great proportion of scrofulous cases may undoubtedly be cured. Dock root or the phytolacca and other alteratives, as sarsaparilla and stillingia should be freely used.

LOCKED JAW.

This complaint consists in an almost constant contraction of several or the whole of the muscles of the body, whilst the senses remain entire.

The complaint usually termed locked jaw, is caused by wounds; whilst another similar to it, is produced by colds, &c., which has been treated of under the head of convulsions or fits.

This disease may be caused by wounds in the flesh, and particularly of the tendons or sinews, made either by puncture, incision, or laceration; that is, by pricking, cutting, or tearing. In warm climates, lacerated wounds of tendinous parts, prove, as Dr. Thomas observes, a never failing source of this painful and fatal complaint. It also often arises in both warm and cold climates, in consequence of some surgical operation, such as the amputation or cutting off a limb, &c. The disease generally shows itself about the eighth day from the accident, or operation.

The locked jaw, in some instances, makes its attack suddenly, and with violence; but commonly it comes on in a manner more slow and gradual. There is a slight stiffness in the back part of the neck, which after a while increases so as to render the motions of the head both difficult and painful; then comes on an uneasy sensation at the root of the tongue, with difficulty in swallowing, great tightness across the breast, with a pain just

above the pit of the stomach, shooting through to the back. A stiffness now takes place in the jaws, which soon increases to such a degree, that it becomes impossible to open the mouth; and this is the locked jaw.

TREATMENT.—We have so much confidence in the botanic remedies, that we think a case of locked jaw would scarcely ever occur, if such injuries as produce this complaint were properly treated by them. In all cases in which the locked jaw may be apprehended, the patient should have frequent doses of the nervine powder, and cayenne, with hot stones or bricks applied, to produce perspiration, and relaxation of the muscles.

If, however, symptoms of the locked jaw occur, the patient must be carried through a full course of the medicine; and the wound should be bathed or washed with the tincture of myrrh, or a decoction of lobelia; which will have a powerful tendency to promote a healthy action, and thus remove the cause of irritation. In extreme cases the wound may be washed with the most powerful stimulants, such as tincture of lobelia or of cayenne, or the anti-spasmodic tincture. This complaint scarcely ever occurs unless there is some previous deviation from a healthy process in the wound; and the sooner this is corrected the better the prospect and the more speedy the accomplishment of a cure. Bathing the wounded part in white lye, as hot as can be borne, and afterwards applying the common slippery elm poultice, has been found of great benefit in this complaint.

But if spasms have actually commenced, and the jaws are set, we must then have recourse to the anti-spasmodic tincture; in addition to which, the above applications must be made to the wound. The anti-spasmodic tincture may be given in doses of from half a tea-spoonful to two tea-spoonsful, repeated at discretion, according to the symptoms.

As the jaws are set, and the teeth closed, the best way of getting the medicine down, is to hold the cheek, at the corner of the mouth, loose from the teeth, and then pour the medicine from a spoon, between the teeth and cheek, and it will immediately find its way to the throat, and afford relief.

This method of relieving the locked jaw, was first published to the world by Dr. THOMSON, and is far better than knocking out the teeth, as is done by the mineral doctors.

MALIGNANT OR PUTRID SORE THROAT.

SORENESS of the throat, with fever, stiffness of the neck, and inflammation of the fauces or back part of the mouth quickly terminating in ulceration, characterize this disease.

The putrid sore throat frequently arises from a humid or moist

state of the atmosphere, and hence often prevails as an epidemic, making its attacks principally on children, and those of weak lax fibers. It is most prevalent in the fall and winter, though it may arise at any other season.

It is also believed to be contagious, and often passes through a whole family in that way.

In some instances it is said to be so blended with scarlet fever as to make it difficult to determine of which affection the disease partakes the most. It is also met with occasionally in measles.

Putrid sore throat commonly makes its attack with cold shiverings, nausea, and vomiting, succeeded by heat, restlessness, thirst and debility; the eyes are red, a stiffness is perceived in the back part of the neck, with a hoarseness of the voice, and soreness of the throat. On looking at the back part of the mouth, there appears a fiery redness in every part, with a slight degree of swelling in the tonsils, which, however, is not so great as to interfere with breathing or swallowing.

Upon further inspection of the month, it will very soon be found that a number of sloughs of a shade between a light ash color, and a dark brown, are to be seen on the tonsils, and other parts of the throat, or mouth; the breath is also highly offensive; the tongue is covered with a thick brown fur, and the inside of the lips is beset with blisters containing an acrid humor, which, when discharged, corrodes or excoriates the part upon which it falls. There is commonly, also, a discharge of thin acrid matter from the nose producing an excoriation of the nostrils. In infants, a purging is likewise apt to attend, which possesses the same acrid and excoriating character with the humor contained in the blisters and that discharged from the nose.

There is a considerable degree of fever from the first attack, with a small, frequent, and irregular pulse; and every evening the symptoms are increased, with slight remissions in the morning, attended with debility and general loss of strength. In some cases there is a delirium which is of what is termed the low muttering kind.

About the second or third day, large patches or blotches, of a dark red color, make their appearance on the face and neck, and by degrees spread, or appear on other parts of the body, even to the nds of the fingers, which feel swelled and stiff. These eruptions after a few days disappear without producing any remission of the symptoms.

Sometimes the inflammation extends up the eustachian tube, into the ear, producing ulceration, and occasionally deafness.—The whole neck sometimes swells, and assumes a dark red color.

As the sloughs continue to spread, they generally become of a dark color, the parts between them at the same time assuming

a purple hue; new specks also arise, and the whole fauces at length are covered with thick sloughs, which, on falling off, exhibit ulcers, sometimes very deeply seated.

In the worst cases, the fauces appear quite black, the sloughs corrode deeper and deeper, and spread throughout the whole alimentary canal, and terminate at length in mortification; or the symptoms of irritation go on increasing, and a severe purging coming on, the patient is cut off, generally before the seventh day, and, in some instances, as early as the third.

When the evening paroxysm of fever runs very high, with great debility, depression or irregularity of the pulse, early delirium, coma, much vomiting, and diarrhœa, accompanied with considerable swelling of the throat, and dark colored spreading ulcers, very fœtid breath, livid spots on the body, or hemorrhage, we may calculate on the disease terminating fatally.

But, on the other hand, if the pulse becomes more moderate, and stronger, the breathing freer, the skin moist and soft, the red patches or blotches abundant on the skin, the back part of the mouth becoming more red, with a mitigation of the other symptoms, we may then expect a favorable termination. In cases where the fever is of a less putrid nature, and the symptoms are mild, and where the efflorescence or blotches, is succeeded by a remission of fever, and the remission continuing daily to become longer and more apparent, but little danger need be apprehended.

Treatment.—No time should be lost in administering a course of medicine at the very onset of this fatal malady.

The bowels should be relieved by the use of injections, whilst purgative medicines must be carefully abstained from, as they would prove highly injurious to the patient.

A free use must be made of the astringent tonics, such as the beth root, dewberry, bayberry, &c., with frequently repeated doses of the cayenne. On account of the ulcers being seated in the mouth, the cayenne may be steeped, and use the tea instead of giving the pepper in substance. Occasional doses of the diaphoretic powders will also be a proper remedy. Pepper sauce will likewise be found a valuable medicine, and ought to be frequently used, especially if mortification be apprehended. In conjunction with the astringent tonics, it is presumed that few remedies possess so high a power of preventing putrefaction as the pepper sauce.

Gargles must also be used to wash the mouth; for which purpose the pepper sauce, and a tea of some of the astringent tonics, with the addition of golden seal, may be used alternately, several times a day; and the steam of vinegar must be often applied, as directed for inflammatory sore throat.

Bathing the throat with stimulating washes, and applying

stimulating poultices, as directed for the complaint just alluded to, ought also to be adopted; and if the throat become so swelled or sore, as to prevent swallowing, the strength must be supported by nourishing injections. By pursuing the course which we have laid down, with such modifications as the peculiar symptoms of the case, or the judgment of the practitioner may dictate, there is no doubt this fatal malady might be robbed of many of its victims.

MEASLES.

This disease is regarded as an inflammatory infectious fever, and is attended with cough, sneezing, a discharge of thin humors from the eyes and nose, and a determination of acrid matter to the surface of the body, showing itself in red spots over every part of it, though they never suppurate as in small pox, but go away in three or four days with a kind of mealy appearance.

Scarlet fever sometimes resembles the measles so exactly that it is difficult to distinguish between them; but fortunately for the suffering sick, in the botanical practice of medicine, this is a matter of little consequence. The redness of scarlet fever is more equally diffused than in measles, in which it appears in distinct spots somewhat resembling flea bites, whilst the skin remains of a natural color between them. In the measles, the eruption rises more above the skin, and causes a manifest roughness to the touch, which is scarcely perceptible in the scarlet fever, excepting a very little roughness sometimes in the arms. In the scarlet fever there is seldom a severe cough; the eyes do not water much, and the eye-lids are not red and swollen; all of which rarely fail to attend the measles. The time of the appearance of the eruption is also different in the two diseases; in scarlet fever it makes its appearance both on the face and arms on the second day; whilst in measles it shows itself about the third day on the chin and breast, and does not reach the arms or hands until the fourth or fifth day of the disease.

The winter season is most congenial to the spread of measles, though they may prevail at any other time, and they attack persons of all ages, but children are most liable to them. Like the small pox, when genuine, they never affect the same person but once in his life.

Persons of a scrofulous habit, or who are inclined to consumption, are liable to suffer very seriously from the after effects of measles; and these effects in all constitutions, are more to be dreaded than the measles themselves. A harassing and distressing cough, or inflammation of the eyes, sometimes follows the disease; or the patient may get through, and for a time

appear to be recovered, and sore eyes, a cough, or consumption may succeed, as a consequence, at some future period.

Measles sometimes leave behind them a chronic diarrhœa, which has proved fatal; and in other cases, a dropsy has ensued.

In some instances they make their attack in a very mild manner, and go through their course without medical aid of any kind; and in others the fever runs high, particularly after the appearance of the eruption, and is accompanied by a strong pulse, much coughing, great difficulty of breathing, and other symptoms of inflammation of the lungs.

An attack of measles is generally ushered in by chilliness and shivering, succeeded by heat, thirst, anxiety, pains in the head, back, and loins; heaviness, and redness of the face and eyes, with an effusion of tears, swelling of the eyelids, nausea and vomiting; and with these symptoms there are a dry cough, hoarseness, hurried breathing, frequent sneezing, and discharge of acrid matter from the nose.

About the third or fourth day, small red spots somewhat similar to flea bites, appear in clusters about the face, neck, and breast, and in a day or two more the whole body is covered with them. They do not arise into visible pimples, but by the touch are perceived to be a little rough.

The fever does not abate on the appearance of the eruption, as happens in small pox; on the contrary, it is usually much increased, and it does not cease until the eruption begins to go away. Also, the cough, hoarseness, difficulty of breathing, and running from the eyes and nose, are aggravated, on the appearance of the eruption.

On the fifth or sixth day, the spots are changed from a vivid red to a brownish hue, and begin to dry away about the face, and on the eighth or ninth day they disappear on the breast and other parts of the body; about which period it is no uncommon thing for a diarrhœa to ensue.

In more malignant forms of the disease, the fever assumes the typhoid type, livid spots appear on the body, with other symptoms indicating a putrid tendency. The eruption also appears earlier in the disease, and all the attendant symptoms are of an aggravated form.

The fever being mild, with a gentle diarrhœa, free and copious expectoration, moisture of the skin at the appearance of the eruption, denote a favorable termination of the disease.

But on the other hand, a high degree of fever, parched skin, hurried and difficult breathing, flushed countenance, unusually hard pulse, severe diarrhœa, and vomiting after the eruption, with great pain in the head and eyes, coma or delirium, livid color of the eruption, great prostration of strength, and intermittent pulse, indicate the greatest danger.

TREATMENT.—In mild attacks of measles, little more need be done than to take freely of the diaphoretic powders, or cayenne, and avoid exposure to cold; and at the same time paying particular regard to the state of the bowels, which ought to be kept loose by injections, and, if necessary, by adding some of the bitter root to the diaphoretic powders.

If there appears, about the third or fourth day, a manifest aggravation of the symptoms, and the eruption does not show itself; frequent doses of the cayenne, or a tea of equal parts of saffron and Virginia snake root, must be administered, at the same time applying hot stones or bricks to the feet, to induce a determination to the surface, and bring out the eruption. But if this does not produce the desired effect within some reasonable time, and there is great pain, restlessness, and difficulty of breathing, a few doses of the anti-spasmodic tincture, or a course of medicine, must be administered, either of which will rarely fail of fetching out the eruption, and effecting a mitigation of the symptoms.

If, however, the violent symptoms still continue unabated, although the eruption has made its appearance, frequent doses of the capsicum must be given in a strong tea of bayberry, or other astringent; and, if the urgency of the symptoms appear to demand it, the course of medicine should also be repeated at discretion. A mild purge, perhaps, might be beneficial, minding also to make a free use of injections. Sometimes a looseness of the bowels arises, which may be regarded as being beneficial, unless it be so violent as to produce debility, when it must be checked by the use of the pond-lily, dewberry, or any other astringent articles, and also by the use of astringent injections; or, if necessary, by a course of medicine.

To relieve the difficulty of breathing, the patient may inhale the steam of vinegar and water, as directed for inflammatory sore throat. A soreness and rawness of the throat often occur from the severity of the cough, to relieve which slippery elm, or flax seed tea should be taken. The tincture of lobelia, or the expectorant powder, may be used to loosen and relieve the cough.

The use of the vapor bath, occasionally, after the disappearance of the eruption, will be a good preventive of the sore eyes, and other troublesome complaints which are apt to follow the measles; and if the cough continue bad, threatening consumption, the whole course of medicine ought to be adopted, and repeated as occasion may require, until the urgent symptoms are removed.

MERCURIAL DISEASE.

IN the first volume of this work, we dwelt long on the disastrous effects of mercury upon the animal economy; and now it

becomes our duty to point out the best means of relieving the system from its destructive consequences.

The mercurial disease is characterized by great depression of strength; a sense of anxiety about the breast; irregular action of the heart; frequent sighing; trembling, either partial or universal; a small, quick, and sometimes intermitting pulse; occasional vomiting; pale contracted countenance; sense of coldness; with the tongue but seldom furred.

Mercurial medicines have spread their ravages to such an alarming extent, that it has become an important part of the physician's study, to learn to designate and remove the painful and fatal maladies which are produced by their destructive powers. A great majority of the cases of liver complaint, and many of dyspepsy, which are so common of late years, may be traced to the use of mercury. A simple history of hundreds of chronic cases, of various kinds is—"I had the fever, was salivated, and have enjoyed bad health ever since."

But we have said much upon this subject in the first volume, to which we refer the reader for any further information he may want as to the specific effects of mercury upon the system.

Treatment.—It has been observed by medical writers, that there was no known remedy which would neutralize, or destroy mercury in the system; that those laboring under its morbid influence could only be relieved by such means as would promote its evacuation through the proper emunctories or out-lets, by which other useless and injurious matter is removed from the body. How forcibly then do these facts recommend the use of the vapor bath or steaming. This process, with the whole course of medicine, gives new energy to the living power, relaxes the constricted vessels, and thus enables the living machine to relieve itself of any poisonous matter by which it may be assailed or encumbered.

When, therefore, we have reason to suspect that an individual is suffering from the effects of mercury retained in the system, we should resort to steaming in the most thorough manner. Nothing but the highest heat which can be borne, will be sufficient to drive this dangerous substance from the body.

In general, the same taste will be experienced in the mouth whilst undergoing a process for expelling mercury, that occured when the system was first under its influence; and in some instances salivation has ensued, and even purging.

The face often becomes swelled whilst in the vapor bath; to relieve which, the patient should cover his head, so as to admit the hot steam to his face, and keep it exposed to the vapor as long as he can bear it; which process must be repeated until the swelling is gone. Or, after the steaming, when the patient is in bed, take a red hot stone or brick, and cool it just so as

not to burn, then wrap it up in a cloth wet with vinegar and water, with a dry one out side of this, and place it near the face, covering the head and inhaling the steam as hot as it can be borne.

The steaming should be often repeated, the patient at the same time taking freely of the cayenne, and occasionally a full course of medicine. The bitter tonic, made very warm with cayenne, must be taken frequently during the day, and a dose of the nervine powder at night, or if there be much nervous agitation or trembling, the nervine powder, or its tincture, must be taken occasionally through the day. If costiveness prevail, the bitter root, or yellow parilla root, must be added to the bitter tonic. The sarsaparilla may also be used as a common drink, and there is little doubt that the spignet is equally as good.

The patient should live on a good nourishing diet, and take gentle exercise in the open air when the weather is dry; but, by all means, avoid any sudden and violent exertions of strength, as fatal consequences have been known to result from such causes.

MILK SICKNESS.

This disease, so far as we know, is confined to the Western Country, and even to particular districts of it; and is also often called Sick Stomach, and Puking Complaint.

The name which is first given, indicates the source whence this disease is usually derived, it being from a poison contained in the milk of animals, particularly the cow; and the two last are indicative of some of the most prominent symptoms by which it is attended.

We are not in possession at present, of any definite or particular description of this obstinate, and often fatal malady; but from the best information which we have, we present the following:—

Milk sickness usually comes on with lassitude and weariness, with sense of great exhaustion, and trembling, from slight exertions; the breath is very offensive, having a peculiar and disagreeable smell. Obstinate costiveness either accompanies or succeeds these symptoms, which are soon followed by sickness at the stomach, and vomiting; and great distress, with a burning sensation at the stomach. If the costiveness is not removed, the sickness and vomiting continue, and in a short time destroy the patient.

Cattle, hogs, sheep, and dogs, are likewise subject to this disease, and all alike die with it sooner or later. It is communicated to cattle and sheep, as is pretty well ascertained, by eating the leaves of a poison shrub; hogs and dogs derive it

from eating the milk or dead carcasses of cattle or sheep that die of this disorder, which in them is called the *trembles;* and man takes the complaint from eating either milk, butter, or flesh of infected animals.

The trembles in cattle, and milk sickness in persons, is confined, so far as we know, mostly to a few small districts in Ohio and Kentucky, and perhaps may occasionally be met with in all the Western States.

We have seen several interesting communications from respectable individuals, on this important subject, but we are not able to glean enough from them to enable us to attempt a minute description of the shrub from which those persons suppose the poison is drawn.

TREATMENT.—In the milk sickness there can be no perma nent relief from the vomiting until the costiveness is removed; and as this is attended with great difficulty, the most efficient means should be at once adopted. The sickness at the stomach and vomiting, usually prevent the possibility of administering physic in such a quantity as to do much good; and reliance must, therefore, be principally placed on laxative injections often repeated and long continued. In some cases, we are informed, forty injections have been administered before the bowels were sufficiently opened.

Charcoal has of late been highly extolled as a remedy in costiveness, and is said to open the bowels when other remedies fail. We are not aware, however, that this article has ever been applied to remove the obstinate constipation which invariably attends the milk sickness, but we are disposed to think it well adapted to that purpose, from its being less irritable to the stomach than the common cathartic medicines.

The injections ought to be made of a tea of the butternut bark or twigs, or of castor oil, or hogs' lard, and warm water, occasionally adding about the fourth of a tea-spoonful of cayenne, and administering in large quantity, as by this means the hardened *fæces* contained in the *rectum* will be more readily dissolved and carried out of the system. There will also be an advantage, on this account, in retaining the injections until several of them are administered.

The most effectual method of checking vomiting in ordinary cases, is to administer the anti-emetic or pepper sauce, in table-spoonful doses, once in fifteen or twenty minutes; and perhaps it might also be advantageous in the milk sickness. Pearlash water, white lye, or a solution of salæratus, by correcting acidity of the stomach, might be advantageously employed, or strong mint tea might allay the irritation and check vomiting. It is customary, however, with some practitioners to give an emetic, which we think would be useful, as spontaneous vomiting is

certainly an evidence that some irritating matter is contained in or about the stomach. Promoting perspiration will, at the same time, be beneficial, and may be done, either by steaming, or by placing hot bricks, or stones, about the patient in bed. The bowels or abdomen may be bathed with pepper and vinegar, or with the bathing drops, and then have cloths wrung either out of hot water or a decoction of elder flowers, applied to them. Should the disease be attended with violent hickup, as is sometimes the case, a dose of the diaphoretic powders must be given in water or tea, as hot as can be conveniently swallowed, and repeated until this symptom disappears. After the costiveness is removed and the vomiting stopped, the patient should have a course of the medicine, if much debility and evidence of disorder remain, and in every respect be treated as a person recovering from other kinds of sickness.

MORTIFICATION.

Wounds, amputations, inflammations, ulcers, and some diseases, have a tendency to terminate in mortification, the first process of which is termed gangrene.

The symptoms of gangrene in the four first mentioned cases, are—First, a sudden diminution of the pain and fever; secondly, a livid discoloration of the part, which from being yellowish, becomes of a green hue; thirdly, a detachment or separation of the cuticle or external skin, under which a turbid or dirty looking water is found; and fourthly, a subsiding of the swelling, tension, and hardness, while at the same time a crepitus or crackling is perceived on touching the part, owing to a generation of air in the cellular membrane. But when the part has become black and of a fibrous or thready appearance, and destitute of natural heat, sensation, and motion, it is then said to be in a state of mortification.

In putrid complaints, such as fevers, and sore throat, and in dysentery, inflammation of the intestines, and in any other disease ending in mortification, the symptoms, so far as visible, bear in common the same general appearances and characteristics which are discoverable in mortification of wounds, ulcers, &c.

In dysentery, inflammation of the bowels, &c., where mortification is about taking place, there will be a cessation of pain, and fever; the pulse becomes small, weak, and irregular; the face assumes a cadaverous or deathly appearance; the extremities become cold, with cold clammy sweats over the whole body; and the patient is comatose or sleepy, with symptoms of great debility.

TREATMENT.—A variety of articles are used as external applications in cases of mortification of wounded, or ulcerated parts. A poultice of charcoal and yeast, or of the bark of sassafras pounded fine, or smart weed bruised, boiled, and thickened with corn meal, with the addition of a small quantity of cayenne to either poultice, will be found very valuable remedies to prevent or check mortification. A poultice made of the bruised root of the wild indigo, boiled, and thickened with corn meal, has also been highly recommended as an application to mortified parts. The addition of a little capsicum, it is very probable, would increase the anti-septic power of this poultice as well as the others; though either would be highly valuable without it.

Dr. BEACH highly recommends the use of an alkali poultice, made by mixing the pulverized bark of slippery elm with weak lye, until of the proper consistence, and applying it moderately warm to the affected part.

The poultices should be frequently renewed, and at each renewal the ulcer ought to be washed with soap suds, then with a tea of witch-hazle leaves, white pond lily, dewberry, or some other astringent article, and lastly, with the compound tincture of myrrh; when a fresh poultice must be immediately applied.

If mortification has gone so far that the life of the part is completely destroyed, that part which is dead will separate from the living when the mortification ceases, and it should then be removed. After its removal, the wound should be dressed with the healing salve, and if there be symptoms of inflammation, or any other morbid action in the part, one of the poultices heretofore recommended, or the common elm and ginger poultice, may be applied over the salve.

The internal remedies for mortification, which form a very necessary part of the treatment, are such as increase the energy and tone of the whole system. For this purpose, occasional courses of medicine will be highly useful, and between these the diaphoretic powders, bitter tonic, and cayenne, may be employed alternately, or in such way as the judgment may dictate.

Wine is also considered highly useful, especially if the bitter tonic be infused in it, in the proportion of about an ounce of the latter to a quart of the former; which may be taken in doses of two or three table spoonsful, once in four or five hours.

A tea of the wild indigo, taken internally, is highly recommended by Dr. THACHER, as being valuable in mortification, either internally or externally applied. He recommends the tea to be taken internally, at the same time that the poultice is applied externally.

MUMPS.

Mumps are distinguished by a moveable swelling, arising sometimes on one, and sometimes on both sides of the face and neck, at or near the angle of the jaws.

This disease is contagious, and the same individual is liable to it but once in his life; and hence it often prevails epidemically, particularly amongst children.

The mumps sometimes come on, especially when they attack persons who have arrived at, or near to, mature age, with a sense of lassitude and inactivity; chills and slight fever; stiffness and pain about the lower jaw, with sometimes nausea, and vomiting. The salival glands then begin to swell, and continue to enlarge until the fourth day, when the swelling declines, and in a few days is entirely gone.

In some instances, the swelling suddenly subsides, with an increase of fever, when the disease becomes transferred to the breasts of females, or to the testicles of males. Such cases as these are usually caused by taking cold. When it attacks grown persons, therefore, great care should be taken to avoid exposure.

Sometimes, also, when the swelling of the face suddenly subsides, before the fourth day, the disease fixes itself in the head, with an increase of the fever, attended with delirium, and, in some cases with fatal consequences.

In a few instances where the swelling has been very large, suppuration has taken place, and occasioned great deformity, or by bursting inwardly, has produced suffocation.

There is, however, in general but little danger from mumps, excepting when the brain becomes affected, which, by proper treatment, may always be prevented.

Treatment.—In common, this complaint needs no medical treatment; all that is necessary being to have something tied about the face to keep it warm, and in every way avoiding exposure to cold.

If, however, there should be much fever at the onset of the disease, with nausea and vomiting, a course of medicine ought then to be administered, and followed by the bitter tonic and diaphoretic powders. Or, in milder cases, the patient may take the diaphoretic powders, or cayenne, and use other necessary means to promote perspiration, such as sitting before a warm fire, covered with a cloak, coat, or blanket; or he may lie in bed, with a hot brick or stone to his feet.

If the swelling of the neck should suddenly disappear, with an increase of the fever, and the disease seems likely to seat itself in the testicle, the breast, or the head, immediate recourse must then be had to nauseating doses of lobelia, which ought to be repeated, as the circumstances of the case may require.

The bitter tonic, diaphoretic powders, or cayenne, should be used at discretion. The bowels must also be attended to, especially if costiveness prevail, administering injections, or perhaps a mild purge.

The part which the swelling has left, ought to be bathed with some stimulating wash, and have a warm stone placed near it, to promote the reproduction of the swelling.

If the testicles of males, or the breasts of females, become swelled, in addition to the course of medicine just prescribed, the parts must be bathed with the bathing drops, or some other stimulating wash, and have cloths wrung out of hot water applied to the part, or warm stones wrapped in wet cloths may be substituted for the cloths.

A white bean poultice, applied to the testicles, has been highly recommended, in cases where the mumps are transferred to those parts; or the common elm poultice may be useful.

NETTLERASH.

This disease takes its name from an eruption on the skin similar to that produced by the stinging of nettles, and terminates by a disquamation or scaling off of the cuticle.

The eruption is not confined to any particular part of the body, but is somewhat dispersed over the surface, and is always attended with a considerable degree of heat and itching. In some instances the eruption is also either attended or preceded by a slight degree of fever. Sometimes the complaint lasts only a few days, whilst at other times it continues many months, appearing and disappearing at intervals. It likewise usually disappears in the day time, and breaks forth again in the evening, accompanied sometimes with feverish symptoms. It is attended with no danger, and is generally very readily cured.

Treatment.—A mild purge, followed by a dose of the diaphoretic powders, or cayenne, three or four times a day, for a short time, will generally effect a cure; or the vapor bath may be employed. If the complaint, however, should prove obstinate thorough nauseant doses of lobelia should be used, until the rash appears.

NEURALGIA OR PAINFUL AFFECTION OF THE FACE.

This is one of the most painful chronic complaints to which the human frame is subject; but fortunately, it is of rare occurrence.

The most frequent seats of it are the nerves over the cheek

bone and just below the eye, the ala or wing of the nose, upper lip, teeth, or gums. Sometimes the forehead and temples, and inner corner of the eye, and even the globe of the eye itself, are affected.

This complaint comes on with acute pains shooting from about the mouth to the eye or ear, over the cheek, palate, teeth, &c., which are attended with convulsive twitchings of the flesh or muscles of the parts. The pain attacks quite suddenly, and is very peculiar, darting along the course of the nerves which are affected; and occurs in paroxysms of the most agonizing torture, succeeded by intervals of longer or shorter duration.

The same affection of the nerves has also been witnessed in the breast, foot, and uterus.

TREATMENT.—Frequent doses of a strong tincture of nervine powder, with the use of the bitter tonic; repeated courses of medicine, and occasional doses of the anti-spasmodic tincture, seem to promise the most efficient aid in treating this distressing malady.

Bathing the part immediately affected, with the bathing drops, tincture of lobelia, the anti-spasmodic tincture, or any other stimulating wash, should also be tried; together with the application of a hot stone, wrapped in a cloth wet with vinegar and water, near the part.

A method frequently resorted to by the medical Faculty is, to divide, that is, cut asunder, the affected nerve between the painful part and the brain; but although this often effects a cure, it sometimes only removes the complaint to other branches of the same nerve.

NIGHTMARE OR INCUBUS.

THIS complaint occurs only during sleep; and those of a nervous temperament, whose digestive powers are weak, or whose bowels are much disordered, are most liable to its attacks.

Nightmare comes on with a sense of weight and oppression at the chest, often accompanied with a distressing dream; the person makes ineffectual efforts to speak and move; he moans and groans, and at length awakes, oftentimes frightened and much fatigued; having palpitations of the heart, with tremors, anxiety, and lassitude.

Sometimes the oppression and anxiety are so extremely great, that the person is under the most serious apprehensions of suffocation; in which case there is great exhaustion and debility; and the apprehensions are not much weakened on being awakened. Indeed, cases have been reported of its having, in a very few instances, proved fatal.

The causes which give rise to this complaint are, anxiety,

grief, despondency, intense thought, late hours, and heavy suppers. A spasmodic constriction of the diaphragm or midriff, and muscles of the chest, is believed to be the proximate cause of nightmare.

TREATMENT.—A dose of the nervine powder, or tincture of the same, or of the bitter tonic, or cayenne, at bed time, will, in general, prevent it. Where it depends upon a weakness of the digestive functions, tonic remedies ought to be resorted to; and if costiveness prevail, means must be employed for its removal. The vapor bath may also be used.

As a preventive, the person should endeavor to be as cheerful and tranquil as possible; take proper exercise; avoid food that is hard to digest, and never indulge in a hearty supper, especially of meat, immediately before going to bed.

PALPITATION OF THE HEART.

VIOLENT and irregular action of the heart, is what constitutes this complaint.

During the attack, the motions of the heart are performed with greater rapidity, and generally with more force than usual, so that they may not only be felt with the hand, but may often be perceived by the eye, and even sometimes be heard. There is also, frequently a difficulty of breathing, a purplish hue of the lips and cheeks, and a great variety of other anxious and painful sensations.

In some instances the complaint is caused by a local organic disease of the heart or some of the large vessels in its immediate vicinity; in which case it is to be regarded as a dangerous symptom. But in general it is symptomatic of hysterics or some other nervous affection, when it may be readily removed.

TREATMENT.—A few doses of the nervine powder or tincture, will often remove the urgent symptoms of this unpleasant disease. Asafetida may also be employed with advantage, taking one or two pills, of ordinary size. If the general health be impaired, the patient should have a few courses of medicine, with bitter tonics and nervines several times a day, and continued until the difficulty is removed. Bathing the breast about the region of the heart with tincture of lobelia, or the bathing drops, will be found useful. Drinking daily of a tea of the common cuckold is represented as being highly valuable in this complaint.

Persons who are affected with attacks of palpitation should be careful to avoid all such causes as experience has taught them will produce the disease. These are mostly, fits of passion, sudden surprises, violent exercise, or great bodily exertion.

PALSY.

Palsy is characterized by a loss of sensibility or feeling, and the power of motion, in some part of the body, particularly of the left side.

This complaint may arise in consequence of an attack of apoplexy, or by any thing which prevents the passage of the nervous power or influence, from the brain to the organs of motion; and also by pressure on the nerves, in consequence of dislocations, or fractures of the bones, wounds, or other external injuries. It is also caused by the handling or using white lead, as in painting; by the poisonous fumes of metals; and by whatever has a tendency to relax, weaken, or enervate the body; hence those who lead a sedentary, luxurious, and irregular life; or such as are engaged in intense studies, or labor under great distress or anxiety of mind, are subject to palsy.

The aged and infirm are far more liable to its attacks than the young and robust.

Palsy generally comes on with a sudden and immediate loss of motion and sensation in the part; though in a few instances it is preceded by numbness, coldness, paleness, and sometimes slight convulsive twitches. If the head is much affected with the disease, the eye and mouth are drawn to one side, the memory and judgment are much impaired, and the speech is indistinct and incoherent.

Sometimes the paralytic affection is confined to one arm, very rarely to the leg and thigh, and occasionally to the tongue, causing stammering, or loss of speech. In some instances the bladder, and lower part of the intestines, become diseased, when the urine and stools pass off involuntarily.

If palsy attack any vital part, such as the brain, heart or lungs, it very soon proves fatal. When it arises as a consequence of apoplexy, it is considered difficult to cure; and paralytic affections of the lower limbs, arising from injuries of the spinal marrow by blows or other accidents, are generally incurable.

This complaint, though regarded as highly dangerous, particularly in advanced life, is sometimes removed by a diarrhœa, or a fever; and one person with whom we were acquainted was cured by a great and sudden shock, occasioned by a severe wound.

A feeling of warmth, and a slight pricking pain in the affected part, with returning sensation and motion, are favorable symptoms.

Treatment.—The vapor bath, with the course of medicine, will be highly useful in palsy, and ought frequently to be repeated At the first onset of the complaint, a few doses of the anti-spasmodic tincture has effected a cure. The nervine powder, or tincture. may likewise be occasionally given, with beneficial effects.

Bathing the part affected, and particularly along the back bone, with cayenne and vinegar, or the bathing drops, applying them with much friction or rubbing, ought always to be resorted to, and often repeated; and after this is done, warm bricks or stones should be applied or placed near the diseased part.

Great care should be taken to keep the bowels loose by stimulating injections and laxative bitter tonics. Purges are also highly esteemed by some.

Electricity is a remedy almost universally employed in the cure of palsy, and often with the happiest effect. It ought, however, to be used with care, applying it only in slight shocks, often repeated. It is also recommended not to apply it to the head; as it is supposed that danger might arise from its application to that part.

Galvanism has likewise been employed, and highly extolled, in the treatment of this complaint.

PILES.

The piles consist of small tumors situated on the verge of the anus or fundament, which are separate, round, and prominent, though at other times they run together and form a tumid ring entirely surrounding it.

In some cases there is a discharge of blood from these tumors, which generally takes place when the patient goes to stool, when the disease is termed the bleeding piles: and in other instances there is no discharge, when it is called the blind piles.

This complaint may be caused by habitual costiveness, hard riding, excesses in drinking, the suppression of some long accustomed evacuation, exposure to cold, and the frequent use of strong purges of aloes. Many persons possess a constitutional predisposition to piles, and suffer more or less from it through life.

The piles are sometimes accompanied with a sense of weight in the back and lower part of the belly, together with a pain or giddiness of the head, sickness at the stomach, flatulency in the bowels, and fever.

On going to stool a sharp pain is felt in the fundament, and small tumors may be perceived to project beyond its verge. If these break, a quantity of blood is discharged from them, which affords much relief from the pain; but if they continue unbroken, the patient will experience much torture every time he goes to stool, and also feels an inconvenience on sitting down on a hard seat. The tumors are sometimes of so large a size internally, as to press upon the bladder, and produce much irritation and even pain in voiding the urine.

Piles, or hæmorrhoids, as they are technically called, are by no means a dangerous, but oftentimes a troublesome and disagreeable disease.

A considerable degree of inflammation occasionally attends the complaint, which sometimes suppurating, terminates in what are called sinuous ulcers or fistulas.

Treatment.—In the treatment of piles, we may commence by bathing the parts with either the tincture of myrrh, or the juice of smart weed, and the administration of a stimulating injection. In mild cases the use of either, a few times, will effect a cure; but if costiveness prevail, the injections should never be omitted. And the diseased part may also be occasionally washed with a warm tea, composed of any of the astringent articles.

The application of a block of wood which has been heated by boiling in water, or of a hot stone or brick, will likewise be found agreeable, as well as highly beneficial. A salve made by simmering the bruised leaves of the Jamestown weed or henbane, in fresh butter or hog's lard, and rubbed on the affected part, it is said, will afford speedy relief. Bathing the part with cold water is highly recommended by some.

Extract of wild lettuce, (*Lactuca elongata,*) also called milk weed, and trumpet weed, is highly extolled as a certain cure for piles. The whole plant is taken when in flower, cut up short and boiled in a suitable quantity of water for an hour; then strain, and press out all the juice, return the liquor to the kettle, and boil down to the consistency of tar, taking great care not to scorch or burn it. Then bottle close for use. Dose—one tea-spoonful three times a day until a cure is effected.

But if the complaint does not yield to the foregoing prescriptions, a course of medicine must be resorted to, and, if necessary, repeated occasionally, until the complaint is removed. The bitter tonic, diaphoretic powders, and cayenne, must be taken between the courses; and the fundament ought to have a little warm tallow applied to it often.

PLEURISY.

Pleurisy is an inflammation of the membrane which lines the thorax, and is attended with an acute pain in the side, difficult breathing, fever, and a full, quick, and hard pulse.

This disease is induced most usually by exposure to cold, and by such other causes as produce inflammatory complaints; chiefly attacking persons of a vigorous constitution and full habit of body.

Pleurisy comes on with an acute pain in the side, which is much increased on making a full inspiration, and is accompani-

ed by flushing of the face, increased heat over the whole body rigors, difficulty of lying on the side affected, with cough and nausea; the pulse is hard, full, and strong; the tongue white; and the urine high colored.

If the disease be neglected, or continue long, the lungs also become affected, and a high degree of inflammation is sometimes induced in them, with occasionally a fatal termination; or it may end in consumption.

If the fever and inflammation run high, and the pain suddenly ceases, with a change of countenance, and sinking of the pulse, great danger may be apprehended.

On the other hand, if the difficulty of breathing and fever abate, with the pain in the side more moderate, and moisture of the skin and expectoration ensue, a speedy recovery may then be expected.

Treatment.—The common course of medicine, repeated as occasion may require, with the bitter tonic, diaphoretic powders, and cayenne, freely and frequently given, and injections, are the proper remedies in this disease, together with the whole course recommended for the treatment of inflammation of the lungs, to which the reader is referred.

Purges should not be given in pleurisy, especially whilst the pain continues severe, or the fever high. The bowels must be kept in proper order by injections, and laxative bitter tonics; and the affected side should be occasionally bathed with the tincture of myrrh, bathing drops, or other stimulating wash, first made warm.

POISONS.

Poisons are generally classed according to the substance from which they are obtained, as animal, mineral, and vegetable.

Animal poisons are communicated by the bite of mad animals, such as dogs, cats, foxes, and wolves; by the bites of snakes, such as the rattlesnake, pilot or mockasinsnake, and in some countries by many other kinds; by the stings of insects, such as the bee, the hornet, the wasp, the spider, and in other countries, the scorpion; and by infectious matter, such as small pox, measles, contagious fevers, &c.

The mineral poisons are, chiefly, the preparations of arsenic, copper, antimony, mercury or quicksilver, zinc, tin, lead, &c.

The vegetable poisons are, mushrooms, or a toad stool nearly resembling them, laurel, hemlock, nightshade, foxglove, henbane, prussic acid, tobacco, &c.

ANIMAL POISONS.

The treatment of the bite of mad animals has heretofore been noticed; and the poison of contagion will be found under the

heads of the diseases to which they give rise; therefore, it only remains for us, under this head, to speak of the poisons communicated by snakes and insects.

The symptoms attending the bite of the rattlesnake, the most common venomous reptile in this country, are nausea and vomiting; a full, strong, agitated pulse; swelling, first of the bitten part, then extending over the whole body; eyes suffused with blood; bloody sweats; hemorrhages from the nose, mouth, and ears; with which there is an indescribable pain, first commencing in the bitten part, and gradually extending over the body. The teeth chatter, whilst the pains and groans of the unhappy sufferer indicate his approaching dissolution.

TREATMENT.—The treatment of all venomous bites and stings is so similar, that, for the sake of brevity, we will make one description answer for all.

When a person is bitten by a venomous snake, on the hand, arm, foot, or leg, a ligature or string ought immediately to be tied around the limb, between the wound and the body, which will have a tendency to check the further absorption or passage of the poison into the body. As soon as possible, the part must be freely washed with the strongest tincture of lobelia, endeavoring to get it into the bottom of the wound, for which purpose it might be better to lay the wound open with a knife; and whilst this is doing, a tea-spoonful of the tincture should be taken internally.

The washing of the wound ought to be continued for some time, and afterwards occasionally repeated. The tincture internally, should also be repeated in the course of an hour or two or sooner, if the unpleasant symptoms are not removed, or if they return.

But if, notwithstanding the use of the means just prescribed, the person becomes worse; or if the symptoms have assumed an aggravated character before medical aid could be obtained, a most thorough course of medicine must be immediately resorted to, in addition to the external application of the tincture, and repeated as the symptoms may seem to require.

A variety of other remedies are also recommended for venomous bites and stings. The juice of the common plantain has long been in use as a cure for stings of insects, bites of spiders, &c. For the bites of snakes, the Greek valerian or sweat root, is regarded by many as a specific; and although we have never tried this article, we have much confidence in its utility. Directions for using this medicine will be found under the proper head (*Polemonium reptans*,) in the materia medica. Indigo, moistened with vinegar, to the consistence of paste, and applied to bites and stings, is also highly recommended.

If the part bitten should suppurate, it must be treated the same as any other sore or ulcer.

The bites and stings of insects may be treated precisely on the same plan recommended for those of the rattlesnake. The lobelia appears to possess the property of disarming the poison of both animals and vegetables of its powers, and rendering it harmless upon the system. Bites and stings should, therefore, be immediately washed with the tincture or tea of this most valuable and important article, and if the animal be very venomous, or the system disturbed by the absorption of the poison, a dose of it should be taken internally, and, if necessary repeated.

MINERAL POISONS.

The symptoms which arise from all the mineral poisons are very similar. Their taste, in general, is said to be more or less like that of ink, and less burning than the taste of the concentrated acids and alkalies.

The individual sometimes complains of a closing or constriction of the throat; severe pains are soon felt in the fauces, stomach, and bowels, which are quickly augmented and become almost insupportable, with nausea and vomiting.

The matter thrown from the stomach is of various colors, often mixed with blood. There is also either costiveness or a diarrhœa, and the stools are sometimes bloody.

To these alarming symptoms are added, frequent fœtid belchings, hickup, difficulty of breathing amounting almost to suffocation; with a quick, small, and hard pulse, which is sometimes irregular.

An unquenchable thirst also prevails, with difficulty in passing the urine, cramps, icy coldness of the extremities, dreadful convulsions or a general prostration of strength, the countenance becomes changed, and oftentimes delirium arises, which may be regarded as the forerunner of speedy death. In some cases, however, the individual preserves all his mental faculties to the very moment of dissolution.

Treatment.—In cases of persons swallowing any of the mineral poisons, immediate recourse should be had to the tincture or any other preparation of the lobelia, which should be administered in sufficient quantity to produce speedy vomiting. Stimulating injections, with the addition of two or three teaspoonsful of the tincture of lobelia, ought also to be administered, to arouse the torpor of the bowels, and assist in producing vomiting. Pennyroyal tea, warm water, or almost any kind of fluid drink, should be freely given during the operation of the emetic, to promote the vomiting and wash out the stomach.

After the stomach is well cleansed, the patient should take mutton or veal broths, flaxseed or slippery elm teas, and milk, both for nourishment and to sheathe the bowels, which wil

have a tendency to prevent their being acted upon by the poisonous particles of matter which may possibly remain after vomiting.

If some time elapses before medical aid is or can be procured, the lobelia tincture must be given in repeated doses of two or three table-spoonsful at short intervals, until vomiting is produced, and the urgent symptoms removed. Injections ought also to be administered.

As soon as convenient after the vomiting, perspiration ought to be produced and kept up for several hours; and the health and strength of the patient promoted by the use of the tonics, both bitter and astringent. The exciting of a free perspiration ought to be carefully attended to, as by this means the poisonous matter, which may have been absorbed and passed into the blood, will be thrown out.

If the patient, notwithstanding the use of the means recommended, should continue in a debilitated condition, with other unpleasant symptoms, he should have a regular course of the medicine, which, if necessary, must be repeated, at proper intervals, until his health is restored.

VEGETABLE POISONS.

Under this head we will include the acids and alkalies. Many of the acids, it is true, are formed from mineral substances; but still the acid principle legitimately appertains to the vegetable kingdom, and the mode of treating poisons from either the vegetable or mineral acids, is essentially the same. The alkalies are wholly of vegetable production.

Acids.—The symptoms which ensue on swallowing any of the concentrated acids are, a very unpleasant, sour, burning taste in the mouth; an acute pain in the throat, which very soon spreads to the bowels; an insupportable offensive breath; frequent belchings; nausea, and copious vomiting of substances of various colors, sometimes mixed with blood, producing in the mouth a sensation of bitterness, with hickup.

Sometimes the bowels are costive, but more often there is a diarrhœa, with the stools more or less bloody; colic pains so acute that the individual cannot support the weight of the bed clothes, or even of his shirt; these pains also extend to the chest, causing difficulty of breathing, and great distress; pulse frequent but regular; great thirst, whilst drinking only augments the pain, and what is swallowed is soon rejected by vomiting. There are also shiverings, with an icy coldness of the skin, especially of the lower limbs; cold clammy sweats; frequent fruitless attempts to make water; great restlessness and anxiety; convulsive motions of the lips, face, and limbs; great prostration of strength; with the countenance but little altered at first

the complexion soon becomes of a pale, or leaden color, and in most cases the mental faculties remain entire.

It also frequently happens that the inside of the mouth and lips are burnt, thickened, and covered with white or black patches, which, becoming detached, irritate the patient, and produce a very fatiguing cough; in which case the voice is changed; and sometimes there is a painful eruption of the skin.

The whole of these symptoms are not, however, always met with in the same person. And in addition to these effects, nitric acid, (aqua fortis) produces yellow spots upon the lips, or other parts of the skin on which it may have fallen.

TREATMENT.—It is a fact known to chemists, as well as persons who are much in the habit of reading, that acids and alkalies mutually neutralize each other. Thus, if pearl-ash be put into vinegar, each is neutralized, so that both the sourness of the vinegar, and the burning taste of the pearl-ash are destroyed, which is what is meant by neutralizing. And hence the evident propriety, in cases where any of the acids have been taken into the stomach, of administering alkaline preparations.

ORFILA, however, in his work on poison, says that the result of the many trials he has made is, that *calcined magnesia* is the best antidote to the acids. The poisoned individual must be made to drink largely of water, in which magnesia is diffused in the proportion of an ounce of magnesia to a quart of water; a tumbler full of which must be given every two minutes, in order to favor vomiting, and to prevent the deleterious action of that portion of the acid which has not exercised its corrosive power. However, as magnesia is not kept in every family, the time spent in procuring it at the drug shop, continues ORFILA, must not be lost upon the patient; he should be made to drink copiously of water, which will weaken the power of the acid, or of flaxseed tea, to which we will also add slippery elm, or any other mild drink.

He also recommends, in case the magnesia cannot be procured, to dissolve an ounce of soap in a quart of water, and administered as we suppose, in frequent small doses. He also recommends chalk, which to do good, must be taken in considerable quantity; and we have no doubt, that white ley, prepared as directed in the preparations and compounds, and taken freely, would be highly beneficial.

We would, however, in all cases recommend that an emetic be given as soon as possible, and at the same time prepare any of the foregoing articles, and administer them in suitable quantity.

ALKALIES.—The effects of the alkaline preparations are nearly similar to those which occur in taking the acids. It is only necessary to remark, that the taste of these poisons is acrid, burning, and urinous.

TREATMENT.—An emetic should be immediately administered, and at the same time make the patient drink largely of water made sour with the addition of vinegar, or lemon juice, to neutralize the alkali. No hesitation should be made about which to give first, either the vinegar or the emetic, but give whichever can first be got. Or if neither can quickly be procured, then give warm or cold water, until vomiting takes place.

POISONOUS VEGETABLES.—These are divided by ORFILA, into irritating, narcotic, or stupefying, and acrid-narcotic poisons.

The symptoms attending the introduction of *irritating* poisons are—more or less of a bitter taste in the mouth; burning heat, and great dryness of the tongue and mouth; painful constriction of the throat; nausea, vomiting, and diarrhœa; pains more or less acute in the stomach and bowels; strong, frequent, and regular pulse; with breathing disturbed and quickened. Frequently the individual staggers in his walk, appearing to be intoxicated; the pupils of the eyes are dilated; with such a state of prostration that the patient appears to be dead; the pulse grows feeble, and death closes the scene.

Some of this class of poisons produce convulsions of more or less violence, stiffness of the limbs, and pains so acute as to force from the patient the most distressful cries.

Narcotic poisons, when introduced into the system, produce stupor, numbness, heaviness of the head, inclination to sleep, slight at first, but soon becoming irresistible; a sort of intoxication, with a dull, heavy look; the pupil of the eye may be very much dilated, contracted, or in its natural state; there may be furious or gay delirium; sometimes there are pain and convulsions of various degrees in different parts of the body; palsy in the limbs; pulse variable, but in general it is full and strong at the commencement of the affection; breathing is often a little accelerated; with vomiting, especially when the poison has been applied to wounds, or given by injection; whilst the convulsions and prostration soon increase, and death puts an end to existence.

Acrid Narcotic poisons exhibit many, or all the symptoms of the other two divisions, with the addition of some others which we think it unnecessary to enumerate. This class includes, amongst other articles, tobacco, poison-hemlock, henbane, fox glove, spirituous liquors, &c.

TREATMENT.—The treatment of poisoning from vegetables of all kinds, introduced into the system, either by way of the skin or by the stomach, is so nearly similar that we will make one description of it suffice.

Immediately on any of those poisonous substances being swallowed, or so soon as practicable thereafter, the person ought to have an emetic, the operation of which should be promoted

by warm water or pennyroyal tea. The vomiting must be continued until the stomach is perfectly cleansed; when proper means should be taken to produce, and keep up a free perspiration. If the patient is inclined to be sleepy, vinegar and water may be given to him, which will have a tendency to neutralize the narcotic qualities of the poison. If debility continues, with other bad or unpleasant symptoms, the course of medicine must be repeated as often as appears necessary, together with the frequent use of the bitter tonic.

In cases where poisons have been applied to the skin, producing eruptions or sores, the part should be washed with the tincture of lobelia, or a tea of pipsisway; at the same time taking the diaphoretic powders to promote a determination to the surface of the body; and if the health becomes affected, pursue the course which has just been recommended in other cases of poison.

PUTRID OR TYPHUS FEVER.

This fever takes the name of putrid from the symptoms of putrefaction which arise after a short continuance of the disease; it is, however, more commonly known at the present time, by the name of typhus. In its milder forms it was formerly called nervous fever.

Typhus fever may be readily distinguished from such as are of an inflammatory character, by the smallness and weakness of the pulse; the sudden and great debility which comes on at its first attack; by the brown or black tongue; by the dark fœtid matter about the teeth; the livid flush of the countenance; and by the acrid and more intense heat of the skin; and, in the more advanced stages, by the petechiæ or livid spots, which come out on different parts of the body; and by the fœtid stools which are discharged.

The most common cause of typhus fever is supposed by some to be contagion; but it is only under certain circumstances that it is communicated in this way. When patients laboring under this disease, are confined in small rooms to which the air has but little access, and which are crowded by other persons who are breathing the air contaminated by the exhalations from the patient's breath, body, and stools, and these persons themselves perhaps, unhealthy from the want of proper food and cleanliness, it is no wonder if the fever should spread as if by the laws of contagion.

Hence it has been observed, that a want of proper cleanliness, or breathing a contaminated air, is more probably the cause of this disease than contagion. In towns and cities where it has sometimes committed such fatal ravages, its origin has commonly

been traced to the habitations of the poor, who live in damp and filthy cellars, whose living is often unwholesome and scanty, and who neglect personal cleanliness. And to this class of persons the disease has always proved most fatal, and to them it has often been confined.

Typhus fever may also be caused by whatever enervates or debilitates the system. Hence we find persons of a lax fiber, or who have been debilitated by other fevers, or by long fasting, hard labor, continued want of sleep, &c., most liable to be attacked by this disease. Persons of intemperate and dissipated habits are also predisposed to typhus fever.

On the first coming on of this complaint, the person is seized with languor, dejection of spirits, great depression and loss of muscular strength, universal weariness and soreness, pains in the back, head, and limbs, with rigors or chills; the eyes appear full, heavy, yellowish, and often a little inflamed; the temporal arteries throb violently; the tongue is dry and parched; respiration is commonly laborious, and interrupted with deep sighing; the breath is hot and offensive; the urine is pale; the bowels costive; pulse usually quick, small and hard, and occasionally fluttering and unequal. Sometimes a great load, heat, and pain, are felt at the pit of the stomach, with a vomiting of bilious matter.

As the disease advances, the pulse increases in frequency, often beating from 100 to 130 in a minute; the debility becomes vastly increased; there is great heat and dryness of the skin; oppression at the breast, with anxiety, sighing, and moaning; the thirst is excessive; the tongue, mouth, lips, and teeth are covered with a brown or black, sticky fur; the speech is inarticulate, and scarcely intelligible; the patient mutters much, and delirium arises. The fever continuing to increase still more in violence, symptoms of putrefaction show themselves; the breath becomes highly offensive; the urine deposites a black and fœtid sediment; the stools are dark, disagreeable, and pass off insensibly; hemorrhages issue from the gums, nostrils, mouth, and other parts of the body; livid spots or petechiæ appear on the skin; the pulse intermits and sinks; the extremities grow cold; hickups ensue, and death finally closes the painful scene.

An abatement of the heat and thirst; the tongue becoming moist and clean; a moist sweat diffused over the whole surface of the body; the pulse becoming stronger, but less frequent, with a free secretion of saliva; swelling and suppuration of the *parotid*, *axillary*, or *inguinal* glands; a scabby eruption about the mouth, and the delirium and stupor abating or going off, may be regarded as favorable symptoms.

Treatment.—On the first attack of this complaint a course of medicine should be resorted to immediately, as by attending to it at the onset, the disease may often be cut short at once.

The state of the bowels must also be carefully attended to, especially if the stools be very fœtid and disagreeable, or if costiveness prevail, as these conditions scarcely ever fail to produce an increase of fever and delirium.

Cold bathing has been highly recommended for this disease, if applied in the early stages, by Dr. Currie, of Liverpool, as well as many others who have adopted this mode of treatment by his recommendation. But we think the use of the vapor bath, with the cayenne, to promote a free perspiration, and throw out of the system the morbid, useless, and putrid matter, and the application of cold water, is much to be preferred to the cold bath alone.

The course of medicine must be repeated, if the symptoms do not abate after the first one, as often as the symptoms appear to require it, until the feverish action subsides; when the appetite and strength should be restored with the bitter tonic, wine, &c. If the stools are very offensive, a mild purge may be given; for which purpose castor oil, or the butternut syrup may be employed; and injections at all times must be liberally used.

During the whole course of the disease, the astringent tonics with cayenne, must be freely and perseveringly administered, both by the mouth and by injection. The pepper sauce will also be found a very valuable article, in addition to the astringent and stimulant medicines, to change the putrid tendency of the fluids, which is so apparent in typhus fevers The patient's drink may consist of water and vinegar, as well because it is pleasant and agreeable, as that the vinegar possesses an antiseptic power in putrid diseases.

Every means must be employed to keep up the strength of the patient in typhus fevers, whilst nothing should be done that is likely to reduce it. The food should be rich and nourishing; the drink cool and refreshing; whilst the room must be well ventilated, that is, have a free circulation of air through it, but never allowed to come in a current upon the patient. The stools ought to be removed as soon as passed; and every other means used to keep the apartment clean and sweet; and to render it more pleasant both to the patient and attendants, the floor should be sprinkled several times a day with warm vinegar and camphor. The clothes of the patient as well as of the bed ought often to be changed, and kept clean.

The internal use of yeast has also been recommended in putrid fevers. One or two table spoons full or more, may be stirred into a quart of beer, or any other pleasant fluid, of which the patient should often drink.

REMITTENT OR BILIOUS FEVER.

By remittent is understood a fever that abates, but does not go off entirely before a fresh attack ensues; or, in other words, where one paroxysm succeeds the other so quickly that the patient is never without some degree of fever. It may also be observed, moreover, that the remissions happen at very irregular periods, and are of uncertain duration, being sometimes longer and sometimes shorter.

This fever is principally induced, as well as the intermittent, by the effluvia arising from marshes and stagnant waters, and is also apt to take place when calm, close, sultry weather quickly succeeds heavy rains or great inundations of water. In warm climates, where great heat and moisture rapidly succeed each other, remittent fevers often appear under a highly aggravated and violent form, usually prevailing as an epidemic. In this climate it is often very prevalent in the latter part of hot, dry summers and in autumn; sometimes being of a mild character, and at other times more violent. It appears most apt to attack persons of a relaxed habit, those who undergo great fatigue, breathe an impure air, and make use of poor and unwholesome diet.

Remittent fever generally comes on with a sense of heaviness and languor, attended by anxiety, sighing, yawning, and alternate fits of heat and cold. The patient then experiences severe pains in the head and back, intense heat over the whole body, with thirst, difficulty of breathing, and dejection of spirits; the tongue is white; the eyes and skin often appear yel low; sometimes there is a sense of swelling and pain about the region of the stomach; nausea and vomiting of bilious matter; with a frequent small pulse.

After the continuance of these symptoms for a while, the fever abates considerably, or goes imperfectly off by a gentle moisture diffused partially over the body; but returns again in a few hours, with the same appearances as before. In this manner, with paroxysms and imperfect remissions, it proceeds at last to a crisis, or is changed into a typhus, or an intermittent.

The disease of which we are speaking has acquired the popular name of bilious fever, owing to the fact, that in a majority of cases there appears to be an increased secretion of bile which is thrown up in vomiting, and also passes off by stool, often giving the stools a dark or black appearance.

Bilious fevers are most commonly to be met with along streams, in the neighborhood of marshes, and near stagnant waters; and they arise most frequently in the latter part of summer and in the fall, but may also occur at any other period during the warm season.

It often, however, appears in a much more aggravated form than that just described; for sometimes a severe delirium comes on and the patient may die during the first paroxysm; or the remission, perhaps, is scarcely perceptible, and is immediately followed by another paroxysm, in which there is a considerable increase of all the symptoms. The fever now runs much higher, the face is greatly flushed, the thirst excessive, the tongue is covered with a dark brown fur, breathing is laborious; the pulse is quick, throbbing, and tremulous. After a while, perhaps another short or imperfect remission takes place, but the symptoms again return with redoubled violence, and at length destroy the patient.

The symptoms of remittent fever are apt, however, to vary so much, according to the situation and constitution of the patient, and also the season of the year, that it is impossible to give a certain detail of them; for sometimes those pointing out a redundancy of the bile predominate; sometimes the nervous are most prevalent; and at other times the putrid.

A remittent fever is always attended with some hazard, particularly in hot climates. The shorter and more obscure the remissions are, the greater will be the danger, and each succeeding paroxysm will be attended with more danger than the former one was.

On the contrary, the milder the attack, and the nearer the fever approaches to an intermittent, the less we may apprehend a fatal termination. The grand object aimed at by many of the mineral doctors, in the treatment of this disease, is to change it into an intermittent fever, when, if they succeed, they think the patient out of danger, and abandon him to his fate; in which case he has the consolation of escaping the hazard of being destroyed by unnatural poisonous medicines, and of being cured in nature's own way.

Treatment.—In cases of remittent fever, immediate recourse must be had to the vapor bath, with the full course of medicine, and free use of injections. A dose of the cathartic pills, or of the black root, or of some other purgative medicine, may be administered if the intestines appear much disordered, either before or after the course of medicine. Care should be taken after the course, to keep up a constant perspiration or moisture of the skin, by the use of the diaphoretic powders, or cayenne, and the application of hot bricks, or rocks. The quantity of medicine, and the frequency of the doses, must be regulated altogether by the effects produced; the object is to keep up a perspiration, and if a small quantity will not answer, a larger must be used.

If these means do not remove the urgent symptoms, another course of medicine must be administered, if the case be a bad

one, within four-and-twenty hours; after which the same plan must be pursued, as before recommended, to keep up the perspiration.

If the stools still appear dark, and are very disagreeable, another purge may be given to cleanse the intestines; minding during the operation, to give the patient gruel, or nourishing broths, as well as the diaphoretic powders, or cayenne, to strengthen and stimulate; thus preventing the prostration which usually follows the operation of purgative medicines. It ought, however, to be carefully borne in mind, that a sparing use should be made of purges in this as well as all other complaints, and that the surest indication for their use is a *looseness* of the bowels, with a foul appearance, and highly disagreeable smell of the stools.

The course of medicine must be repeated as often as may be necessary, and at such intervals as the case may require, until the fever is removed.

If there be symptoms of nervous irritation during the course of the disease, the nervine powder must be used in such quantity as appears requisite to allay them. And if there be great pain in the head, with restlessness, the forehead and temples should be often bathed with cold vinegar and water, and the whole body may be washed with the same, or with a weak solution of pearl-ash in water, especially if the means recommended for producing perspiration are not attended with the desired effect.

To restore the appetite and strength, the bitter tonic must be used; and if extreme debility or exhaustion has been produced, wine or brandy may also be taken.

Great care must also be observed to guard against a relapse, by avoiding fatigue, exposure to cold, or damp air, and by strict attention to diet. The appetite often being too strong for the digestive powers, the patient must be on his guard against eating too much, as fatal relapses have sometimes arisen from that source; and if at any time he should find himself much oppressed by food, a dose of the bitter tonic, or of golden seal must be taken, which if it do not relieve, and the symptoms are urgent, indicating a relapse, an emetic, or a full course of medicine, should be immediately administered. Moderate exercise during the recovery will be useful, but ought not to be carried to fatigue.

RHEUMATISM.

This complaint is distinguished into chronic and acute; being considered as chronic, when there is little or no fever or inflammation, but pain; and acute, when both fever and inflam-

mation exist in a high degree. These distinctions, however, are more fanciful than real, only indicating different degrees of the same disease.

Rheumatism may arise at any time of the year, when there are frequent changes of weather from hot to cold, or from dry to wet; but spring and fall are the seasons in which it is most prevalent. It attacks persons of all ages; but adults, and persons advanced in life, as well as those whose employments subject them to alternations of heat and cold, are most liable to it.

The acute rheumatism in some respects resembles the gout. Rheumatism usually comes on in a more gradual manner than gout, for the most part giving the patient warning by a slow increase of pain. Nor is it so apt to be fixed to one part as gout, but often wanders from place to place. It seldom attacks the small joints, as gout almost invariably does, but is commonly confined to the larger ones, as the knees, hips, back and shoulders. The acute rheumatism is generally attended by a continual fever, whilst the gout has periodical remissions.

This complaint often occurs in so mild a form as to produce little or no inconvenience, from which it may be traced by almost imperceptible gradations up to cases of the most painful and inveterate character, attended with strong symptoms of inflammation, and a high degree of fever.

Rheumatism is accompanied with a peculiar pain about the joints, most commonly in the knees, hips, or shoulders, sometimes attended with swelling and extreme soreness or tenderness to the touch, and a vast increase of pain on being moved. In worse cases, or those termed acute, there are also rigors, succeeded by fever, thirst, anxiety, restlessness, and a hard, full, and quick pulse.

When the rheumatism affects the hip joint it is often called Sciatica; and when it attacks that part of the back styled the lumbar region, it is called Lumbago. These distinctions are, however, of little consequence in a practical point of view, as both affections are to be treated the same as ordinary rheumatism.

Little danger is attendant on rheumatism; but a person once attacked by it, ever afterward is more or less liable to returns of it, and sometimes an incurable stiffness of the joints occurs in consequence of repeated attacks.

It is caused, in general, by whatever obstructs the perspiration, or passage of the fluids through the vessels of the part; and hence it may arise from any exposure to cold, wearing wet clothes, sleeping in damp beds, or rooms, or on the ground; or by being suddenly cooled when in a high state of perspiration.

Those who are much afflicted with this complaint are very apt to be sensible of the approach of wet weather, by the wandering pains which they often experience previous to a storm.

TREATMENT.—A great many different, as well as discordant, remedies have been used for the alleviation, or cure of rheumatism. Nothing, however, that we as yet know of, has sustained the character of an unfailing specific; though several have been ushered into public notice as such.

In mild attacks simply wrapping the affected part in flannel often affords salutary relief, and, if persisted in, generally effects a cure. In addition to this, bathing the part with the bathing drops, or with pepper and vinegar, will be highly serviceable; and in cases attended with much soreness, swelling, or pain, it ought never to be omitted. Tying a strip of gum elastic around the affected joint has also been used with success, after other means had failed.

Sometimes pouring cold water on a rheumatic joint will give ease to the pain when nothing else seems to avail or do much good; or first steaming it for some time, and then pouring on the water, in many instances will do better. The good effects of these means will be further promoted by frequent, or occasional doses of the diaphoretic powders or the cayenne; and if the patient is confined to his bed, a hot stone or brick should be placed near the affected part, not only with a view of promoting a healthy action in the diseased joint, but also of producing general perspiration, and giving energy and vigor to the whole system.

In many cases of rheumatic affection there is such a want of action and sensibility in the part, that it becomes insensible to the effects of the strongest stimulants. Where this is found to be the case, as it is more or less on all occasions, the full effects which would otherwise result from the employment of stimulating washes are not produced. In order to favor the operation of those external means, the part should be bathed with the strongest infusion of the cayenne in vinegar, and then hold it over a lively steam. Or what is more certain, in the worst cases, of producing the burning sensation, which is what is wanted, we may take the pods of red pepper, and steep them a short time in warm vinegar, or water, then open, and lay them nicely on the painful part, and apply a flannel bandage or wrapper over them; in addition to which, if we choose, a hot rock may be placed near the part. By pursuing this course, we may be sure of producing the desired effect, in a short time.

An ointment made by boiling peppers in water until the strength is extracted, then skimming out the pods, or straining the liquor, adding hog's lard, and simmering down, has been highly recommended as an external application to rheumatic affections.

In addition to external applications of every kind, to the part immediately affected, the use of the vapor bath will be found highly advantageous, nay, indispensably necessary in all bad cases: and if there be symptoms of inflammation with great pain,

and fever, the whole course of medicine must be administered, and daily repeated until the urgent symptoms are removed.

In cases of this kind, the diaphoretic powders and cayenne must be taken several times a day, as well between the courses, as after these become unnecessary, until the complaint is entirely removed.

To strengthen and restore the weakened joint to its healthy state after the pain and soreness have left it, we should bathe it daily with some stimulating wash, shower it with cold water, and keep it covered with a flannel cloth.

If stiffness of the joint follows the rheumatism, the part should be bathed with some stimulating wash, or the ointment of which we have just spoken, or the nerve ointment, and be often held over a hot steam of vinegar and water; or herbs, such as tansy, mint, &c. may be used instead of the vinegar.

In a late work, published by Dr. Gunn, of Knoxville, in Tennessee, we find a new method of producing perspiration in the treatment of rheumatism, very highly recommended by him, from practical experience of its virtues in a great many cases, both in Tennessee and Virginia.

The superiority of Dr. Gunn's vapor bath over the common method, (if it really be superior) consists in the medicated fluid with which the vapor is made. He directs half an ounce of salt peter, one ounce of Seneca snake root, well bruised, and half an ounce of sulphur, to be put into a quart of whiskey, and stand five days before using. The patient may then be surrounded with a blanket, being naked, as for steaming in the common way, and having red hot stones placed under him, the liquor just described must be poured very slowly, or rather dropped, through an opening in the blanket on the stones, by which he says a powerful sweat will be produced, which should be continued for a quarter of an hour, if the patient be strong enough to bear it so long. He also directs that if the patient becomes faint or sick, whilst in the bath, he should be immediately taken out; but we presume that with the aid of the cayenne, or the diaphoretic powders, taken before, or during the operation, and by applying cold water to the face, breast, &c. the faintness and sickness might readily be removed.

There are also two other remedies often used in the treatment of rheumatism, and which are, by some, held in high estimation, that we deem worthy of a place here. These articles are a tincture of the common poke-weed or pigeon-berry, and the tea or tincture of squaw or rattle-root. The first mentioned article may be prepared, by filling a vessel with the ripe berries, and then pouring on them as much spirits as the vessel will contain, letting it stand, until the virtue of the berries is extracted—Dose, two table-spoonsful, three times a day. The latter may be pre-

pared by infusing a handful of the roots in a quart of boiling water, and taken in doses of a common sized teacup full, three or four times a day. We are constrained, however, to notice one circumstance connected with this subject; that the effect produced upon the system by a large dose of the tincture of the rattle-root, (which is sometimes used instead of the tea,) in some instances, is very alarming; though we have heard of no case in which any bad consequences have followed its use.

Dr. William Ripley, of Cincinnati, in whose sound judgment and practical experience we have much confidence, informs us, that preparing the rattle-root in tea prevents almost entirely the alarming effects which have been known to follow the use of the tincture. It is very possible, indeed we think highly probable, that a compound of the tincture of the poke-berries and tea of the rattle-root might be a more valuable remedy for rheumatism, than either of them alone. [See materia medica, article *Phytolacca decandra.*]

RING WORM AND TETTER.

These complaints, though not considered as precisely the same, are both to be managed in the same way.

Ring Worm is more common in warm than in cold climates, and shows itself in small red pimples, which break out in a circular form, and contain a thin acrid fluid. When the body is heated by exercise, these circular eruptions itch, and on being scratched discharge their contents, which falling on the sound parts, spread and increase the disease to a much greater extent than at the commencement.

In some cases the disease seems so universal that the whole system becomes tainted; the skin puts on a leprous appearance, and is much disfigured by blotches, whilst the unhappy patient is in continual torment from the intolerable itching and painful excoriation.

Tetter consists in an eruption of broad itchy spots dispersed here and there over the skin, of a whitish or red color, which gradually spread until they meet or run into each other, discharge a thin fluid, and either form extensive excoriations of the skin, or end in bad ulcers.

After a while scurfy scales make their appearance, which peel off, leaving the under surface red; but the eruption soon makes its appearance, and goes the same round again and again, until the disease is either cured, or goes off spontaneously, which latter, however, rarely occurs. Some persons seem to be constitutionally predisposed to eruptions of this kind.

Treatment.—Various remedies have been recommended for

this complaint, and used with different degrees of success.—Washing the part with ink made of ink-powder, or with alum water, often effects a cure, especially of the ring worm. The juice of the black walnut husk or shuck, applied to the affected part, is also a useful remedy.

Washing the part in salt and water, has sometimes effected cures when other applications failed; as also the tincture of lobelia, and even the anti-spasmodic tincture, have been successfully resorted to as an external application in eruptions of the skin. Cedar oil is said to have cured these complaints, when other articles had been ineffectual.

Blood-root or red puccoon, steeped in good vinegar, has, however, been more highly recommended, perhaps, than any other article for the treatment of ring worm and tetter. The part affected should be washed with this liquid, two or three times a day.

In Beach's *American Practice*, we find the following recipe for making tetter ointment, which the writer says he has never applied without benefit.—Take of Indian turnip and olive oil, of each one ounce; common plantain leaves, white lily leaves, [or root,] and beeswax, each two ounces; white turpentine and fresh butter, each, half a pound. Bruise the leaves and roots, and simmer them with the other articles in an earthen vessel, over a slow fire, and closely covered; strain, and when nearly cold, add two drachms (one fourth of an ounce) of yellow ochre. This must be applied to the part, and seldom fails of doing good.

The use of the sulphur bath, made by burning the sulphur and confining the vapor to the part, or to the whole body, is also highly recommended for eruptions of the skin, by some physicians of this country, and particularly by those of France.

The daily, or less frequent, use of the vapor bath, by promoting the discharges by the skin, which it also cleanses and softens, is a highly useful remedy in all diseases of this kind.

RUPTURE.

This is an unnatural protrusion of some portion of the contents of the abdomen, generally dependent upon a laxity of the parts. It is produced in children by crying, coughing, vomiting, and other like causes; and in grown persons, by blows, violent exertions of strength, strains, &c. It has been observed that ruptures were most frequent amongst the inhabitants of those countries where oil is much used as an article of diet.

A rupture is a kind of sack or tumor, protruding from the abdomen, in various situations, but most usually in the groin, scrotum, labia pudenda, the upper and fore part of the thigh, the navel, and at various points on the surface of the abdomen.

The contents of these tumors are as various as their situations.

Instances have occurred of the stomach, womb, liver, spleen, or bladder, being found to form their contents. But a portion of the intestines, or of the omentum or caul, are found to be the most common contents of rupture tumors.

On the first appearance of a rupture, the protruded sack is commonly of a very small size, and the bowels frequently return to their proper place without any assistance; but by their repeatedly coming out, it is gradually increased, in some cases, to a large size.

Ruptures sometimes prove fatal before the cause of the difficulty is known: Therefore, whenever sickness at the stomach, vomiting, obstinate pain and costiveness of the bowels, give reason to suspect a rupture, all those places where they usually appear should be carefully examined; as by neglecting this inquiry, the case may become incurable, or the individual may even die, before the cause of the difficulty shall become known.

Treatment.—The principal danger in this complaint arises from the liability of the protruded part to become inflamed, by which it is enlarged, rendering it impossible to be returned, and liable to mortify. Therefore, whenever a rupture is discovered, efforts should immediately be made to return the protruded intestine into the abdomen. If the difficulty have lately happened and there be no swelling nor inflammation, this may generally be accomplished with little difficulty.

To do this, lay the patient on his back, with his head very low and his breech raised high with pillows or blankets folded, when a gentle pressure must be made upon the tumor with the fingers, in which more dexterity than force is requisite, to push the gut back by the same opening through which it had escaped. The patient, if arrived at years of discretion, can do this to much better advantage than any one else.

But should these means prove unavailing, or if there be pain, soreness, swelling or inflammation in the part, woolen cloths wrung out of hot water, or a hot stone wrapped in wet cloths, must be applied to the tumor, and renewed as often as they become cool; in addition to which, an injection or two, composed of catnip tea, with half or a whole tea-spoonful of lobelia in it, must be administered, which will have a tendency to relax the constriction and swelling of the part, whereby the rupture may be reduced. To do this, the plan already recommended must be adopted.

The application of fomentations of bitter herbs, such as mayweed, tansy, hoarhound, wormwood, catnip, or hops, may be employed; or it may be bathed with the nerve ointment, or any soft oil. The patient may likewise be steamed, or "let an alkaline poultice be applied over the parts and over the seat of the stricture." Dr. Beach says he has found this application

of great value in ruptures which were difficult to reduce. All persons, however, should be cautioned against the employment of cold applications to ruptures as is recommended and practised by the medical faculty, as they will rarely fail to do mischief.

If, however, the above mentioned means fail of relaxing the tumor so that it can be reduced, or if the symptoms be violent, a regular course of medicine must be immediately resorted to, which, together with the external applications, will, if persevered in, generally remove the inflammation, and so relax the part that the rupture may be reduced, that is, the intestine returned to its proper place. When this has been accomplished, it will be necessary to procure a truss, which may be got at most apothecary stores, and apply to the rupture, which will prevent it from again coming down.

The application of a truss, however, will rarely effect a cure, though with young persons, or if the rupture be not suffered to continue long unattended to, the constant wearing of one for a great length of time, may ultimately enable the ruptured walls of the abdomen to close and become sound. We find, however, in the "American Practice," the extract of oak bark highly recommended for the cure of rupture, as having been used with great success by a few practitioners in Europe. The manner of preparing this remedy is as follows:

Take a few pounds of oak bark, (we are not informed which kind,) and steep in a sufficient quantity of cold water, for twelve or twenty-four hours; then put both bark and water into a large kettle, and keep boiling over a gentle fire, for two or three days, adding, when necessary, boiling water from time to time, so that the bark may be constantly covered. The object in boiling is to extract all the virtues of the bark. After this long and slow boiling, the bark should be removed and the boiling continued until the extract is reduced to a very thick consistence, when it is fit for use.

After a rupture has been reduced, take some of this extract of the oak bark, warm it so as to soften it, then bathe the part with it, and apply the truss. This operation must be repeated three or four times a day. By these means ruptures of many years' standing, according to an European author, have been cured in a few days or weeks; though in general it required a continuance of three months.

ST. ANTHONY'S FIRE OR ERYSIPELAS.

This disease is an inflammation of the skin, commencing generally with fever, drowsiness, and oftentimes delirium.

Every part of the body is liable to the attacks of erysipelas, but it more frequently appears on the face, legs, and feet, than

any where else when seated externally; and in warm climates it is a more frequent form of inflammation than that which terminates in suppuration.

Although the disease under consideration sometimes attacks infants, and occasionally youth, yet it seldom occurs before the person has arrived at mature age; and is most usually met with in advanced life, more often amongst women than men, particularly those of a sanguine, irritable habit or temperament. In some people there exists a predisposition to the disease, sometimes returning periodically, making its attacks once or twice a year, and in some instances much oftener, producing great exhaustion and debility.

St. Anthony's fire is brought on by the different causes which produce inflammations in general; such as injuries of all kinds, the application of stimulant acrid matters to the skin, as blistering plasters, exposure to cold, particularly during a course of mercury, obstructed perspiration, &c. &c.

In slight cases, where it attacks the extremities, it makes its appearance with a roughness, heat, pain, and redness of the skin, which becomes pale when the finger is pressed upon it, but returns to its former color when the finger is removed. There is also a burning and itching of the part; and a slight fever. These symptoms continue for a few days, when the surface of the part affected becomes yellowish, the cuticle or scarf-skin falls off in scales, and the disease will be at an end.

But on the other hand, if the attack has been very severe, and the inflammation high, there will be pains in the head and back, great heat, thirst, and restlessness; the part affected will be slightly swelled; the pulse small and frequent; and about the fourth day perhaps, a number of little blisters, containing a clear, or in some instances a yellowish fluid, will appear. In some cases the fluid contained in the blisters is viscid or sticky, and instead of running out when the blister is broken, it adheres to, and dries upon the skin.

In unfavorable cases these blisters occasionally degenerate into obstinate ulcers, which sometimes end in mortification. This, however, does not often happen; for although it is not uncommon for the skin and blisters, to appear livid or blackish, this usually disappears with the other symptoms of the complaint.

This disease appears to be most dangerous when it attacks the face. In this case it comes on with chilliness, succeeded by fever, thirst, restlessness, with drowsiness, or tendency to coma and delirium, and the pulse is frequent and full. After two or three days, a fiery redness shows itself on some part of the face, which at length extends to the head, and gradually down the neck, leaving every part which the redness has occupied a little swelled.

The whole face at length becomes full and the eye-lids are so much swelled as to deprive the patient of sight. Nearly the same appearances follow the redness and inflammation of the face, as those described on the extremities.

No remission of the fever follows the appearance of the redness on the face; but on the contrary, it is increased as the inflammation spreads.

In the course of the disease the disposition to sleepiness and delirium occasionally increases, and the patient is sometimes destroyed between the seventh and eleventh days of the complaint.

TREATMENT.—As this disease oftentimes goes off spontaneously by a sweat, we should commence the cure by steaming, and then giving an emetic; in other words, administer a course of medicine, and, if necessary, repeat it at suitable intervals until the inflammation and fever are removed.

In proof of the propriety of emetics we not only have the general principles of medical philosophy, but also the authority of eminent medical men. Dr. ABERNETHY says, "I'll be hanged if erysipelas is not always the result of a disordered state of the digestive organs; but how to put it to rights," (he very candidly observes,) "I do not know."

Now we do not introduce this remark of ABERNETHY'S as proof direct, of the propriety of emetics, but to show his opinion of the cause of the complaint. It is admitted perhaps, by all, that in disordered digestion emetics are valuable.

After the course of medicine the perspiration must be kept up by frequent doses of the diaphoretic powders, and cayenne, aided by the application of hot bricks, or stones. To allay the heat and irritation of the inflamed part, dusting it over with flour, or starch, has been highly recommended; but we think the application of cold water a far better means of accomplishing that object. If the inflammation is seated on such a part that water cannot consistently be poured on it, cloths wet in cold water may be applied instead of it. Stimulating washes, containing a portion of golden seal, may also be used both previous to the cold applications, and afterwards; or the common elm poultice may be applied to the inflamed surface.

As a means of strengthening the digestive powers, the bitter tonic may be given three or four times a day, both during the existence of the inflammation and afterwards; and if symptoms of mortification show themselves, the most energetic measures should be pursued; for which see under the proper head.

ST. VITUS' DANCE.

THIS disease is marked by convulsive motions, most generally confined to one side, and affecting principally the arm and

leg. When any motion is attempted to be made, various muscles act which ought not to, and thus a contrary effect is produced from what was intended.

This complaint is said to be chiefly incident to young persons of both sexes, particularly those of a weak constitution, or whose health and vigor have been impaired by confinement, or by the use of scanty and improper nourishment. It usually makes its attacks between the age of ten and fifteen, occurring but seldom after maturity. But the only cases of this complaint which we have seen, occurred after maturity, and grew worse with age. These, moreover, were undoubtedly hereditary in the male line, whilst the females were entirely exempt from the disease. In some, the symptoms appeared earlier in life than in others, but all the males, sooner or later, became affected, and gradually grew worse, at least for several years, though the females, as just stated, were not known to be afflicted with this unpleasant disease. This unfortunate family appeared to have the complaint equally in all parts of the system, and were never free from its influence only when in bed or asleep. A very remarkable circumstance connected with the history of this family was, that one individual who could scarcely be said to be still one moment, was an excellent marksman with the rifle, often, for his own and others' amusement, shooting birds on the wing.

St. Vitus' dance, in addition to its being hereditary, as has just been stated, is occasioned by various irritating causes, such as teething, worms, acrid matter in the bowels, offensive smells, poisons, &c. It arises likewise in consequence of violent affections of the mind, as horror, fright, and anger. In many cases it is produced by general weakness and irritability of the nervous system, and in a few it takes place from sympathy at seeing the disease in others.

This complaint is sometimes preceded by a coldness of the feet and limbs, or a kind of tingling sensation which ascends like cold air up the back, with a flatulent pain in the left side, and obstinate costiveness. At other times it comes on with yawning, stretching, anxiety about the heart, palpitations, nausea, difficulty of swallowing, noise in the ears, giddiness, and pains in the head and teeth.

The disease first affects the legs, by a kind of lameness, and the patient drags them after him in an odd ridiculous manner, nor can he hold his arms still, but is constantly throwing or moving them about in an ungraceful manner, which it is impossible for him to avoid. When he eats or drinks, he uses many singular gesticulations before he can carry the food or drink to his mouth; the head in some cases partaking of the same convulsive action. Sometimes various attempts at running and leap-

ing take place, and at others the head and trunk of the body are affected by convulsive motions. The eye loses its lustre and intelligence, and the countenance is pale and expressive of vacancy; swallowing is occasionally performed with difficulty, the speech is often impeded, and sometimes completely suspended.

When this disease arises in children, it usually ceases again before mature age, and in adults is often carried off by a change from the former mode of life. Unless it passes into some other disease, such as epilepsy, or its attacks are violent, it is not attended with danger.

Treatment.—As costiveness generally prevails in this disease, strict attention should be paid to the bowels, using injections and laxative bitter tonics, with occasional courses of medicine to invigorate the whole system. The tincture of nervine powder ought also to be taken, and if this does not, after a reasonable time, appear likely to check the involuntary action of the muscles, we may substitute the anti-spasmodic tincture, in doses proportioned to the age and symptoms, two or three times a day. An infusion of skullcap, made by pouring a quart of boiling water upon one ounce of the plant, strained, and sweetened with loaf sugar, and drank freely by the patient, is said to be almost a specific for this complaint; especially, when used alternately with the nervine tincture.

Where little debility prevails, and much costiveness, repeated purgings have been highly recommended, as having been attended with great success. If this mode of treatment, however, should be ventured upon, every precaution should be taken to prevent debility. The bitter tonic, and occasional doses of cayenne, ought to be administered, to which may be added the nervine tincture, with a good nourishing diet, and once in a while a course of medicine.

SCALLED HEAD.

Scalled, scald, or scalt head, consists in an inflammation of the skin of the head, producing a discharge of a peculiar gluey matter, which sticks among the hair, and often gradually increases until the whole head is covered with a scab.

Children are principally subject to this complaint, particularly those of the poor; and it frequently arises in consequence of uncleanliness, or from the want of a due proportion of wholesome nourishing food, and possibly from bad nursing. In many instances it is propagated by contagion, either by using a comb imbued with the matter from a diseased head, or by putting on a hat or cap worn by a person laboring under the complaint.

This scalled head first commences with a brownish spot on some part of the head; which soon discharges a peculiar matter.

producing a scab. Other sores soon form on different parts, and, if not checked, the whole head, in time, becomes one scab, from which issues a very offensive matter.

TREATMENT.—We may commence the cure of this unpleasant disease, by anointing the head with oil, hog's lard, or fresh butter, when it ought to be covered with the leaf of skunk, or common cabbage, or a bladder may be drawn over it. The oil is to soften the scabs; and the cabbage leaves, or bladder, to promote perspiration of the head, and thus assist in still further dissolving the hard scabs. These applications ought to be made at night; and in the morning the leaves must be removed, the head washed with soap suds, endeavoring to get the scabs all off; and when this is accomplished wash it with a preparation of equal parts of the tincture of myrrh, tincture of lobelia, and a strong tea of bayberry, pond-lily, or beth-root. After the washing, the head must be carefully kept from the air by drawing a bladder over it, or by the use of a cap, handkerchief, or cloth; and if the case be a bad one, the patient ought to have a course of medicine occasionally. If the bowels are costive, they must be relieved by injections, and kept regular by the laxative bitter tonic, of which the parilla ought to form a part, and at the same time taking three or four times a day of the diaphoretic powders, to assist in promoting a healthy action in the system.

The head must be dressed every day in the following manner: —After washing clean with mild soap suds, it must be then washed with lime water, made by slacking a piece of lime, of the bigness of a hen's egg, in a quart of water. After washing with this, apply the tinctures of lobelia and myrrh, and the astringent tea as before directed, when the following ointment may be applied to the sore:—Take two table-spoonsful of pure tar, one table-spoonful of powdered charcoal, two tea-spoonsful of sulphur, or powdered brimstone, to which must be added of hog's lard sufficient to make a soft ointment. Or instead of this, WELLS' scrofulous ointment (hereafter mentioned in this work) will, perhaps, be a better application. In either case, when the dressing is completed, the bladder cap should be applied to shield the head from the air.

Simply sprinkling the head with powdered charcoal after washing, has proved highly efficacious in scalled head; and drinking a tea of yellow dock-root, yellow parilla, and sassafras, may be regarded as a valuable remedy. The diet should be wholesome and nutritive, avoiding salted meats and fish.

SCARLET FEVER.

THIS disease attacks persons of all ages, but children and young persons are most subject to it; and it appears at all sea-

sons of the year, but is most frequent in the latter part of fall and beginning of winter, at which period it often prevails as an epidemic.

Scarlet fever is generally regarded as a contagious disease, though it is by some disputed as being such. It is also said by some, that the same individual is liable to have it but once in his life, though it is pretty generally admitted, at the present day that this is not the fact.

As an epidemic, scarlet fever does not always assume precisely the same character. This diversity probably depends upon the dissimilarity of constitution in different individuals, different seasons of the year; different states of the atmosphere, different conditions of the individual when exposed to the contagion, &c. &c.

The disorder to which scarlet fever bears the greatest resemblance is measles, for the distinguishing symptoms of which, see *Measles*.

This complaint, like other fevers, commences with languor, lassitude, chills, or shiverings, heat, confusion of ideas, thirst, dry skin, anxiety, nausea, and vomiting. The stools are usually of the common quantity, urine high colored and turbid, and the pulse weak and varying from 100 to 120 strokes in a minute.

About the second or third day, numerous specks, or minute patches, of a vivid red color, appear about the face and neck; and within twenty-four hours, a like efflorescence is diffused over the surface of the body, and occasionally even tinges the inside of the lips, cheeks, palate, and fauces.

Sometimes the efflorescence is continuous over the whole body; but, frequently, on the trunk there are intervals of a natural color between the patches, with dots scattered over them. There is an increase of fever in the evening, at which time the rash is most florid or red, and is less so in the morning.

On the fifth day the eruption begins to decline; the intervals between the patches begin to widen, and the florid hue fades. On the sixth, the rash is very indistinct, and is wholly gone on the seventh.

But the description which we have given, is of the disease in its mildest appearance. In the more malignant forms of the scarlet fever, we find, in addition to the symptoms first enumerated as being of an aggravated character, soreness of the throat; inflammation and ulceration of the tonsils; the breathing is frequent and laborious; the pulse quick, small, and depressed.

In the progress of this form of the disease, one universal redness often pervades the face, body, and limbs, with some appearance of swelling. The eyes, and nostrils, likewise, partake more or less of the redness; and a tendency to delirium often prevails.

Sometimes also a disposition to run into putrefaction takes place, which is known by the pulse being small, indistinct, and irregular; the tongue, teeth, and lips, are covered by a black fur or incrustation; with fœtid breath; livid color of the cheeks; deafness and delirium; and great prostration of strength. Ulcerations of the fauces also arise, similar to the putrid sore throat; and the tongue is liable to be excoriated by the slightest touch. The rash or redness, is usually faint, excepting perhaps a few irregular patches, which soon change to a livid or dark red color. It also appears later in the disease, is very uncertain in its duration, and in some instances suddenly disappears in a few hours after it comes out; but may, perhaps, show itself again in two or three days.

When scarlet fever terminates favorably, the fiery redness gradually abates, and is succeeded by a brown color; the skin becomes rough, and peels off in small scales; the swelling subsides, and the health is gradually restored.

The mild forms of this disease are not to be regarded as dangerous; but when it partakes much of the character of putrid sore throat, or appears much inclined to putrefaction, it must be viewed in a more unfavorable light.

Treatment.—In mild cases of this complaint nothing more may be necessary than to give occasional doses of the diaphoretic powders, saffron tea, or cayenne, to promote perspiration, and, if the bowels are costive, an injection ought occasionally to be administered whilst the digestive powers may be restored, and the bowels regulated with the laxative bitter tonic.

Dr. Currie, of Liverpool, states that the affusion of cold water, at the commencement, and during the hot stage of this fever, completely removes the disease and prevents any efflorescence or redness from appearing. His method is to strip the patient entirely naked and dash four or five gallons of the coldest water he could get, over the body; repeating the operation ten or twelve times in twenty-four hours, if the heat or fever continued to return so often.

He further adds, that he pursued this course with so invariable success, in upwards of one hundred and fifty cases, that he could not contemplate it without emotions of surprise, as well as of satisfaction. Those who wish to try this practice would no doubt increase the good effects of the cold affusion, by administering a dose of cayenne, or of the diaphoretic powders previous to applying the water.

But we think, nevertheless, that using the vapor bath to promote perspiration, and then pouring on the cold water, is a more sure and speedy method of removing the heat and fever than the cold water alone.

In bad cases the course of medicine should be resorted to,

and repeated as the circumstances of the case may require, until a cure is effected.

If a soreness of the throat takes place, it must be treated as directed under the head of malignant, or putrid sore throat; and where mortification is apprehended, we should resort to the means recommended under that head.

If purgative medicines are at all admissible in scarlet fever, it must be at the first onset; and even then, the tendency to run into typhus, and end in putrefaction, is sometimes so great as to render cathartics dangerous.

The appetite and strength should be restored with the bitter tonic, wine, nourishing food, and gentle exercise.

SCURVY.

This complaint is arranged, by Dr. Good, under three different heads or species; which he denominates *petechial*, *land*, and *sea* scurvy.

The first species, or *petechial* scurvy, is characterized by numerous small spots, resembling flea-bites, chiefly appearing on the breast, arms, and legs; with a pale countenance.

The second species, or *land* scurvy, shows itself in circular dark or purple spots in the skin, of different sizes; often in stripes or patches, scattered irregularly over the legs, arms, and body; with occasional hemorrhages from the mouth, nose, or internal parts; attended with great debility and depression of spirits.

The third species, or *sea* scurvy, is characterized by spots of different hues, and found principally at the roots of the hair; the teeth are loose; the gums spongy, and apt to bleed; the breath is fœtid; and extreme universal debility prevails.

All these varieties, however, may be contemplated under one head as only different degrees of violence, or mildness, of the same disease. The last species named is not, however, denominated sea scurvy from its exclusive prevalence at sea, but because it is there that it is most common, rages with most violence, and occasions the greatest havock.

The same causes which produce this fatal malady at sea, will also do it on shore; and in armies and garrisons reduced to short allowance or unwholesome provisions, like causes have given rise to a scurvy of a most malignant and fatal character; especially where they have been worn down by fatigue or anxiety, and exposed to a damp air.

The causes which generally give rise to scurvy are, severe labor; weak or unwholesome diet; breathing an impure air; anxiety of mind; debilitating menstrual evacuations; and, at sea, by living on salt provisions.

In the worst forms of this disease, there arises a tendency to putrefaction; and a singular disposition, as related by Lord Anson, in old wounds after being long healed, to break open afresh, and become ill conditioned sores; the same thing also happening with broken bones.

The scurvy comes on gradually with lassitude, weariness, faintness, and pains in the limbs; dejection of spirits, anxiety, and oppression at the breast; loss of strength and debility.—After this there often are shiverings, nausea, and vomiting. The purple spots, which are the principal characteristic of the disease, commonly appear first on the legs, and afterwards, at irregular periods, on the thighs, arms, and trunk of the body The spots sometimes appear on the inside of the mouth, tonsils, lips, or gums; and it is from here the first hemorrhage issues, though as the disease advances, blood also flows from the nose, lungs, stomach, intestines, and uterus. The bleeding is oftentimes profuse; and the disease is accompanied with dropsical swellings of the legs.

The state of the bowels is various; the stools being sometimes frequent and offensive; whilst at other times an obstinate costiveness prevails.

Our description thus far has been principally confined to the milder forms of scurvy. In the worst degrees of it, such as has sometimes taken place in long sea voyages, all the symptoms which have been described become aggravated; and the last stage, says Dr. Good, is truly distressing. Blood is frequently discharged from the intestines, bladder, and other organs. The slightest motion brings on faintness, and often immediate death. Catchings of the breath and syncope or fainting, become frequent and dangerous; yet the patient is so insensible of his real weakness, that he often attempts exertion, and dies in the very effort; though more frequently he survives the attempt for a short time, and especially when animated by some happy motive, as the hope of getting on shore, and then suddenly sinks into the arms of death.

Treatment.—As diet has a great influence in the cure of scurvy, we will first direct the reader's attention to this subject. A person laboring under this disease ought to use no salted animal food, but on the contrary, he should live mostly on vegetables, and what meat he does eat should be fresh. Of vegetables, he should use of those termed alkalescent, such as garlics, scurvy-grass, water-cresses, &c.; mustard, horse, and common radish, and lettuce; all of which may be freely eaten without cooking, together with beets, carrots, parsnips, turnips, cabbage, &c., which may be prepared by the common process of cookery. Sour fruits are also useful.

The drink may consist of vinegar and water sour butter-

cider, spruce beer, or, what is far better, lemonch must be mixed with water and sweetened with sudeed, this last article is now considered, in conjunction proper diet, a specific for scurvy.

If the digestive powers have become much impaired, a course of medicine ought to be administered, and the bowels stimulated by injections. The daily use of the vapor bath will also be found highly beneficial, and the course of medicine should be repeated as the exigencies of the case may seem to require.

The wine-bitters must be taken two or three times a day; and a tea made of the roots of the narrow-dock, ought also often to be drunk during the intervals between taking the bitters. We have known one bad case of scurvy cured by no other means than the dock-root tea faithfully persevered in. There is no doubt that this article possesses, in a high degree, the power of curing this disease. If the fresh roots can be procured, a small handful of them may be sliced up and steeped in a quart of water, of which the patient may drink from a fourth to a half tea-cupful several times a day; and if the dried root is used, one tea-spoonful of the powder may be steeped in half a tea-cupful of hot water, and taken as a dose three or four times a day, in conjunction with the wine-bitters.

The common bur-dock has also been advantageously used in cases of scurvy, and if the narrow-dock cannot be procured, this might be substituted for it. The medicinal powers of the smooth or broad-leafed-dock, which so nearly resembles the narrow kind, is said by some to be fully equal to the latter, in the cure of diseases of the skin, for which it is so celebrated; and in the absence of the narrow, the broad-leafed-dock may be used instead of it.

SHINGLES.

This disease, in Dr. Good's arrangement, is a variety of tetter, characterized by an eruption of blisters on some part of the trunk; appearing in clusters, which are disposed to spread round the body like a girdle.

The name of this complaint is a corruption of either a French or Latin word, signifying a belt or girdle.

An attack of shingles is sometimes preceded by sickness and headache; but in most instances the first symptoms are, heat, itching, and tingling on some part of the body, which, when examined, is found to be covered with small red patches of an irregular shape, situated near together, upon each of which numerous minute elevations or pimples are seen clustered together. These pimples, in the course of twenty-four hours, be-

come enlarged to the size of small pearls, are perfectly transparent, and filled with a clear fluid.

The clusters are of various sizes, one, two, or even three inches in diameter, and surrounded by a narrow red margin or ring. During three or four days, if the disease be not checked, other clusters arise in succession, and extend with considerable regularity in a line drawn both ways round the body; though sometimes, like a sword belt, over the shoulder.

As the patches which first appeared subside, the blisters partially run together, and assume a livid or blackish hue, terminating in thin dark scabs. About the twelfth or fourteenth day, the scabs fall off, when the skin under them appears red and tender; and where the most considerable sores have been, there are pits made by scars.

This complaint is generally to be regarded as of little consequence; though it is sometimes accompanied, especially on the decline of the eruption, with an intense deep-seated pain in the chest.

The shingles may occur at all seasons, but it is most apt to arise in summer and autumn.

Persons between twelve and twenty-five years of age are most liable to attacks of this disease, though individuals more advanced are not exempt from it. It is caused by colds, sudden fits of passion, violent exercise, cold indigestible food, and intemperance. Occasionally, it is said to have appeared critical in bowel complaints and affections of the lungs.

Treatment.—In general, little need be done in affections of this kind. If, however, there should be a deep-seated pain in the chest, a course of medicine ought to be administered, and followed with the laxative bitter tonic and diaphoretic powders. The bitter tonic should be sufficiently laxative to keep the bowels loose; and if obstinate costiveness attend, a purge may be administered, aided by injections.

The affected part may be washed with the bathing drops, or the tincture of lobelia or of blood-root, or cold substances may be applied to it. A tea of the dock-root, we also think, might be useful in this case, as well as in all other diseases of the skin, either taken internally or applied externally.

SMALL POX.

This complaint has been very justly regarded as one of the greatest scourges of the human race. It is supposed that it was unknown to the ancient Greek and Roman physicians, as no definite description of the disease has been found in their writings. The first account of it is met with in the works of the Arabian

physicians; and from Arabia the small pox was introduced into Europe, where it spread devastation and death, unrestrained, if not accelerated, in its destructive career, by the means adopted to oppose it.

Persons of all ages and both sexes are liable to this malady, but the young are more exposed to its influence than persons who are very old. It is also said to be more prevalent in the spring and summer, than at other seasons of the year.

This disease is of a highly contagious nature, and the same individual is, in general, liable to take the affection but once in his life; though a very few instances have occurred, in which the same person had a second attack. Some individuals, on the contrary, appear altogether unsusceptible of the small pox, although exposed to its infection, and continue so through life; whilst others remain so only for a time, and then readily take the complaint. With some also the disease produces but little indisposition, though instances of this kind are very rare.

Small pox commences with restless uneasy sensations, great dislike to motion, chilliness and heat, vomiting, soreness of the throat, pain in the head and small of the back, great thirst and stupor. On the third or fourth day the eruption appears on the face, neck, and breast, in small spots resembling flea-bites, which increase every night for the ensuing four days; during which time the whole body commonly becomes spotted with them, though the face is almost always much more thickly covered than any other part.

Wherever the pimples appear, the part gradually swells; the eye-lids particularly are often so much distended as to produce blindness. The spaces between the pimples are of a reddish cast, and, as the pimples suppurate and fill with matter, these spaces grow redder. About the eighth day the suppuration is complete; and on the eleventh the inflammation abates, and the pustules, as they are called when filled with matter, begin to decline and dry away by degrees and scale off, and wholly disappear by the fourteenth or fifteenth day, excepting those on the extremities, which, as they come out later, commonly remain a few days longer. The fever is inflammatory.

Such is the ordinary course of the mild forms of small pox, but there often are great variations in the severity of the symptoms, according to the degree of fever and extent of the eruption, which are proportionate to each other; if the fever is high, the eruption will be considerable, and if moderate, it will be less, and the pustules few. When the pimples are few and scattered, there will be but little indisposition; but when they are numerous, the soreness, swelling, and fever will be very distressing. If the patient be an infant, convulsions sometimes occur previous to the appearance of the eruption, as well as afterwards.

We have stated that in the mild forms of small pox the fever is inflammatory; and we might also have said that the pimples are separate and distinct from each other; but in the more violent and malignant varieties of the disease, the fever assumes the putrid or typhus form; the pustules run into each other, becoming confluent, as it is termed, and the disease often ends in death.

The distinct small pox is not considered dangerous, excepting when the fever which precedes the eruption is extremely violent, or when it attacks pregnant women, or symptoms of putridity arise. When there is a tendency to putrefaction, the disease often proves fatal between the eighth and eleventh days, but in some instances death is protracted till the fourteenth or sixteenth. Small pox is apt to leave behind it a predisposition to inflammatory complaints, particularly sore eyes, and inflammation of the lungs, and not unfrequently scrofula.

Treatment.—We take the liberty here of laying before the reader a statement of the medical treatment of small pox, furnished by Dr. Israel Wilson, a respectable botanical practitioner of the city of Cincinnati. We also deem it proper to say that a number of botanical practitioners in that city have had ample opportunity of testing the new practice, and have found it highly efficacious.

Dr. Wilson informs us that he has had about fifteen cases of small pox, of which number only one died; and in this case a raving delirium immediately supervened on the taking place of the fever, which was before he saw the patient; and it being a child, he was prevented from administering medicine.

The following is a statement of the manner in which one case was treated, and may be regarded as a fair sample or specimen of the general mode of managing all the others.

"On the first of May, 1830, Dr. Wilson was called to see a patient affected with a severe pain in the head and back, attended with stupor and general prostration of the powers of the system, and a quick but not full pulse. The case was soon recognised to be small pox.

"In the first place an injection was administered to relieve the bowels, which were much constipated or bound; when a regular course of medicine was resorted to, (including steaming) after which two more injections were given at short intervals, by which the bowels were sufficiently opened. The injections were, however, continued as often as once in eight hours until the eruption appeared, and the pustules became filled with matter. The cayenne and astringent compound were likewise freely used during the same time; and after the filling of the pustules, the bitters and tonic cordial were resorted to, and continued until the patient was entirely well, which was in about two weeks from the time Dr. Wilson first saw him.

"He has not found it necessary to resort, in any case of small pox, to more than two courses of medicine to produce the eruption, when the fever has always abated. The injections were made more stimulating than he makes them in other cases of disease.

"It is also worthy of remark, that none of his patients have had pits remaining in their faces after the disappearance of the pustules, as is often the case with persons cured under the old practice of medicine."

Other practitioners of the botanical school, however, in the treatment of small pox, do not resort to the steaming process. Those who omit it, give medicine to promote perspiration; and relieve the bowels by injections or mild purges. To produce perspiration, the diaphoretic powders, or cayenne, may be used, repeating the doses so often that the system shall be constantly under the influence of the medicine.

Of the comparative value, or success, of treating small pox with or without the process of steaming, we are unable to judge; and, therefore, those who may meet with this disease must form an opinion for themselves, as we can only say, that from all the testimony which we have obtained of those who ought to know, we have no hesitation in believing that either mode is far more successful than the old method of treating it. We are the more particular in thus expressing our sentiments on this subject, in consequence of reports of the inadequacy of the botanical practice to cure small pox, which have grown out of two recent cases of failure; and also because it is so directly in opposition to the mode adopted by the mineral doctors. Their practice consists in a diet wholly of *vegetable* food, purgatives every few days, cold drinks, light clothing, and exercise in the open air, or in a cool room. We also take the liberty of introducing a communication from Dr. Ripley on this important subject. We could wish, however, that he had gone a little more into detail respecting his treatment of the small pox; but as it is, we think it valuable, and believe that whilst it goes, in general, to substantiate the statement of Dr. Wilson, it will also, with a little attention, be found sufficiently explicit to answer all the purposes intended:

"I have always found," says the doctor, "in the primary fever of small pox, an almost perfect resemblance to ordinary bilious fever; but in general the rigors are more severe, and continue alternating with flashes of heat, for a longer time than is usual in that disease. But the action varies in different cases, from the lowest typhoid type, to the highest inflammatory form, which last is the most common; whilst in general the danger increases as it approaches the typhus; and I verily believe that no physician can discriminate so closely as to detect the small pox by the symptoms alone, before the eruption appears.

"But the difficulty of discriminating makes no difficulty in practice to those who adopt the botanic plan, as it requires the same treatment with that form of fever which it resembles, and the same motto may be used in either case—'support the powers of life, and never poison your patient.' The more the symptoms incline to typhus, the greater the deficiency of nervous energy; and, of course, the difficulty of keeping the determining powers to the surface is increased. In such cases it must not be supposed that the danger is over when the eruption is out, for the tendency to strike in, will be in proportion to the diminished energy of the nervous system, which appears in the first stage; and the sinking or flattening down of the pustules will perhaps be the first symptom indicating an unfavorable condition of the system. But where there is more energy, all the symptoms of fever may increase, and bile will accumulate in the stomach, and a thorough emetic becomes necessary. The anti-spasmodic tincture is always best in such cases; and if the throat is sore, and hot medicine dreaded, still it is needed, and the throat is cured by it. Let the diet be good and nourishing throughout.

"To make myself better understood by those who employ no doctor, I would advise a course of medicine in the first place, when the cold chills commence; it will be proper to steam before giving an emetic if the patient is cold and the pulse low; but if otherwise, give the anti-spasmodic tincture first, and after the operation it will be proper to steam if the fever is off; if not, rub the patient all over with a flannel cloth wet with the compound tincture of myrrh, or pepper vinegar, and repeat the dose of anti-spasmodic tincture till the fever abates, or as often as it rises after an intermission. In most cases under this treatment there is very little fever after the eruption appears, through the whole progress of the disease. If the secondary fever* appears, it is when the pustules are about drying up, when the same treatment may be applied as at first, to subdue the fever. But beware of refrigerating cathartics: use the syringe to keep the bowels in order, with diaphoretic tea and anti-spasmodic tincture."

We cannot well leave the present subject without laying before the public some account which we have received of the very successful use of the squaw or rattle-root, in cases of the small pox.

If the reader do not already know it, he may be informed that in the early days of this republic, the jurisdiction of the country along the Susquehanna river, about Wyoming, was claimed by the State of Connecticut, the laws of which disallowed of the practice of inoculation. Two physicians, however, as our in-

* This name is applied to the fever which often arises in violent cases, after the pustules have appeared.

formants state, had so far disregarded the law as to inoculate one or two families in a private manner, with a view, as was supposed, of introducing the small pox into the neighborhood.—Unfortunately for them, however, the circumstance got to the ears of the magistrates, and the doctors were obliged to take measures to stop the progress of the disease or become liable to a heavy penalty.

As they were returning from the magistrates, before whom they had been cited, to their inoculated patients, they were overheard by a person standing behind a tree, talking about the peculiar circumstances in which they were placed, and the means they should use to extricate themselves from their embarrassments. The person who had secreted himself, continuing to observe their movements, saw them dismount from their horses and dig something from the earth that they carried away with them, which he found upon going to the spot, to be the squaw or rattle-root. His curiosity now prompted him to repair to the house of the inoculated family, which was near by, where he saw the bruised root steeped into a strong tea, and freely administered to the family; and as no symptoms of small pox ever appeared, he very naturally concluded that the rattle-root tea destroyed the virus of the matter introduced by the process of inoculation.

Such is the simple narrative of the circumstances, as related to us by two individuals who lived in the same neighborhood at the time, and who were near relatives of the person who made the discovery; and we have unbounded confidence in the facts as stated; but whether the rattle-root prevented the inoculation from taking effect, is a matter involved in doubt. We have, however, more satisfactory evidence of its power to destroy the small pox virus, than is deducible from the case just related, and which we derived from the same source.

The individual who made the discovery of the doctors' using the rattle-root, very naturally concluded that if it would destroy the virus before it had produced its specific effects upon the system, it would also weaken its force and disarm it of its destructive powers after those effects had made their appearance. With these views, he embraced the first opportunity to recommend a trial of it, and found it succeeded beyond his expectations, in removing the urgent symptoms of this fatal malady, and reducing it to a mildness which, under similar circumstances, he had not been accustomed to see; and the experiment, repeated again and again, not only by himself, but by others, and the effect which followed being so uniformly the same, left no doubt on the minds of our informants, that the rattle-root may be regarded as a specific against the effects of the small pox poison.

But before leaving the subject, we will relate one case, amongst many others, in which the remedy in question gave ample evi

dence of its happy powers. A female, considerably advanced in life, took the small pox which made its appearance in its worst form, and ultimately arose to such a height that she was abandoned by her physician as beyond the possibility of cure. The individual who had made the discovery of rattle-root, happening to be a particular friend of the old lady's, and hearing of her hopeless situation, immediately set out to visit her, being a distance of many miles. When he arrived, she had been speechless several days, and to all appearance was beyond the reach of medicine. True, however, to his purpose, and possessing the confidence which experience had given him in the virtues of the rattle-root, he immediately prepared some of the tea, which he commenced giving her, and in a short time had the satisfaction of hearing her speak, and eventually to see her restored to health.

We have now stated the most material facts respecting the use of the rattle-root in the treatment of small pox, as they have been related to us by persons in whom we put the highest confidence. But we do not ask the reader to place full reliance upon the alleged virtues of this root, although in all cases where in we have employed it as a remedy, though not in small pox, we have found it an article of very active, but we think, not dangerous powers. It will be little or no disappointment, however, to us if, on trial, it should fail to produce the effects which have been attributed to it; though we must confess that we feel some confidence in its virtues. But even should it, on a fair and full trial, fail, it will share no more than the common fate of many other articles which have been highly extolled, in consequence of some favorable circumstances attending the first few cases.

We will close the present article with a request that those who have it in their power to test the virtues of the rattle-root in small pox, would cautiously try its effects; as it ought to be borne in mind that it is only by experience we can fully ascertain the value of any article, and by which means alone the healing art can arise to that degree of perfection which we dently hope it will, at no distant period, attain.

INOCULATION AND VACCINATION.

The object of producing the small pox by inoculation is to disarm this fatal plague of its terrific powers; as by propagating it in this manner it is rendered far more mild than when communicated in the natural way. In the latter mode of taking the disease, it is computed that of adults, from one fourth to one third die with it; and of children about one seventh; whilst in cases of inoculation, not more than one dies in five or six hundred.

Yet, great as is the intrinsic advantage of inoculation says

Dr. Good, there is one evil which has always accompanied it, and which it is almost impossible to provide against; and that is, the wider diffusion of the contagion through the atmosphere by the indiscriminate use of inoculation in all places. And hence, continues he, it has been very forcibly observed, by those who have written most warmly in favor of vaccination, that small pox inoculation is upon this ground a greater public evil than good; since the multitude, who will not consent to be inoculated, receiving the natural disease more generally than they otherwise would do, the total mortality from this complaint is greater than before inoculation was had recourse to.

The method of communicating the small pox by inoculation, like the disease itself, appears to have come from the East, and especially from China; where it seems to have been practised from time immemorial. The first public attempt at inoculation in England, was an experiment made upon six condemned criminals, all of whom were fortunate enough to recover, and thus redeemed their lives.

The matter intended to be used for inoculation should be taken on the seventh or eighth day, or previous to the taking place of suppuration; and it is of no consequence from what subject, whether young or old, with a disease slight or serious, or even from a dead person, it is equally the same. The usual place of inserting the matter is between the elbow and shoulder, and is done in a very simple manner; a needle is as good as any thing, though a lancet is commonly used. All that is necessary, and all that ought to be done, is to make the smallest possible scratch, or puncture that will start the blood, into which a minute quantity of the matter must be deposited.

The puncture or scratch, does not so completely disappear in this case as in vaccination; but is often scarcely visible for two or three days; about which time a minute pimple will be seen and a little itching may be felt, and sometimes there is a slight inflammation. On the sixth day a pain and weight are felt in the arm-pit, proving that the virus or poison is conveyed into the system. On the seventh or eighth day, slight shiverings, headache and pain in the back are perceived, and are immediately followed by the eruption, which, for the most part, is confined to a single pustule immediately at the point where the matter was inserted, or a few which directly surround it.

A rosy, or a narrow deep red circle, surrounds the pustule, which, in unfavorable cases, turns of a purple or livid color, and the head or center of the pustule sinks or flattens.

The treatment should be the same as that recommended for the disease when taken in the natural way.

Vaccination is the substitution of a still more mild and less dangerous, as well as a different, disease than that produced by

inoculation, for the natural small pox, and which is known by the name of kine or cow pox. The contagion was first derived from the cow, and hence its name.

Cow pox, says Dr. Good, first attracted attention in the county of Dorset, England, about forty or fifty years since, as a pustular eruption, derived from infection, chiefly showing itself on the hands of milkers who had milked cows similarly disordered. Those who had been thus affected, were found unsusceptible of taking the small pox; and so well were the people satisfied of this fact, that an inoculator, who attempted to communicate the small pox to one who had been previously infected with cow pox, was treated with ridicule. A formal trial, continues Dr. Good, was made, however, and it was found that no small pox ensued. About the same time, a farmer of sagacity of the name of Nash, duly attending to these facts, had the courage to attempt inoculation on himself, in which he completely succeeded. And from these, and numerous similar facts, originated the practice of what is now generally termed vaccination; the whole honor of which is attributed to Dr. Jenner, and which, in all probability, will immortalize his name. To this, however, we do not object, after recording the facts of the case; and which, we will only observe, afford additional evidence that the great benefactors of the world are not always found in the temples of wealth, nor the mazy walks of science, but amongst the hardy sons of nature, whose original, untutored minds, unshackled by the forms of science, are left free to pursue the dictates of reason, truth, and common sense.

After it became known that having the cow pox procured an exemption from the small pox, attempts were made to inoculate with matter from the human subject, which was found not only to succeed, but also to produce a much more mild disease than that derived, by milking, from the cow.

The matter for inoculation, or, as it is now termed, vaccination, may be taken from the pustule at any time after it is formed, before the ninth day of the disease. But after the ninth day from the time of vaccination, the matter usually becomes so inactive as not to be depended upon. Good matter is clear or transparent; and none other should be used. Of late, however, the scab has been preferred to vaccinate from. For this purpose, take a scab from a well formed pustule, pare off the edges with a knife, then shave down the central portion and moisten it with a little cold water, when it is fit for use.

In performing the operation of vaccination, the same instruments may be used, and the same plan pursued, that were recommended for inoculating for the small pox, observing great care to make the puncture or scratch no deeper than just to start the blood, or there will be danger of the matter being

washed away by the bleeding. On the third day after vaccination has been performed, a very small inflamed spot appears where the matter was inserted in the arm; which gradually increases in size and hardness, and produces a small round tumor slightly raised above the level of the skin. About the sixth day, a discolored speck appears in the center of the tumor, which is caused by the formation of matter; and this speck goes on increasing in size as the matter augments, until the tenth day; at which time it exhibits in perfection, the peculiar character or appearances that distinguish it from the small pox inoculation. Its shape is round, or sometimes a litle oval, the margin or edge is very distinguishable, and is always smooth or regular; and the center of the pustule is depressed or sunken, so that the edges are elevated above it; being, moreover, of a bluish brown color, whilst the fluid or matter which it contains is clear and colorless.

About the eighth day, when the pustule is completely formed, a pain will be felt in the arm-pit, with perhaps a slight headache, shivering, lassitude, loss of appetite, and increase of the pulse. These symptoms may continue, in a greater or lesser degree, for one or two days, but always go off spontaneously, without leaving any bad effects behind. During this time the pustule becomes surrounded by a red inflamed circle, about an inch or inch and a half in diameter, which is an evidence that the vaccine matter has produced the proper constitutional effect upon the system.

After this period, the matter in the pustule gradually dries up, the red circle fades, and, in a day or two, imperceptibly vanishes; so that it is seldom discoverable after the thirteenth day from the vaccination. About this time, the pustule hardens into a thick scab of a brown appearance; and, if not removed purposely or accidentally, falls off in about a fortnight, leaving the skin sound and uninjured. No medical treatment is required in vaccinated cow pox.

SPASMODIC CHOLERA.

This formidable disease appears to have had its origin in that part of the continent of Asia called the East Indies, whence it is sometimes called *Asiatic*, or *Indian* cholera. It commenced its ravages in the year 1816 or '17, and after spreading devastation and death over many parts of the continent of Asia for about twelve years, it visited the Phillippine and other islands of the Chinese Sea, and at length, in 1829, entered Europe. Continuing its destructive career, it successively traveled over many of the kingdoms of Europe, and finally made its appear-

ance in the summer of 1832, on the American continent at Quebec and Montreal, where it gave melancholy proofs that its virulence was by no means assuaged by its passage across the Atlantic. Nor has its malignant character been in the least mitigated by a year's residence in the United States; but is at this very moment [summer of 1833,] sweeping off its victims in many parts of the country with fearful rapidity.

The symptoms of this dreadful malady are usually spoken of as appertaining to two stages; the *premonitory* and the *collapsed*. The premonitory symptoms are; derangements of the bowels, such as looseness, in which the discharges are frequent and copious, thin and slimy, of a whitish color and often attended with griping pains in the intestines. Pains in, or sickness at, the stomach, and dizziness of the head, are also considered as premonitory symptoms of the cholera; all of which, in places where the disease is prevailing, should be carefully attended to and guarded against.

After some one or more of these symptoms has continued for a longer or shorter time, that is, for a few minutes or hours, the collapsed stage comes on, so suddenly in some cases, as almost instantly to prostrate the person to the earth. This stage of the complaint is generally of but short duration, as the patient must be quickly relieved by medicine or he is soon cut off by the disease.

In the collapsed stage there is a deadly coldness of the extremities, with spasmodic twitchings of the fingers and toes, gradually extending along the limbs to the body. The skin of the hands and feet is pale and shrunk or wrinkled; sickness, or burning pain at the stomach comes on, with retchings, vomitings, and violent cramps or spasms, great thirst, anxiety, and oppression; distortion of the features; cold breath and tongue, the latter of which is usually moist and whitish; failure of the circulation; and finally, a dreadful universal spasm puts a period to the suffering of the unhappy patient.

Such are a few of the many and varied symptoms attending the progress of this terrific malady, though all of them are not often found united in the same patient. Indeed, in some instances the power of life is so suddenly and fatally prostrated, that the organs of the system at once become insensible to the influence of stimulus of any kind; and nothing is perceptible but "a mortal coldness and arrest of the circulation, and the patient sinks, insensible of pain, into the arms of death!"

Treatment.—From all that we can glean from the various fragments and ephemeral publications emanating from botanical physicians, upon the treatment of this scourge of nations, it would seem that, in general, it is pretty easily cured in its first or premonitory stage. To check the diarrhœa, which consti-

tutes the chief symptom in this stage, little more, in common, seems necessary, than placing the patient in bed, with a hot brick at the feet, and administering the best remedies to check diarrhœa, such as tincture of myrrh and bayberry, cholera syrup or mixture, decoction of wild-cherry bark, cat-tail flag root boiled in milk, or any other astringent article, with diaphoretic powder or cayenne to promote perspiration. If perspiration, however, should not be produced, or the symptoms not be mitigated, by these means, more vigorous measures must be taken. A hot rock may be placed at each side of the patient, and a stimulating injection administered, and, if necessary, repeated. The extremities, stomach, and bowels should also be freely bathed with an infusion of warm pepper and vinegar, or other hot stimulating wash, applied with much friction. If there be much nausea or vomiting, and the means recommended fail, recourse must be had to some of the anti-emetic mixtures, which should be administered without delay.

The perspiration, when produced, should be kept up for from twelve to twenty-four hours, according to the violence of the attack or other condition of the patient. If by these means the disease be thrown off, the patient should continue taking the cholera syrup several times a day, or if there be symptoms of nervous irritation, an occasional dose of the nervine powders must be taken, together with the bitter tonic, until the symptoms are entirely removed.

But if the foregoing treatment prove unavailing, or if the collapsed stage come on, more vigorous measures must be taken. The anti-spasmodic tincture, in addition to the other articles recommended, must be freely employed, as a vomit, and injections, containing two or three tea-spoonsful of the same tincture, ought to be often administered; and we would recommend, as speedily as possible, the application of the vapor bath.* At any rate, the most powerful means must be employed to promote perspiration, both by the external application of heat to the surface, and by the internal administration of the most powerful stimulants. If nothing can be retained on the stomach, as is often the case, an emetic must be administered by injection. For this purpose the quantity of fluid used should be small, so that it can the better be retained; using either the tincture or tea of lobelia, or the seeds, in the quantity of from one to two table-spoonsful in each injection; repeating them, for three or four times, every ten or fifteen minutes.

If free and full vomiting, of a dark morbid matter, takes place from administering an emetic, in any form, we have good

* Some respectable practitioners think a *dry* heat alone ought to be used, and that vapor or *moist* heat ought never to be resorted to in cholera.

reason to hope for a recovery ; but if the matter ejected from the stomach be light colored, thin, and watery, the prospect may be considered as highly doubtful. In cases of the latter kind, Dr. N. Hixson, of Maysville, Ky., informs us he has found cold affusion, by pouring on the patient a bucket full, or more of cold water, would excite reaction, and thus increase the pulse, and restore the circulation and heat to the surface. When this is done, he gives an emetic, which is followed by that kind of discharge indicative of a favorable termination of the complaint. Cold affusion, under such circumstances, may seem like a rash and hazardous experiment, but Dr. Hixson assures us that he has generally found it beneficial. When he did not find it so, he immediately proceeded to employ the vapor bath, and steamed as long as the patient could well bear it, and then applied the cold water, which, as he informs us, always increased the pulse and restored the circulation and heat to the skin. This condition of the system he considered as indicating the favorable moment for an emetic, which, under these circumstances, always produced a good effect. During the foregoing operations, the patient must take freely of the cayenne, or diaphoretic powders, or both may be taken alternately, not only to guard against the shock from the cold affusion, but to stimulate the system, and assist in producing reaction. Our informant also recommends the employment of diuretics to relieve the suppression of urine which always attends cholera.

The reputed great success of Dr. Hixson in the treatment of the fatal malady under consideration, has induced us to give the foregoing, which he communicated to us during a personal interview ; and now leave to be tested by such as may have opportunities for doing so.

If, notwithstanding an emetic has afforded relief, the patient should relapse, no matter at what period, whether of a day or an hour, another emetic must at once be given as the only means of arresting the disease. We have known one case in which four emetics were given in the course of twelve hours, and another in which seven or eight were given within the lapse of thirty-six hours, with the happiest effect; and without which, there is no doubt, the patients would have both been numbered with the dead. We are satisfied, in short, that emetics are the principal dependence in cholera, and ought to be repeated as often as appears necessary to keep the patient in an improving condition. During the intervals, the patient should have repeated small doses of cayenne, cholera syrup, diaphoretic powders, or tincture of myrrh, and a decoction of bayberry, cherry bark, and pond lily, or cat-tail flag-root boiled in milk, or any other astringent article which may set well on the stomach; giving any or all of them alternately or

in any other prudent manner which the circumstances of the case may suggest.

When the disease is entirely removed, the patient may take, occasionally, a small dose of either the cholera syrup or bitter tonic, and, more frequently and freely, of the wine bitters or the tonic cordial, to promote digestion and restore the strength; carefully avoiding every thing, in the least degree, liable to produce relapse.

Before quitting this subject, we feel disposed to offer a few remarks on the change of diet so commonly resorted to wherever the cholera prevails. Much has been said, written and printed, in relation to this matter, a great portion of which we consider erroneous. No sudden and essential change can ever be made in the quality of our food without affecting the irritability of the bowels; therefore the utmost care and discretion should be exercised in this particular when exposed to an attack of cholera We ought certainly to avoid every thing that is hard to digest, as well as those articles that we know are apt to irritate the intestines and produce diarrhœa. In all other respects we should pursue our usual course of diet, providing it be a tolerably regular one; but by all means avoid overloading the stomach, and especially hearty suppers. Eating too much, we have no doubt, is a more prolific cause of cholera than eating a wrong article, though both have done much mischief. As a general rule, when exposed to cholera, we should eat less than usual, as most persons habitually eat too much. Irritability of the stomach and intestines seems to be what mainly predisposes to cholera; therefore, overloading the stomach, or eating food hard to digest or that is apt to produce a diarrhœa, will be sure to increase the hazard of an attack of the fatal malady. It, therefore, behooves all to exercise prudence in regard to diet, and not suddenly to make great or essential changes in it; and yet to avoid such articles of food as are known to irritate the stomach and intestines or produce diarrhœa; and likewise never overload the stomach, especially at supper. These cautions ought also to be particularly observed during recovery from cholera.

Another error, as we think, has been committed in relation to this complaint, in the employment of remedies as *preventives*. When a person is in good health, as a general rule, he can take no medicine that will make him any less susceptible of disease; but subjecting his organs to the influence of medicine whilst in health, should he be attacked, the remedies will not then produce so prompt and so good an effect as if none had been previously taken. We therefore think the practice of taking preventives of cholera, at best a doubtful, if not an absolutely pernicious custom. Whilst in health we need no medicine, but when once attacked with cholera, no time should be lost in employing

the best means to check it; and among the most important, we think, is quietness and rest; for which purpose let the patient retire to bed and remain there until fully recovered.

SPRAINS.

Sprains are the effects of severe strains of the tendons, or ligaments, and most frequently happen in the ancles, knees, or wrists.

Accidents of this kind, especially if severe, are usually followed by a painful inflammatory swelling of the part.

Treatment.—Many things have been recommended and used as external applications to sprains; but the pouring on of cold water is perhaps better than any thing else. Wormwood or tansy, bruised and bound on the part, is useful; or either of those articles may be steeped in vinegar, and applied; occasionally moistening the herb as it becomes dry, with some of the vinegar in which it was steeped. Chamomile may also be used in the same manner. The nerve ointment will likewise be found very useful in removing the pain and soreness.

The leaves of the common bur-dock, bruised and applied to sprains, is highly recommended, it being said that it will give immediate relief. In the first place, however, we would recommend that the part be bathed with pepper and vinegar, or with the tincture of myrrh; and if redness and inflammation appear, cold water ought to be poured on it; previously taking a dose of the diaphoretic powders or of cayenne.

The sprained limb must also have rest, and should not be allowed to hang down; and where weakness remains, after the swelling and soreness are gone, in addition to pouring cold water on the weak joint, wearing a tight bandage around it will be useful.

SUBSTANCES STOPPED BETWEEN THE MOUTH AND STOMACH.

Children as well as grown people are liable to attempt swallowing substances of such size or shape as to stop or stick in the œsophagus or gullet. These may be hard crusts of bread, or of hard baked meat, fish bones, boiled potatoes, pins, pieces of money, thimbles, rings, &c. Accidents of this kind are always dangerous, and sometimes fatal.

Treatment.—It is very common with mothers, when children are choked, to strike the palm of the hand with considerable force on the back, which will often cause the substance to fly out. Another simple mode which we have seen tried, and

in which some put much faith, is simply rubbing the center of the forehead with the thumb or finger. We know not, however, upon what principle this process operates to remove the foreign body from the throat, if it even does it. Sneezing, excited by the use of snuff of any kind, should also be resorted to, as relief has been obtained in this way.

If either or all these means fail, an attempt should immediately be made to extract the lodged substance with the fingers; and there are perhaps few cases, if taken in season, but what might be relieved in this manner. But if the offending material cannot be felt, or if felt, cannot be taken hold of, so as to extract it, a careful examination must be made by pressing down the tongue with a spoon handle, or some other suitable instrument, so that the lodged substance may be seen if it has not descended oo low; which may enable us, if visible, to contrive some means best adapted to its removal. If a hook appears most eligible, one may quickly be made by bending a small wire; or if forceps be thought best, and none are at hand, a pair may be soon made by taking a piece of wire of suitable length, flatten the two ends, and then bend them nearly together, leaving room, however, for the lodged body to pass between them, with which it may be seized and withdrawn.

But if the body have gone so low as not to be seen, then we must be governed by the nature, or shape, or size of it, as to the instrument to be employed or the means to be used. If it be a bulky substance, the only chance may be to push it down into the stomach, which can be done with a piece of whale bone or wire with a small piece of sponge tied nicely to the end of it. After moistening this instrument, which is called a *probang*, with the mucilage or tea of slippery elm, it must be cautiously introduced into the throat, and the obstructing substance carefully pushed down into the stomach. There is some hazard, however, in this operation, as the gullet has sometimes been ruptured, or otherwise so injured as to destroy life. But if the lodged body be of such a nature that a wire hook can take hold of it, this may be employed; or instead of this, a wire may be bent so as to form a loop which may be introduced around it, and extract it in this way.

Another method recommended by Dr. Ewell is to attach to the end of a small flexible piece of whalebone, or smooth split of white oak, a bunch of thread, doubled so as to make an immense number of nooses, which is to be pushed down the throat, and then give it such a motion as might be best calculated to entangle the lodged body, and withdraw it.

Pins have been dislodged by riding on horseback, or in a carriage. Another method which has been successfully employed is, to take a very small piece of dry sponge, which must be at-

tached to the end of a silk or cotton string, and introduced into the throat below the foreign body, when, by throwing warm water into the throat, the sponge will swell, and withdrawing it by the string, the lodged substance may come with it.

The patient should occasionally take a swallow of the elm mucilage, with which also the instruments ought to be moistened. Or for want of the elm bark, any other mucilage, oil, or butter, may be employed.

If these means fail, or if it be thought unnecessary or imprudent to try them all, an emetic should be given by injection. For this purpose the tincture or powder of lobelia may be administered in warm water, two tea-spoonsful at a time, once in fifteen minutes, until it operates. Or if the patient can swallow, the emetic may be administered by the mouth. The elm tea should also be given to lubricate the throat to facilitate the ejection of the obstructing substance.

If inflammation takes place, a poultice must be applied to the throat, continuing the elm mucilage and occasionally inhaling the vapor of vinegar as recommended for sore throat, and the patient treated in every other respect as for other inflammations. If swallowing be not interrupted, the strength may be supported by nourishing broths or soups; or if they cannot be swallowed, they must be administered by injection.

SUSPENDED ANIMATION.

The animal functions may become suspended without life becoming extinct, by different causes, such as drowning, hanging, or suffocation; or it may be caused by extreme cold, or lightning.

Drowning has been treated of under that head, and it only remains for us to speak of suspended animation from hanging, suffocation, cold, and lightning.

Hanging.—In hanging, the appearances discoverable externally, are very similar to those which occur in drowning; and the means which ought to be used for restoration may be the same as those recommended in accidents of that kind.

Suffocation.—Under this head we include all cases of suspended animation that are caused by breathing air which is unfit for the purposes of supporting animal life, such as *carbonic acid gas*, usually called *damps*, abounding in wells, cellars, vaults, caverns, &c., and *hydrogen*, and *nitrogen*, *gases*, and the gases which are generated by putrefying substances, or in fermenting liquors.

The first sensations experienced on inhaling noxious gases are, giddiness, headache, stupor, faintings, numbness, and some-

times convulsions. The head, face, and neck, of the affected person, are swollen; the eyes are protruded from their sockets; the tongue hangs out at one side of the mouth; the jaws are firmly closed; the face is of a livid, and the lips of a deep blue color; the abdomen is inflated; the body is insensible to pain; and the person appears to be in a deep sleep.

In some instances these gases, by being inhaled, produce an immediate suspension of the animal functions; whilst in others, the circulation and even breathing go on in a feeble and imperfect manner. Cases of death, in consequence of inhaling carbonic acid gas, have occurred within the last few years with an alarming and increasing frequency, in consequence of persons incautiously descending into wells without first ascertaining the state of the air contained in them. This is a very easy thing to do, by merely letting down, slowly, a lighted candle, when, if the well contains this gas, the candle will go out; in which case it will be highly dangerous, if not absolutely destructive, to enter the well. In some instances, however, a person may live where a candle will not burn.

The burning of charcoal in tight rooms also renders the air unfit for respiration; and many melancholy cases of death have occurred from this cause.

Treatment.—In the treatment of suspended animation from the inhalation of poisonous gases, we may commence with dashing cold water in the face and on the breast, at the same time exposing the patient to a free and pure air. A stimulating injection must be administered as soon as possible, and repeated if animation be not soon restored.

The face, temples, and lips, must be bathed with strong vinegar; and hartshorn, or volatile salts, should be held near the nose. It has also been recommended to blow into the lungs, or, which is better, inflate them with oxygen gas.

The anti-spasmodic tincture ought also to be given internally, by pouring a tea-spoonful into the mouth, which may be repeated at discretion, until the patient is capable of swallowing, when the diaphoretic powders, steeped, may be administered instead of this tincture; and if the patient continue feeble and languid after being restored, the vapor bath should be resorted to; and if necessary, the whole course of medicine.

Cold.—In cases of suspended animation arising from this cause, the countenance becomes pale and shrivelled, and the limbs are stiff. An excessive desire to sleep always precedes a suspension of the animal powers when caused by cold, which the strongest resolution is incapable of overcoming.

Treatment.—In cases of this kind, and especially where the vital flame is nearly extinct, it is recommended to plunge he patient into a cold bath made of sea or salted water for a

few minutes, then to be taken out, wiped dry, placed in a warm room, and rubbed by several persons with warm hands.

We are, however, inclined to believe, that immediately removing the patient to a warm but well aired room, and occasionally sponging, or dashing the body with cold water, would be better than the cold bath. By immediately placing the body in a warm room, if any breathing remained, the warm air would be inhaled into, and have a beneficial effect upon the lungs; whilst dashing cold water upon the person would give a shock that would more likely be followed with a salutary reaction, than would plunging the patient into a cold bath.

As the warmth and signs of returning animation become more visible, the cold water must be omitted, whilst the warmth of the room should be increased gradually; and after the living power becomes pretty well restored, a hot brick may be placed at the feet, and be continued until perspiration is produced.

As internal remedies, whilst the patient is insensible, we might occasionally pour a little tincture of myrrh, or tea of cayenne, into the mouth, but not enough for scarce any of it to reach the stomach; and injections of warm water, or of pennyroyal tea ought also to be administered. As the vital flame increases, we may increase the stimulants, by adding tincture of myrrh to the injections, and giving occasional doses of the diaphoretic powders in tea, and at length when the living power is pretty well restored, we may give the cayenne both by mouth and by injection. If faintness occurs during recovery, the face, breast, or back, should be wetted with cold water or vinegar.

If a person has exposed his hands, feet, or other parts of the body, to the action of severe cold, so that they are frozen or frost-bitten, he should avoid suddenly approaching a fire, as it might cause a violent and painful inflammation, and even mortification. The affected parts should be covered or rubbed with ice or snow, or immersed, if practicable, in cold water; or cloths folded in several thicknesses, and frequently wet with cold water, may be applied to them. After this course has been pursued until the cold or frost is abstracted, the part should be bathed with the tincture of myrrh, using brisk friction. If there be much pain or inflammation, the common elm poultice must be resorted to. A few doses of the diaphoretic powders, or cayenne, should also be given, to excite perspiration.

When the extremities are frozen, says an intelligent writer, and even when quite black, it is the custom in Russia to rub the parts with warm goose grease; repeating the application so often as to keep them always covered with the grease. This method, continues he, has been found to restore their life and circulation with great effect. The oil or grease of common fowls, will probably answer as good a purpose.

The same course of treatment, as above laid down, should be pursued in those cases of inflammatory swellings called chilblains, which also arise from the effects of frost.

Lightning.—A stroke of lightning appears to exhaust the system of its stock of nervous power, and as a consequence of which, the limbs do not become stiff, but remain flexible, the countenance appears pale, and the blood does not coagulate. When the electric fluid has acted with great power, disorganization takes place; bleedings occur at the mouth and nose; the blood vessels are ruptured; the thin delicate membrane which encloses the brains is torn in pieces; the brains are altered in their appearance; the skin along the region where the fluid passed, is of a very black color, and driven into ridges; and speedy putrefaction takes place. In such cases life can never be restored; but where the organs have suffered no material injury, although considerable violence is done to the surface of the body, a cure may frequently be effected.

Treatment.—The treatment of the effects of lightning is thus laconically described in the Annual Report of the Royal Humane Society, for 1818:—

"When a person is struck by lightning, strip the body, and throw buckets full of cold water over it for ten or fifteen minutes; let continued frictions, and inflations of the lungs, be practised; let gentle shocks of electricity be made to pass through the chest, when a skilful person can be procured to apply them; and apply blisters to the breast."

In the extremely flaccid or soft and loose state of the muscles as well as of the blood, which succeeds a stroke of lightning, we should very naturally conclude that the application of cold water was strongly indicated; as this appears to be the most powerful means which are readily obtained, of restoring firmness and proper tone to the relaxed muscular fibers. At any rate, muscular relaxation from other causes, are known to yield to cold applications more promptly than to any other external means whatever; and hence appears the usefulness and propriety of dashing the naked body with cold water when injured by an electric shock. And as lightning is usually accompanied by rain, it would require but a moderate effort of the imagination to fancy that the All-wise Creator had so designed it that the means of preservation should accompany the dangerous element; as some are actually supposed to have been preserved by the falling of rain, when stunned to insensibility by lightning, in the open air.

Gentle shocks of electricity, when passed from the chest to the back, have been observed also to give firmness of tone to the relaxed fibres and to the blood; and from its surprising effects on poultry, upon which Abilgaard performed numerous expe-

riments, there is reason to believe it would have a beneficial influence upon the human system. But the cases to which this mode of affording relief can be applied, are so very few, that the great and most general dependence must be placed in the application of cold water; which, perhaps, to do the most possible good, ought to be continued until the skin and muscles have become sensibly firm and more contracted. But instead of the blisters upon the breast, as recommended in the Humane Society's Report, we would advise the application of vinegar in which pepper has been steeped, or of pepper-pods, as directed for rheumatism.

We also think that stimulants should be introduced into the mouth and intestines; for which we also have the authority of Dr. Good, who says, "stimulants of the most active kind ought to be resorted to without loss of time." We would therefore advise that the anti-spasmodic tincture be occasionally poured into the mouth, whilst stimulating injections are thrown into the bowels. After the patient has recovered his senses and power of motion, if the muscles remain relaxed, and the debility continues, the application of cold water may be repeated daily, with the use of the bitter and astringent tonics, until the health is perfectly restored.

TOOTHACHE.

This distressing malady arises from various causes, such as cold, rheumatic affection, the introduction of some foreign matter into the tooth when it is decayed, &c.

Treatment.—The application of something warm to the part, as a hot brick or rock, wrapped in a wet cloth, or holding the head over a steam having it covered with a blanket; bathing the face or jaw with pepper and vinegar, or applying to the face a paper wet with vinegar and sprinkled with cayenne; or holding heating substances in the mouth, such as the compound tincture of myrrh, pepper tea, &c., or chewing a small piece of the bark of Xanthoxylon, will be found of great benefit. [The same plan may be pursued in cases of ague, or pain in the face and jaw.]

The introduction into the diseased tooth, if it be hollow, of a little lint, or cotton wool, moistened with either the anti-spasmodic tincture, or oil of summer savory, oil of cloves, or of nutmegs, &c., will often afford relief. Previous to the application of any of these articles, the hollow or cavity of the tooth should be carefully cleansed of all extraneous matter; and if it be found necessary to renew them, the same precaution ought also to be taken at each renewal.

The most certain means, however, of getting rid of this painful disease is to extract the tooth. By having this done season-

ably, the adjoining teeth will be preserved from being affected with caries or decay from the diseased tooth. If toothache takes place in a sound tooth, it should not be extracted.

ULCERS.

Ulcers are defined, a solution of the continuity of the soft parts of the animal body; that is, a dissolving or separating of parts which are united. But in the popular acceptation of the term, an ulcer is understood to be an old, or a large sore.

They are produced by a variety of causes, and accompany several different complaints. Thus we have the *simple*, the *sinuous*, the *fistulous*, the *scorbutic*, the *scrofulous*, and the *venereal* ulcers, together with a few other distinctions which have been made by systematic writers.

The simple ulcer is that which takes place in consequence of slight wounds, and usually heals in a short time, without much attention.

The sinuous ulcer is deeply seated in the flesh, and opens to the surface by a small pipe or tube.

The fistulous ulcer is nearly similar to the sinuous, but the pipe or passage is smaller and generally longer, with its orifice or mouth and internal surface callous or hardened. Fistulous ulcers are most common about the anus.

Scorbutic ulcers are such as attend the scurvy, of which, as well as of the scrofulous, we have heretofore spoken. Venereal ulcers will be found under the proper head.

Treatment.—In ulcers of every kind, if the general health is impaired, the proper measures must be taken to restore it, at the same time that we make applications to the affected part. The means to be adopted to answer the first intention will, of course, depend upon the degree of debility or of indisposition which may be present. But in all bad or extensive ulcers, whether the health appears materially impaired or not, it will, in general, be advisable to administer occasionally a course of medicine: and this will be more especially necessary if the ulcer has been of long continuance, or is attended by a considerable discharge. By this means we not only purify the fluids of the body and dispose the ulcer to heal, but all the secretions and excretions are promoted, and the discharge by the ulcer is turned into its natural channel, and the sore may be healed without danger.

A general tonic and strengthening plan, in other respects, must be pursued, such as a daily use of bitter tonics, either the common or laxative, or the wine-bitters, together with moderate exercise.

External applications are also of much importance, and may

be varied according to the appearance or nature of the ulcer, which may readily be distinguished with but little attention or ob servation.

In general, poultices ought first to be applied in all cases, but especially to those which are painful or inflamed; and these should be renewed once or twice in twenty-four hours. If the weather be very warm, or the discharges great, it will, in general, be best to renew them twice; and if the weather be cold, or the discharges small, once will be entirely sufficient. A formula for making different kinds of poultices will be found under the proper head, in the compounds.

At each renewal of the poultice if the sore is very foul, first wash with mild soap suds, then with a tea of wild lettuce, dewberry root, witch-hazel, or the astringent tonic; and if the ulcer be a bad one, we may then apply the tincture of myrrh, and if still worse, it may be sprinkled with cayenne. The tea of the bitter-root is also highly recommended as a wash for ulcers, and we have no doubt of its efficacy.

In deeply seated ulcers, such as the sinuous, or the fistulous, a small syringe will be necessary in dressing them, as without this they cannot be washed out from the bottom. But in throwing in the fluid it should not be done with so much violence as to irritate the tender surfaces of the sore, which will make the washing more hurtful than useful; and this is more especially to be guarded against after the healing process has commenced.

The poultices should all be applied cold, especially if the sore be painful or inflamed, and occasionally wetted by pouring cold water, or any of the forementioned teas cold, between the poultice and the ulcer. This will remove the inflammation and relieve the pain. The poultice must be continued until the inflammation is subdued, and a discharge of healthy matter takes place. Healthy matter, or pus, very much resembles cream, both in color and consistence.

After continuing the poultices until the pain and inflammation are gone, and the ulcer discharges good matter, they may be discontinued, and the healing, or sumach, salve, substituted instead of them. Sometimes, however, healthy matter may be discharged whilst the sore continues red and inflamed. In these cases it is often advantageous to lay a plaster of salve on the ulcer, and then cover the whole with a poultice.

In sinuous, and particularly in the fistulous, ulcers, where the edges are callous, in which case the surface of the pipe approaches towards a gristle, after washing out as has been directed, the tincture of myrrh may be injected; and if it do not create a local action in the part, with a disposition to heal, we may substitute a tea of cayenne pepper, or even the anti-spasmodic tincture. Ulcers with callous edges, or with pipes, have lost that sensibil-

ity and activity in those parts, which render other ulcers sensible to the common applications which dispose them to heal. Hence it becomes necessary to apply more powerful stimulants to arouse the vessels to greater activity, as by no other means can a cure be effected. The tincture of lobelia is also a valuable external application for all kinds of ulcers. A strong decoction of *chestnut* leaves, used as a wash, several times a day, has cured some inveterate cases. An ointment made by bruising *sweet* or *Seneca clover*, and simmering it with fresh lard until the strength is extracted, strained and applied to the ulcer, is likewise recommended as exerting a specific effect.

There is another condition in which ulcers are sometimes found, of which it may be necessary to speak. Here, as in the callous ulcers, the action is feeble and languid, which is owing, perhaps, to the general debility of the constitution.

In the cases of which we are speaking, instead of the red or florid color of the surface of the sore, and especially of the *granulations*, there is a glassy, half-transparent appearance in the part. There is, in fact, an evident want of action and vigor in the ulcer.

Cases of this description, perhaps, might be best treated with warm stimulating poultices; and in addition to these, the stimulating washes recommended for the callous ulcer should be freely used, together with the tonic plan herein before advised, to promote the general health; and the diet, as in all other kinds of ulcer, must be rich and nourishing.

VENEREAL DISEASE.

The venereal complaint is very contagious, though it can only be communicated by actual contact. "The prevalence of this dreadful disease among mankind," says Dr. Gunn, "is another proof, amongst the many others that might be adduced, that it is the interest of mankind to be virtuous if they wish to be happy." Yet it has sometimes happened that the venereal disease was contracted innocently.

At what time, or place, this complaint had its origin, is unknown; but it first attracted attention in Europe about the year 1493, and quickly spread its ravages over large districts; and very soon to every commercial part of the world.

The most usual means by which the venereal disease is communicated is by illicit intercourse between the sexes; and hence the disgrace attached to it is such that many persons conceal their real situation until their constitutions are ruined.

The venereal complaint, strictly so called, may appear in two ways, either in ulcers, or, as they are commonly called, chan-

cres, on the privates, or the general health may first become affected; though this last is rare.

Chancres make their appearance commonly about the sixth day after the infection, though sometimes sooner, often later, and occasionally not till the lapse of several weeks, in the form of minute pimples of a peculiar kind, having a hard, inflamed base, of a pale red hue, and an irritable or painful point. This pimple soon opens with a very small hole, becomes ulcerated, and discharges a small portion of clear matter, which produces fresh chancres wherever it touches the skin.

Another symptom which succeeds the chancres, is swellings called buboes, which are supposed to be produced by the absorption of virus from the chancres, and is communicated to the inguinal glands situated in the groin, which become inflamed. These tumors, when first perceived, are small, but hard and fixed, and attended with an obtuse pain. They gradually enlarge, and the pain becomes more acute, which renders walking troublesome and unpleasant; and if they are not seasonably opened will burst spontaneously, discharging a considerable quantity of matter.

If the disease is not cured in this stage, the whole system, sooner or later, will be sure to become affected, when the very foundations of life are with quickness and certainty sapped, and existence itself rendered a burden to the unhappy patient.

The symptoms which attend the constitutional affection are, soreness and ulcerations of the tonsils, *uvula*, roof of the mouth, and tongue; which renders the voice hoarse and the swallowing difficult. Copper colored spots appear on the skin, which are at first scurfy, afterwards throwing off scales, and eventually produce scabs covering foul ulcers, which gradually grow deeper, and discharge an offensive matter.

The disease still continuing to advance, irregular shooting pains are felt through the limbs, which at night are so severe as to prevent sleep. The bones at length become diseased, and often swelled or enlarged, and finally grow rotten. The ulcerations in the back part of the mouth are still going on, and spread also to the adjacent bones of the palate and nostrils, which are gradually destroyed and carried away, rendering the speech imperfect, and flattening the nose to a level with the face.

At length the complexion becomes yellow, the appetite is impaired or lost, the hair falls off, the strength decays, a hectic fever sets in, and death finally comes to remove from the unfortunate sufferer his load of wo.

Treatment.—So soon as a person discovers that he or she has contracted this formidable complaint, which will be known by the appearance of the chancres, or ulcers, about the organs of generation, the part affected should be washed thoroughly

with the tincture of lobelia, or of myrrh, or both may be mixed in equal proportions. This application will produce a smarting, but, as Dr. GUNN says, "they are now on the stool of repentance," and must therefore prepare their minds to bear it. This washing should be strictly attended to three times a day, previous to which, however, the sores must be cleanly washed with soap suds. After each washing with the tincture apply a little lint, or salve, to the sore; and be careful to wash the hands, as bad ulcers have been formed on other parts by neglecting this wholesome process, after dressing venereal sores.

As an internal remedy, we would advise a tea-spoonful, or more, of the tincture of lobelia, with half the quantity of cayenne, at night on going to bed, and a hot stone should be placed at the feet to promote perspiration. During the day, the patient may drink freely of strong tea of sarsaparilla, and three or four times in the day take a dose of the laxative bitter tonic; and twice a day he may take a dose of half a tea-spoonful of balsam of fir on sugar, which will be more especially necessary if there be any discharge from the penis, or, in case of a woman, from the vagina, or from the urinary passage. In cases of these discharges, it has also been found useful to inject into the urinary passages a strong decoction of the astringent tonic with more or less of the tincture of myrrh in it; and we have no doubt the tincture of lobelia, or the tea of wild lettuce, might also be profitably employed.

If this course be adopted early in the disease, it will perhaps never fail of effecting a cure; but if the constitutional symptoms, as they are called, have made their appearance, which we have heretofore described, the course of medicine must be resorted to, and repeated as the case may demand; at the same time continuing the external and other remedies, as before directed. And if ulcers break out, they must be treated agreeably to the directions under that head.

If a gleet, which is a discharge from the *urethra*, remain after the disease is removed, which sometimes happens when treated by mercury, the general plan herein directed, as to internal remedies, and particularly the use of the fir balsam, and injections into the urethra, should be advised, together with the application of cold water to the part.

It has been usual to confound *clap* or *gonorrhœa* with the disease of which we have been treating; though by the most learned modern authors it is considered as a distinct malady. The symptoms are, burning and scalding sensations in the urethra, in making water, which are pretty soon succeeded by a discharge of matter from the same part, at first of a white color, then yellowish, and finally it becomes of a greenish cast The cure for this is the same as that recommended for dis-

charges from the urinary passages, in the venereal complaint and gleet, together with careful attention to keeping the penis washed clean from the matter which is discharged from it.

WHITE SWELLING.

This is a most dreadful disease, seated commonly in the knee joint, though sometimes in the ancle, or in the wrist, or elbow. It takes its name from the circumstance of there being no inflammation or discoloration of the skin which covers the swelling, and seems to be a complaint partaking of the nature of both scrofula and rheumatism; and may often be said to unite the horrors of both. The disease, in fact, is distinguished by authors into two kinds, the rheumatic, and the scrofulous, as it shows symptoms of one or the other of these affections.

In the rheumatic species of white swelling, which is its mildest form, an acute pain is felt extending over the whole joint, and sometimes along the muscles which are connected with it. A swelling of the part also at the same time commences, which, in different patients, progresses with different degrees of rapidity; but the joint is always sufficiently swollen to cause a perceptible difference of size between it and the corresponding one of the sound limb. The skin which surrounds the swelling generally becomes considerably tense; but there is scarcely ever any discoloration of it at this stage of the disease.

Any motion of the joint causes, from the first, a considerable increase of pain; and the patient always finding most relief from pain when the muscles are relaxed, keeps the limb in a bent posture, which generally becomes stiff in this position.

The swelling now increases with greater rapidity, and the joint frequently enlarges to twice or thrice the natural size; the limb, both above and below the affected part, wastes away, though sometimes it becomes dropsical; the pains are more severe and intolerable; and finally, perhaps, abscesses form in various parts of the swelling, and break out into bad ulcers; which are very similar in their character to those treated of under the head of scrofula.

In that species of the disease termed the scrofulous, the pain at the commencement is more acute and confined to a particular point, most frequently to the very middle of the joint; but the swelling is less considerable than in the rheumatic species.

An increase of pain on motion, and a stiffness of the joint takes place, in this as in the other species, and as the disorder advances, the pains increase in violence and the swelling becomes more considerable; the ends of the bones appearing to partake of the disease, they also are enlarged. In time, the

swelling in this form of the disease assumes the same appearances as it does in the rheumatic kind; and in both, the constitution becomes equally affected, and both may have the same termination; that is, death, unless their progress is arrested by the use of proper means.

TREATMENT.—In general this may be the same as that prescribed for scrofula, to which the reader may refer. In addition to this, we subjoin the following curative means, extracted from BEACH'S "American Practice," a part of which the author says was obtained from an Indian native:—

If a cure is attempted before suppuration has taken place, he recommends an attempt to disperse the swelling by steaming it in the following manner:—Take of catnip, hearts of mullen, wormwood and mayweed, two double hands full of each, and of soft soap, one pint; boil in six quarts of water until the strength is extracted from the herbs. Then place the affected joint over the steam arising from this decoction, for fifteen or twenty minutes, covering it with a blanket in such manner as to confine the vapor to the diseased part. We would recommend, in order to make the steam more lively and penetrating, and of course more useful, that a red hot brick, or rock, be occasionally placed in the decoction of herbs.

Immediately after this local application of vapor, he directs the part to be bathed with an ointment made by dissolving half an ounce of camphor in half a gill of spirits, to which is added a large table-spoon full of *laudanum*, simmered in the marrow of three hog's jaws, or a small quantity of lard or sweet oil.

This course is directed to be repeated daily, but he says not how long, though we suppose for a reasonable time, when if it do not disperse the swelling, then apply a strengthening plaster. We must be permitted to observe that we do not recommend the *laudanum*, but only introduce it as a part of Dr. BEACH'S remedy; instead of which we would advise the same quantity of the anti-spasmodic tincture.

If the foregoing treatment does not remove the complaint, he directs a poultice to be made, for promoting suppuration, as follows:—Take dandelion roots, hearts of mullen, catnip leaves and flowers, of each a handful. Bruise, and boil in sweet milk, thicken with pulverised slippery elm bark to a proper consistence for a poultice, and apply to the diseased joint about blood warm. The steaming must still be continued as before directed, at evening, immediately after which the poultice is to be applied, and so continued daily until suppuration takes place, with a free discharge of matter, and the inflammation has subsided. When the ulcer assumes this condition, it should be dressed with salve until healed. Or it may be otherwise treated in the general method recommended for scrofulous and other ulcers.

We cannot omit observing, however, that in most cases of this painful malady, an occasional course of medicine, in addition to Dr. Beach's treatment, will be found beneficial, and should therefore be resorted to at the discretion of those concerned.

WHOOPING COUGH.

This disease is mostly confined to children, being usually propagated by contagion, and is attended with a suffocative, convulsive cough, and a deep shrill sound termed a whoop, from which it takes its name.

Whooping cough commonly comes on with some little difficulty of breathing, thirst, and a gentle quickening of the pulse. Next succeed a hoarseness and cough, with difficult expectoration. These symptoms continuing for a while, they become more marked, and the disease assumes its characteristic form.

Expectoration at first is very moderate, but gradually becomes more copious, though it is always viscid or tough. The peculiar difficulty and great exertions in coughing, bloat the face which turns purple, and the eyes swell and become prominent. Vomiting often attends the fits of coughing, which is a good symptom, and is frequently succeeded by a craving for food.

The duration of whooping cough is very uncertain, lasting from a few weeks to as many months, or even a whole year, going off gradually, and often imperceptibly. And however tedious or distressing it may be, it seldom proves fatal, excepting to very young infants, or such as are debilitated by other diseases.

Treatment.—Attention in this case must be given to the means of loosening the cough, and allaying the spasmodic irritation. For either of those purposes, and especially for the first, emetics have always been found the most serviceable; to accomplish which, a tea-spoonful, or more, of the tincture of lobelia may be administered towards bed-time; and previous to retiring to bed, half a tea-spoonful, or more, of the tincture of lady's slipper or the nervine tincture should be given. During the day, if the cough be troublesome, the child ought to drink frequently of a tea of the diaphoretic powder, made very sweet, to which plenty of cream should be added to make it palatable.

The skunk-cabbage root pulverized, is also a valuable remedy in whooping cough. It is both loosening to the cough and quieting to the nerves, and may be given in doses of a fourth or half tea-spoonful, once or twice a day. Stimulating washes, such as the pepper sauce, bathing drops, &c. frequently afford great benefit by being applied, with gentle friction, along the back bone, breast bone, or the lower region of the stomach. It may also be advisable to bathe the feet in warm weak ley, as often,

at least, as every evening, and afterwards apply drafts of bur-dock, skunk-cabbage, or horse radish leaves, &c.

If, however, the symptoms become violent, or attended with much debility, we may administer a course of medicine, and repeat it as the circumstances of the case may seem to require; and in the latter stages, the bitter tonic should be resorted to, as a means of giving tone to the whole system; for which purpose the cold bath has also been highly recommended. When costiveness attends, in any stage, it should be removed by injections; physic having been found to afford no alleviation to the most urgent symptoms. In general, when there is little or no looseness of the bowels, the best injections for children are made of catnip tea, with the addition of a little tincture of myrrh.

WORMS.

Not only the human body, but also the bodies of other animals, are liable to have their intestines infested with worms. There are three kinds most usually met with in man. These are the small white worm, called also *ascarides;* the long round worm, or *teres;* the tape worm, or *tænia*, which is a white, flat worm, consisting apparently of joints, and is frequently of great length; some of which are reported to have been thirty, forty, and even sixty feet long.

The different kinds of worms are represented as choosing different portions of the intestines to live in; for instance, the small white worm selects the rectum; the round worm, the small intestines, and sometimes the stomach; and the tape worm, the whole intestinal tube.

The cause of worms may fairly, we think, be attributed to a weakness of the digestive powers, and debility of the intestines; which may also be assisted by unwholesome food, and a weak, vegetable, and debilitating diet. It is a disease most common to children, but is often met with in grown persons, particularly those of a relaxed habit, whose digestion is weak, and who live much upon a milk and vegetable diet.

The symptoms indicating worms are extremely various and contradictory, often imitating many other complaints. But in general, some one or more of the following will be found present in such cases:—Headache, dizziness, disturbed sleep, appetite sometimes lost and sometimes greedy, pains in the stomach, gripings, looseness, very disagreeable breath, gratings of the teeth during sleep, which is often disturbed by frightful dreams, picking at the nose, a peculiar paleness or whiteness about the mouth, hardness and fullness of the belly, short dry cough, heat and itching about the anus, nausea, fever, and sometimes convul-

sions; but the most certain evidence of worms is their ejection from the bowels.

TREATMENT.—In the cure of worms, three objects ought to be kept in view:—First, cleansing the intestinal canal of whatever morbid matter may be retained in it, and which probably may be the element in which the worms live; secondly, strengthening the system generally, and the intestines particularly; thirdly, destroying the worms by the use of those medicines termed vermifuges or anthelmintics.

Of the two first objects, that of cleansing the canal, and of strengthening the system, we know that we possess the means of accomplishing them, at least so soon as the irritation of the worms has ceased; but the vermifuge medicines are of doubtful character; and moreover, those articles which are known to kill worms when applied to them out of the body, are as well known to weaken the tone of the stomach and intestines when taken internally, and consequently have a strong tendency to defeat the other intentions of cure.

These different remedies may all be used at the same time, or at least, we need not wait until one object is accomplished before we attempt another.

The course which we have found, in general, to have the best effect in curing worm complaints, is to give the butternut syrup, in sufficient quantity to produce a free and thorough evacuation of the contents of the bowels, and during the operation, as well as afterwards, to make use of a strong tea of the poplar bark, with the addition of a little cayenne pepper. By pursuing this course we have succeeded in curing several very alarming cases of fits arising from the irritation of worms. In each case of this kind, however, the stomach had been previously well cleansed by an emetic of lobelia.

The Carolina pink has acquired considerable fame in the cure of worms, and we believe not without just cause. Two circumstances, however, we think, have conspired to injure the character of this valuable herb:—the one is, that by keeping long [*Thacher*] it loses its virtues, and hence frequently fails in producing the desired effect; the other is, that some other poisonous weed has sometimes been gathered with the pink, and when steeped and given along with it, has produced very alarming effects. This weed is said to be a vine, and in order to avoid hazard, the pink, before being steeped, should be carefully picked over, and every thing else rejected.

If the case be a bad one, we may first administer an emetic, and then commence giving a strong decoction of the pink made very sweet, when the child will often relish the taste of it so well as to drink enough of its own accord. If it appears, however, likely to drink an unreasonable quantity, it should be restrained.

but it may take from one to three pints in twenty-four hours, when it must be smartly purged with the butternut syrup. The poplar bark tea, as before directed, or the bitter tonic, in decoction or in wine, may be used during and after the operation, giving it three or four times a day.

Instead of the pink, we may, if we choose, give the cowhage; the stiff hairs of which are to be scraped from the pods and mixed with syrup or melasses until they have become thick, and a tea-spoonful or more must be administered to the child for three successive mornings; when it should be followed by a purge of the butternut syrup, and the bitter tonic as before directed.

The oil or spirit of turpentine, has also been highly recommended, as well as the oil of wormseed. The spirits of turpentine may be given in doses of half or a whole tea-spoonful, or even more, which may be repeated for two or three days, when it should be followed by the butternut syrup and bitter tonic, as before directed. The oil of wormseed may be given in doses of one drop to each year of the child's age, up to eight or ten years, when the quantity may be less in proportion. Drop the oil on a lump of sugar, and grate it into a table-spoonful or more of water, and repeat it morning and night for three or four days, when it must be followed by the butternut syrup to purge the bowels, and the bitter tonic to restore their tone. Spirits of turpentine and oil of wormseed combined, and applied externally to the bowels, we have no doubt would be found highly efficacious.

Charcoal, it is said, according to the latest and most enlightened experience of the medical schools of Europe, is a valuable medicine for worms. The mode of giving, or the quantity to be given, we have not seen stated, but as the article possesses no dangerous powers, fears need not be entertained in using it. It sometimes happens that worms ascend into the throats of children, and choke them; in this case a little salt dissolved in water, may be given with happy effect. Any of the preparations mentioned under the head of "anthelmintics," may be advantageously used in this complaint.

YELLOW FEVER.

This fatal and most distressing disease is confined either to the hot climates of the South, or the hottest seasons of the more temperate regions of the North.

Yellow fever appears, at least in its present malignant form, to be a modern disease. It was first noticed in the island of Barbadoes, in the year 1647, and soon after made its appearance in various other islands of the West Indies; and, in 1693, in

Boston. In 1699 it visited Philadelphia and Charleston, after which it made its appearance in both those places several times between the years 1732 and 1748, during which last year it also appeared in New York.—[*Dr. Currie.*]

The next appearance of this fatal epidemic was at Philadelphia, in the year 1793, just one hundred years after its first visit to the then British colonies in North America, at Boston. Since that date it has several times made its appearance in both Philadelphia and New York, as well as many other places along the sea-board.

The yellow fever is by some considered as only a more intense form or higher degree of remittent fever, whilst others regard it as a distinct variety, or even species, of fever.

Yellow fever makes its attack with a diversity of appearances and symptoms, some of which are common to all fevers, and others peculiar to itself. Occasionally the symptoms are very mild; but more commonly they are violent and distressing from the beginning. We cannot perhaps do better in describing this disease than to abridge the account given by Dr. Currie, who had several times witnessed its ravages in Philadelphia.

In general, says he, it attacks suddenly, without any previous indisposition, with a chill, pain in the head and limbs, sometimes sickness at the stomach, the eyes are red and painful, the pulse often full and frequent soon after the cessation of the chill, when the skin becomes very hot, face flushed, great oppression and stricture about the breast, extreme restlessness, and frequent sighing.

The heat of the skin, and pain in the head and limbs, usually increase during the first thirty-six hours, and then gradually decrease for the same length of time; so that at the end of seventy-two hours, the patient is sometimes entirely free from all symptoms of the disease, and a speedy recovery takes place; but more commonly there is only a short and partial remission, which in a few hours, is followed by a far more distressing train of symptoms, particularly a burning sensation in the stomach, accompanied with almost constant sickness, and straining to vomit. The pulse now becomes small, quick, and irregular; the stomach painful on pressure; and generally a costive state of the bowels.

These symptoms, if not relieved by proper means, continuing to increase, are, in a short time, succeeded by a cessation of pain and fever, and a vomiting of a flaky, dark colored matter resembling coffee grounds, or a mixture of soot and water. This matter, which is called the black-vomit, is usually thrown up at short intervals, and appears to contain more fluid than has been drank.

In this stage of the disease, during the intervals from vomiting,

the patient feels so much ease that he imagines himself out of danger, and converses fluently, though often incoherently, sometimes getting out of bed and walking the room, but is soon exhausted and obliged to lie down. Convulsions, or lethargy, generally follow these exertions, and the scene is quickly closed by the curtain of death!

The symptoms which distinguish this fever from every other that has appeared in this country, says Dr. CURRIE, are the suddenness of the attack, commencing in most cases without any preceding lassitude or indisposition; the redness of the eyes and flushing of the face, and the long duration of the paroxysm, being generally thirty-six hours before any considerable abatement takes place. To this may be added, the new and severe train of symptoms which soon follow the remission, the golden yellow color of the skin, and black vomit.

In some instances, however, instead of the black vomiting, the patient becomes comatose or sleepy, and dies without a struggle; whilst in others, putrid symptoms of a most virulent character occur, and bleeding takes place from the nose, mouth, eyes, ears, or bowels, and even from parts where blisters have been drawn. In the first stages of the disease, as it occurred in Philadelphia, the tongue was generally covered with a white fur resembling a piece of white muslin. After the third or fourth day the tongue was brown and much drier; but when the black vomiting occurred, it became moist, and nearly as clean as in health.

TREATMENT.—Attacks of yellow fever, require, in general, the most prompt and efficient treatment. In the early stages, if the strength be not greatly impaired, nor symptoms of putrefaction make their appearance, a mild purgative may be administered. But if the attack be violent, and attended with great prostration of strength, or if there be symptoms of putrefaction, our reliance for cleansing the intestines must mainly be placed on injections.

To allay the excessive heat and dryness of the skin, the alkaline wash, so highly recommended by Dr. ROGERS and others, might be resorted to, and repeated at discretion. This wash is directed to be made by dissolving one and a half table-spoonfuls of pearl-ash in three gills of hot water, with which the body and limbs are to be washed. Simple cold water has been highly recommended for the same purpose, and used, we are told, with very beneficial effect. In conjunction with either of those remedies, we ought to administer frequent doses of the diaphoretic powders, or cayenne, mixed with warm aromatic teas, such as pennyroyal, catnip, &c., to promote perspiration. Some cases are related, where simply a strong decoction of boneset or thoroughwort, taken freely, effected a cure.

When black vomiting has come on, the case is considered as

hopeless, though some have recovered even in this stage. Dr. CURRIE observes, that this dreadful symptom has more frequently been relieved by a mixture of equal parts of lime-water and new milk, taken in doses of from one to four table-spoonfuls every hour or oftener, than by any other remedy.

But the great dependence in all stages of this terrible malady, must be in repeated courses of medicine; and the earlier in the disease they are employed, the better. The alkaline wash, as well as the cold water, may likewise be used between the courses, together with the usual means of stimulating the system and promoting perspiration; such as the cayenne pepper, diaphoretic powder, the application of hot bricks, or rocks, stimulating injections, &c. If pains in the stomach, with nausea, arise, the region of the stomach ought to be bathed with the bathing drops, or pepper and vinegar, or a large poultice of mustard may be applied to it; and if putrid symptoms make their appearance, a free use must be made of the pepper sauce and tincture of myrrh.

The room in which the patient is confined ought to be well ventilated, that is, have a suitable admission of pure air; and the floor should be frequently sprinkled with vinegar, or with camphor, and the stools immediately removed, as well as every thing else of a filthy nature. The clothes of both body and bed, must be frequently changed and kept clean.

During recovery, the patient should make liberal use of the wine-bitters, or he may take the bitter tonic in any other form; and live on a nutricious, wholesome diet; carefully guarding against relapses.

CONCLUSION.

We have now brought our description of diseases, or rather the different symptoms of disease, with the method of cure, to a close. In the performance of this part of our work, we have availed ourselves of the privilege which all authors of popular medical works have assumed, since the days of Dr. Buchan, of borrowing either the ideas or language, or both, of preceding writers. Indeed, so much has been written upon this subject, that a medical treatise cannot now be attempted without servilely copying, or otherwise falling into the track pursued by one's predecessors.

It may possibly have been anticipated by some of our readers, that the method laid down for the treatment of disease would have been more diversified and extensive, in consequence of the advantages which have been derived from experience, and the mass of materials in our possession. We will remark upon this point, that we fully expected ourselves, to have introduced a much greater variety into this department, but were deterred, chiefly, from the following considerations, which we deemed important:—

The materials which we had with much labor and considerable expense collected for the work were mostly in a detached or unconnected form, and, therefore, required much time and careful attention to enable us to introduce them in a proper manner into the work. To this we may also add, that many of the articles and compounds, which we contemplated publishing, were untried by ourselves, and therefore we could not speak of them with that confidence which is so desirable in a matter of so much importance to the health and well-being of the human family. Some articles that we intended to introduce were, moreover, on such authority that we could not consistently give them a formal introduction under the head of treatment, although we have reason to hope they may prove highly valuable.

Before any thing is thus recommended, we think it ought to be well tested by competent persons, upon whose authority the fullest reliance may be placed. We, therefore, concluded to arrange the greater part of the knowledge we had thus obtained, and which we originally contemplated introducing into the treatment of diseases, under appropriate heads in the materia medica. The attentive reader will there find them, with their mode of preparation and manner of using, as well as a

statement of what cases they have been found useful in; and by a judicious application he will be enabled to form a correct estimate of their value.

We will take the opportunity of expressing the obligations which we feel ourselves under to numerous individuals, who have so generously assisted us, by communicating their knowledge and experience, in aid of this work; and they will please accept our thanks for this, the same as if their names were here mentioned.

It is not our intention, however, by any means, to give publicity to all the recipes and other communications which have been so kindly furnished us, but will select such only as appear most likely to be generally or extensively useful.

We deem it proper further to observe, that in describing the symptoms of disease, it is utterly impossible to give a description of any particular complaint, that will always apply in every case to the disease intended to be described. Symptoms oftentimes occur which it would be in vain to attempt a description of; whilst in other cases, many of those which are described may be wanting. It is only by taking them in a group and comparing them with the general train of symptoms, that we shall be enabled to give a correct *name* to the disease; in which, however, the best read physicians frequently disagree; and hence arises the most disastrous consequences by administering poisonous medicines which, even in the practice of those who approve of them, may be wrongly and very improperly used. But there is nothing of this in a practice where poisonous medicines are excluded.

If a person becomes sick, we go about restoring him to health, regardless of *names;* if we know the name, well; if not, we are not deterred from administering medicines, either a single article or a full course, according to the *urgency* or *violence* of the symptoms. And hence we are constrained to acknowledge, that all the lengthy and tedious descriptions of disease which swell the countless volumes written upon medicine, are comparatively of little value. Even the trouble that we have taken, and the expense which we have incurred in collating, revising, and publishing the descriptions given in our own book, we regard more as an offering upon the altar of public prejudice, fashion, and folly, than as a really useful and intrinsically valuable addition to the general knowledge of the nature of disease, and of the general method of treatment and cure.

We will conclude by referring the reader to the common *course of medicine*, and general mode of *treatment*, in all alarming cases, rather than to vain attempts at giving a correct

name to the disease, which is a matter of small consequence compared with the knowledge of the means of effecting a cure.

The course of medicine, so often referred to under the head of *Treatment*, will be found very particularly described in a succeeding part of this volume; together with all the general directions necessary to enable almost any person, aided by common sense and a little experience, to cure the usual maladies incident to a family.

NEW VEGETABLE MATERIA MEDICA

The original plan for the arrangement of the articles constituting this department, was to place them in classes agreeably to the classification proposed in the first volume; but we soon found this would require much time, reflection, and attentive discrimination; more, indeed, than we could possibly bestow. We discovered, moreover, that so much difficulty would attend the classification of many valuable articles which we intended to introduce, that the advantages would not, at this time, repay the labor. Yet we will not conceal our firm convictions that important advantages might result from the classification of medicines according to their most obvious effects upon the system. Its tendency would be to simplify the healing art, and thus render it more intelligible to the whole community; which ought to be the grand object and aim of every person who attempts to write upon this subject.

We have abundantly shown, as we trust, that the indications to be answered in the treatment of disease, are few and easily comprehended; and now if all the various articles calculated to answer each one of those indications could be thrown together under one head, how much more easy would it be for an individual, having but a slight knowledge of medicines, to understand and apply them. The practitioner, or the family, could at once refer to the class from which he or they wished to make a selection, and choose such as appeared most appropriate to the case. There would be something highly systematic, beautiful, and yet simple in such an arrangement; and we hope, that ultimately, the advancement of medical science will lead to this important result.

In this, as well as in the preceding part of the present volume, we have drawn our descriptions, and all other important information, from every accessible source, and hope that we shall be pardoned throughout, for crediting but few quotations or authorities which we thought proper to use. The works principally consulted are, Thomson, Rafinesque, Rogers, Thacher, Bigelow, Barton, Cullen, and Smith.

The reader will observe, that in the Materia Medica, the first name, in *capitals*, is the systematic, botanic, or technical term by which the article is distinguished; after that follow the common names, of which most plants can boast more than one, and oftentimes several different vegetables bear the same name. From this source originates a great deal of confusion, which the invention of botanical names, and a more exact method of describing plants, was intended to correct.

It may be proper to observe, however, that some very valuable plants, which will be introduced into this work, were derived from persons whose opportunities did not enable them to give correct botanic names; nor have these articles, so far as we know, been introduced into any botanical work hitherto published. We have, therefore, been under the necessity of giving them such names as were furnished us, and content ourselves with recording their virtues. Some of them were also derived from the Indians, and for some of these no names are known amongst the whites.

[Since the publication of the second edition, we have been enabled to obtain the botanical names of most of the plants just alluded to, and have also corrected many others which, from difficulties inseparably connected with works of this kind, were erroneously given. In the performance of this duty, we feel it incumbent upon us, to acknowledge the disinterested assistance of Dr. J. L. RIDDELL and I. A. LAPHAM, and to the former more particularly for his services in correcting many of the descriptions which were either too brief, or otherwise defective.]

ACIDUM ACETOSUM.

Common name—VINEGAR—ACETOUS ACID.

VINEGAR was known many ages before the discovery of any other acid, excepting those which exist ready formed in the different kinds of vegetables, particularly in sour fruit.

This agreeable, pungent acid, is produced by the fermentation of saccharine matter or sweet vegetable juices, such as cider, wine, beer, sap, &c. The process by which vinegar is formed is termed the acetous fermentation, which is nothing more than the absorption of oxygen gas from the atmosphere.

From the mucilaginous impurities which all vinegars contain, they are apt, on exposure to the air, to become turbid and ropy, and finally, entirely spoiled. This inconvenience may be remedied by boiling the vinegar for one hour, in open bottles placed in a kettle of water over the fire; after which they are to be kept corked.

Vinegar possesses strong antiseptic powers, and is hence employed, to correct the putrid tendency of the fluids in putrid and pestilential fevers, and in scurvy. Mixed with water, it makes not only an agreeable but a useful drink in all *febrile* diseases. It is also useful to settle the stomach in cases of nausea or vomiting; and administered by injection is said to be useful in costiveness. It is also very serviceable in obviating the poisonous effects of vegetables, particularly those which are termed the narcotic poisons.

In dysentery, vinegar in which salt has been dissolved, is recommended as a valuable remedy. It is prepared and used as follows:—

Take any quantity of vinegar and add to it as much salt as it will dissolve; to one table-spoonful of this mixture add two of hot water, and give to the patient at a dose, to be frequently repeated. The same mixture may also be applied to inflammations, swellings, sprains, &c.

The vapor of vinegar inhaled into the lungs, is useful in all diseases of these organs, as well as of sore throat; and diffused through the rooms of the sick, it corrects the putridity of the air, and renders it more wholesome and agreeable to both patients and attendants.

AGRIMONIA EUPATORIA.

Common names—Agrimony, Cocklebur, Stickwort.

Common agrimony has a perennial root, with a rounded hairy stem, growing from one to two feet high; leaves alternate, rough, ragged, hairy, and unequal, lower ones the largest. Blossoms yellow, growing on a long terminal spike, which is a continuation of the main stem; producing a small green bristly bur, which often sticks to clothes that come in contact with it.

The root of agrimony is a mild astringent tonic, and may be used in tea for bowel complaints, fevers, &c. The leaves have also been employed for the same purpose, and are said to be useful for jaundice, scurvy, &c. We have also heard this herb highly spoken of as a remedy for worms. "Taken in tea, of both root and herb," says Dr. Elisha Smith, "for a long time, it will almost invariably cure the scrofula." He also recommends it in gravel, asthma, and cutaneous diseases. "The best way to take it is in a strong decoction, sweetened with honey."

ALCOHOL.

Ardent Spirits—Spirit of Wine.

Alcohol is the pure unadulterated spirit, or stimulating, intoxicating principle of whisky, brandy, and all other kinds of inebriating drinks. It is formed during the process of what is termed the vinous fermentation, which can only in general take place in fluids impregnated with sugar. Wine, cider, beer, and all sweet juices of vegetables, by passing through the vinous fermentation, generate alcohol; and in order to procure it in a more concentrated form it is distilled, and the alcohol being more volatile than the water with which it is mixed, on the application of heat it rises and passes off through the worm or pipe, leaving the greater portion of the water behind. The materials from which the spirit is made give to it different names. Thus, spirit made by the distillation of the fermented juices of fruits, as wine, or cider, is called *brandy*, when of the juices of plants, as the sugar cane or sap of maple, &c., or rather from the sugar or melasses manufactured from these substances, it is called *rum*; and when from malted grain, as barley, rye, &c., it is called *whisky*. But notwithstanding that pure alcohol is so much lighter or more volatile than water, it cannot all be distilled off from the fluid which contains it, without more or less water passing over with it. Hence, in order to obtain the alcohol more pure, whisky or brandy must be re-distilled.

AGRIMONIA EUPATORIA, (Agrimony).

ALETRIS FARINOSA, (Star-grass).

Equal quantities by weight of pure alcohol and water form proof spirit, which is extensively used as a *menstruum* in medicine and the arts. Many substances do not yield their medicinal properties to water, which are nevertheless readily given out to, or are dissolved in, proof spirits, or in alcohol. Medicinal *resins*, can only be dissolved by alcohol, and *gums* by water. The virtues of plants reside sometimes in resin, sometimes in gum, and sometimes in both. Hence the menstruum, or solvent, must be varied according to the qualities of the article. But in general, for making tinctures, proof spirits are used; the alcohol dissolving the resinous, and the water the gummy parts. Alcohol is employed in tincturing camphor, myrrh, &c., and is also used for dissolving the vegetable oils, and thus are produced the various essences.

ALETRIS FARINOSA.

Common names—Stargrass, Blazing Star, Aloeroot, Mealy Starwort, &c.

Root perennial, small, branched, crooked, blackish outside and brown within. Leaves radical, from six to twelve, spreading on the ground like a star, lanceolate, entire, very smooth, with many longitudinal veins, ends of the leaves sharp, pale green, about three or four inches long. Stem round, erect, from one to two feet high, naked except a few scattered bracts or scales, ending in a long spike of white, somewhat scattered flowers. Found in almost all parts of the United States, growing on poor dry soils in open situations on hills, prairies, and borders of woods.

The root is the part employed as medicine, being a very bitter and valuable tonic and stomachic, promoting, in small doses, the appetite and digestion, but in larger ones is apt to produce nausea and vomiting. The bitterness appears to reside in a resinous matter which is fully imparted, in tincture, to alcohol, which it renders extremely bitter; whilst water is rendered much less so. The tincture becomes turbid by the addition of water.

The stargrass may be given in tincture, decoction, or substance, though the first and last forms are undoubtedly the best; or it may be incorporated into cordials or syrups. A dose of the powder should not exceed half a tea-spoonful. It is useful in all cases of debility and loss of appetite, fevers, colic, and rheumatism.

It may not be improper here to observe that a plant was introduced into the first and second editions of this work under the name of *aletris alba*, so similar to this in its external appearance

as to be readily confounded with it by careless observers. The plant alluded to proves to be the *helonias dioica*, which see

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ALKALI.

UNDER this head we shall include all the alkaline articles, most commonly used in medicine—such as chalk, soda, and lime. Their use is to neutralize acidity, which renders them peculiarly proper in dyspepsy, as well as in all diseases attended by, or arising from sourness of the stomach. In administering alkaline draughts, for acidity of the stomach, much pain is occasionally produced by the gas generated in the process of neutralizing, as we see in mixing a glass of soda water. To prevent this unpleasant symptom, the alkali should be taken in small quantity at a time. Administered by injection, alkalies are said to allay tenesmus like a charm.

CARBONATE OF SODA.

Soda possesses, in general, the same properties as pearlash, but is much less caustic or biting to the taste. A solution of it is an excellent gargle for cleansing the mouth, gums and throat, both in the diseased and in the sound state; at the same time whitening the teeth, and dissolving those incrustations called tartar, which often form upon them, without injuring the enamel. A small quantity of this solution, occasionally swallowed, after washing the mouth, effectually removes a bad breath.

CARBONATE OF POTASH, OR PEARLASH.

A solution of pearlash is very serviceable in acidities of the stomach, and in all complaints arising therefrom, such as cholera morbus, diarrhœa, dysentery, headache, &c. A diluted solution drank warm, in bed, is good to promote perspiration, and if it does not act in this way, it generally goes off by urine. A wash of pearlash is an excellent external application in fevers, neutralizing the septic acid, and softening the skin, which gives a tendency to the flow of perspiration.

Pearlash is often employed in a neutralized state, that is, dissolved in vinegar, to allay irritation, to check vomiting, and to promote perspiration.

BICARBONATE OF POTASH, OR SAL ÆRATUS.

The *bicarbonate of potash*, commonly called *sal æratus*, is milder and more agreeable to the taste, than the pearlash, and may be used for the same purposes, in its stead.

Sal æratus is manufactured in New England in distilleries and breweries, by suspending pearlash in an open vessel over the

beer or wort whilst fermenting, whereby it becomes exposed to and combines with the carbonic acid gas which escapes from the fermenting beer. In this way the pearlash will become saturated with the carbonic acid in the course of five or six weeks, when the process is completed.

CARBONATE OF LIME, OR CHALK

This article is very highly extolled by some as a remedy in cholera morbus, and is also very useful in diarrhœa, as well as all cases of acidity of the stomach. It may be taken in doses of one tea-spoonful or more. Chalk is sometimes applied externally, to scalds and burns, by sprinkling the powder on the affected part. The preferable kind for any of the above purposes, is probably that which is termed "*prepared chalk.*"

CALX, OR LIME.

Lime, as it exists in common lime-stone, in chalk, and marine shells, is combined with carbonic acid, which neutralizes its alkaline qualities, and prevents it from slacking. The carbonic acid is driven off in the form of gas, during the process of burning, when it is converted into what is called quick-lime.

Lime dissolved in water, is esteemed a very valuable remedy in dyspepsy, and in all cases of acidity and debility of the stomach. By some it is esteemed much superior to pearlash. Possibly this might be useful in worm complaints, to dissolve the mucus in which those vermin are said to reside.

To make lime water, take of fresh burnt lime, four ounces; cold water, two quarts; first slake the lime, and then put the lime and water immediately into a large bottle, cork tight, and shake well together. After the lime has all subsided at the bottom of the bottle, shake it up again, and repeat this eight or ten times, when it will be fit for use. When wanted for use, pour off, carefully, about a tea-cup full of the water and add to it half the quantity or more of sweet milk, which may be taken as a dose, to be repeated several times a day. The milk covers the biting taste which it otherwise would have, and renders it not disagreeable.

ALNUS SERRULATA.

Common names—Tag Alder, Black Alder.

Tag alder is a perennial shrub or bush, rising to the height of from five to ten feet, many shrubs growing from the same root, bearing a large, roundish, or rather obtuse, dark green leaf, with tags or cones somewhat similar to witch-hazel. Found in wettish lands, or along streams.

The tag alder is a very good tonic. The tags, bark, boughs,

or leaves may be taken freely in strong tea, and are very valuable in all diseases of the skin, particularly for boils, which by a timely use of the alder, may often be prevented from suppurating or coming to a head. It is made much use of by herbalists for all eruptions and humors of the skin, with great success.

Externally, in poultice, it is used by the Indians, for swellings, strains, and the leaves bruised and applied to women's breasts, repels milk. The cones and twigs made into a salve by boiling in water and then adding lard or butter, make an excellent ointment for burns and scalds, and probably for other sores. Cloths kept constantly wet in the strong tea, and applied to hot swellings, afford much relief.

AMARANTUS HYPOCHONDRIACUS.

Common names—Amaranth, Prince's Feather, Lovely Bleeding.

The amaranth is an annual plant, much cultivated in gardens for its beautiful red appearance, rising to the height of from three to five feet. The whole plant is more or less red, but the blossom most so, being of a deep, bright red, whilst the leaves are dark. Prince's Feather is the name by which it is most commonly distinguished; but amaranth is a better and more elegant term, which ought to be adopted. This article is too well known to need a more minute description.

The amaranth is an astringent, and as such, the leaves are used in decoction for bowel complaints. But it is most celebrated as a remedy for profuse menstruation, and has often cured when other remedies have failed.

AMOMUM ZINGIBER.

Common names—Ginger, also distinguished by Race, and Black, and White Ginger.

Ginger is a perennial shrub, growing about three feet high, a native of the East Indies, but now cultivated in the West Indies, in large quantities. Race, is a term applied to ginger in the root, to distinguish it from that which is ground. The black ginger, is the root prepared with less care than the white; the white, also called Jamaica ginger, being washed and scraped previous to drying.

Ginger is a warm and moderately stimulating aromatic, of much value in medicine, mostly used in combination with other articles, and is an important ingredient in the diaphoretic or sweating powders. For medicine, it is better to purchase the sound roots, as that which is ground is often prepared from such

roots as are worm-eaten and unsaleable, besides being adulterated with other articles. Dose, from half to a whole tea-spoonful, in warm water sweetened. Externally, very valuable in poultices.

AMYGDALUS PERSICA.

Common name—PEACH TREE.

THIS valuable tree affords not only a most delightful fruit, but also furnishes very valuable medicine. The bark, leaves, blossoms, kernels, and gum, are all highly useful.

The bark, leaves, or flowers, in tea or syrup, are an excellent purgative, and may be given to young or old; useful in colics, bowel complaints, worms, and fevers. A strong decoction may be given to children, in tea-spoonful or larger doses, every hour or oftener, until it operates; to grown persons, in larger quantities. It also acts as a diaphoretic and tonic. A tea of either the peach tree leaves or bark is one of the best remedies for bloody urine, and very probably may be found beneficial in other complaints of the urinary organs, and for bleeding from other internal parts. If reliance is placed upon the peach tree physic, in fevers, it ought to be given daily for several days, so as to produce moderate purging; at the same time administering the cayenne pepper, diaphoretic powders, or bitter tonic, and applying hot rocks to aid in promoting perspiration.

RAFINESQUE says that the blossoms are much used in Europe for worms, colic, and gravel, in the form of tea.

The kernels taken from the stone of the peach, is a most valuable tonic, and is particularly serviceable in bowel complaints, and in all cases of extreme debility. They are best, however, combined with other articles, and usually exhibited in a cordial or syrup.

In a late work, by Dr. ELISHA SMITH, of New York, which we have several times quoted, and which fell into our hands since the publication of the first edition, we find the following remarks respecting this article:—"Peach pits tinctured in brandy, in proportion of four ounces to a quart, form a powerful tonic in debility, fever and ague, &c., and is remarkably efficacious in curing the whites. A tea-spoonful of this preparation may be taken three or four times a day."

As an external application to inflammations, the peach tree leaves bruised and boiled and employed as a fomentation, or thickened with bran as a poultice, and often renewed, are said, by good authority, to be valuable.

High wines, or alcohol made from peach brandy, is a valuable menstruum for making the tincture of myrrh, being much more pleasant than that made from whisky.

The gum which exudes from the peach tree answers all the purposes of Gum Arabic, and is said to be superior to it.

ANETHUM FŒNICULUM.

Common names—Fennel, Sweet Fennel.

Fennel is a perennial plant, native of Italy, where it grows wild, but in the United States is cultivated in gardens, though sometimes growing spontaneous. The seeds are a good aromatic; as such are useful in bitters, and a variety of other compounds. They also yield an excellent oil, which is good to expel wind, and promotes urine.

ANGELICA ATROPURPUREA.

Common names—Masterwort, Wild Angelica.

Roots perennial, numerous, large, and long. Stem round, smooth and hollow, growing from three to five feet high, branched at the top, giving rise to several large bunches of umbelliferous flowers. Leaves large, few, jagged, and hairy.

The seeds and roots of the masterwort are very useful for colic, wind in the stomach, and all flatulent complaints; being at the same time a grateful aromatic, stimulant, and stomachic medicine. It is also one of the articles entering into Dr. Finch's remedy or treatment of gravel. The fresh root is said to be poisonous, which is dissipated in drying.

ANGUSTURA BARK.

The Angustura bark is imported from the Spanish West Indies, and may be regarded as a valuable tonic. The best menstruum for extracting its medicinal qualities is proof spirit, in which it ought to be tinctured, or it may be taken in substance.

It increases the appetite, removes flatulence and acidity arising from dyspepsy, and is a very effectual remedy in diarrhœa arising from weakness of the bowels, and in dysentery; acting without oppressing the stomach. Dose, half a tea-spoonful.

ANTHEMIS COTULA.

Common names—Mayweed, Dog Fennel, Wild Chamomile, Dilly, Dillweed, Fieldweed, Stinking Chamomile.

Root annual, crooked, fibrous. Stem erect, from eight to eighteen inches high, much branched from the bottom.—

ANGELICA ATROPURPUREA, (Masterwort).

Leaves alternate, double pinnated, giving the plant a ragged appearance. Flowers many, white and yellow, forming a terminal corymb, on a naked peduncle. Grows in great abundance near houses, along roads, walks, wastes, &c. It is a species of Chamomile, for which it may be substituted on all occasions; but for internal use, the flowers being least unpleasant, ought to be preferred.

The Mayweed has been long and extensively used in domestic medicine, with advantage. It is reputed an active tonic, sudorific, anodyne, and emetic. Useful in colds, fevers, rheumatism, hysterics, epilepsy, dropsy, and asthma, either internally or externally applied. Internally the herb is used in tea, and externally in fomentations—for rheumatism, hysteric fits, piles, pains, and bruises. It may be given in tea when taking an emetic, and is better than warm water to promote vomiting. In small doses, taken warm, it always acts as a sudorific, promoting copious perspiration.

ANTHEMIS NOBILIS.

Common name—CHAMOMILE.

THIS common herb is a native of the south of England, but is now cultivated in gardens for the purpose of medicine. The flowers have a strong, but not unpleasant, aromatic smell, and a very bitter, nauseous taste. They are used in spasmodic diseases, hysterics, colics, vomiting, &c.

The whole plant is also valuable as an external application, possessing a relaxing power, and enters into the composition of Dr. THOMSON's nerve or relaxing ointment, which is applied to hard swellings, corns, callouses, shrunk sinews, &c. Bruised and moistened with vinegar, it is useful to apply to sprains and bruises.

APIUM PETROSELINUM.

Common name—PARSLEY.

THIS common garden vegetable is mostly cultivated for culinary or cooking purposes, but it is also highly valuable as a medicine.

Parsley is a pretty active diuretic, and may be used in dropsy, and all ordinary suppressions of the urine, and inflammations of the kidneys and bladder. The root, made into a tea, or decoction, is the part generally used for medical purposes.

Professor CHAPMAN states that he cured one case of dropsy of the abdomen with it, after the patient had been twice tapped.

APOCYNUM ANDROSÆMIFOLIUM.

Common names—Bitter Dogsbane, Wandering Milkweed Bitterroot, Honeybloom, Flytrap.

The root of this plant is perennial, near the size of the little finger, running horizontally under the surface in various directions to a considerable length, of a dark red, or black color, when broken exuding a milk, and having a woody pith. Stem smooth, covered with a tough fibrous bark like hemp, milky, growing from three to five feet high, branching towards the top, and red on the side exposed to the sun. Several stalks arise from one root, or rather branches of the root, bearing white blossoms, tinged with red, which give it a distant resemblance of buckwheat. Leaves opposite, ovate, acute, and entire.

The seed is contained in pods of a dark red color, which grow in pairs, from two to three inches long, the size of a pipe stem, very pointed, always hanging down, and containing a kind of cotton. It grows in wettish lands, plains, mowing grounds, by the sides of fences, woods, &c., in all parts of the country. The best time to gather this article is in the fall after the top has ceased growing, when the roots may be dug from the earth, washed clean, and the bark beaten from the woody pith contained in them with a wooden maul or a mallet, and the bark then be dried in some airy situation where it is not exposed to the rain and dew.

The dogsbane or bitterroot, acts as an emetic, cathartic, and powerful tonic; being intensely bitter. Its cathartic power is, however, not strong, and may rather be regarded as a laxative than cathartic. If given in large doses, however, it produces a purgative effect upon the bowels, and used in this manner, at the commencement of a fever, will often throw it off. In too large doses, it also operates as a dangerous emetic.

It is a most important article in the laxative bitter tonic, being useful not only for its laxative, but also for its tonic qualities. It is said that the Southern Indians employ it in the venereal disease, and consider it a specific. A wash made by steeping the root, is good for ulcers, scald head, and very probably may be found useful as an external application in many diseases of the skin. We think it might also prove highly serviceable in worm complaints.

Its virtues are impaired by age, and, therefore, it should be gathered fresh every year, and kept from the air.

Apocynum Androsæmifolium, (Bitter-root).

APOCYNUM CANNABINUM.

Common name—INDIAN HEMP.

THIS plant very nearly resembles the foregoing, in its external appearance, so much so, that a superficial observer might readily confound them together. The principal difference consists in the color of the flower and appearance of the leaves. In this species, the flowers are greenish yellow, with the internal parts pinkish or purple; whereas in the former species they are white tinged with red. The leaves in this species are oblong-ovate, sharp at both ends, and somewhat white or downy on the under side; whereas in the former species the leaves are ovate, sharp or acute at the outer end, and smooth on both sides. Like the *A. androsæmifolium*, the Indian hemp also grows throughout the United States, and in similar situations, having likewise a milky juice, and a tough fibrous bark, similar to hemp, from which it derives its common name. Like the former species too, it is the root that is medicinal, which is to be procured and prepared in the same manner.

The Indian hemp is emetic, cathartic, diuretic, diaphoretic, and expectorant; but is introduced here principally as a hydragogue cathartic, and diuretic, highly useful in the treatment of dropsy. The best form of using it is in decoction. Half an ounce of the powdered root may be steeped in a pint of boiling water, of which the patient may take from one to three table-spoonfuls, or more, two or three times a day, or oftener if necessary.

AQUA.

Common name—WATER.

WATER is a liquid, transparent, colorless substance, diffused in the atmosphere, and over the whole surface of the globe At thirty-two degrees of Fahrenheit's thermometer, water becomes solid, forming ice; and at two hundred and twelve degrees, it boils, becoming transformed into vapor, and passes off into the air. Water was formerly considered a simple substance, until towards the close of the eighteenth century, the great improvements in chemical science demonstrated that it was a compound, consisting of eighty-five parts of oxygen and fifteen of hydrogen gas.

All the natural waters, that is, water procured from wells, springs, rivers, &c., are more or less impure; and it is only by distillation that it can be obtained entirely clear from all impurities. Pure water has neither smell nor taste, and is per-

fectly transparent. If water on shaking it, throws up air bubbles, giving it a sparkling appearance, it contains *carbonic acid gas* or fixed air. Such water will turn the vegetable blues to a red color Water which has the smell of sulphur, contains *sulpheretted hydrogen gas;* and if it have an inky taste, it has iron in it, and is technically styled *chalybeate* water. By exposure to the air, chalybeate water gives off the carbonic acid which holds the iron in solution, and the iron is deposited, giving to the earth over which it flows a reddish appearance, similar to the rust of iron.

Lime, and various other substances, also abound in water, and either render it unwholesome for drinking and cookery, or unfit for many manufacturing purposes, or both.

Water containing those foreign substances of which we have been speaking, is denominated *hard*. The cause of this hardness is an acid or sourness, which, though commonly imperceptible to the taste, is sufficient to dissolve those materials which are held in solution in the water. It is this acid that dissolves or decomposes the soap, and prevents hard water from washing; the acid neutralizing the alkali of the soap, and setting the oil or grease at liberty. And hence too, the addition of a little lye to hard water *softens* it, by neutralizing the acid, and thus renders it fit for washing with soap.

In the preparation of medicine, soft water ought always to be preferred, as it is a much better solvent than that which is hard. Rain water is the purest; next, river water; and then spring water; the water of wells being generally hardest of all.

Cold water is one of the best external applications to painful or inflamed ulcers, to fresh wounds, and rheumatism. Applied in this way, it is a favorite remedy with the Indians, who say that if persevered in, it will cure. For rheumatism they bathe the affected parts often and continue it long.

ARALIA NUDICAULIS.

Common names—Small Spikenard, False Sarsaparilla.

Spikenard root is perennial, brown, yellowish, creeping, twisted, sometimes many feet long, the thickness of the finger: one stem and one leaf mostly rising together, and less than two feet high; flower-stem straight, leafless, with three small simple naked umbels at the end; leaf with nine folioles or leaflets, ovate, oblong, rounded at the base, end acute, edges indented or notched, surface smooth; flowers from twelve to thirty in each umbel, small and yellowish; berries small, similar to elder berries in size. Found from New England to Carolina and Indiana.

ARALIA RACEMOSA, (Spikenard).

more common in the north than in the south; grows in deep woods, and good soils. It has a balsamic, fragrant, and warm aromatic sweetish taste.

All the spikenards are popular medical plants throughout the United States. They are healing, pectoral, sudorific, stimulant, diaphoretic, cordial, depurative, &c. The roots and berries are most efficient.

The roots bruised or chewed, or in poultice, are used for all kinds of wounds and ulcers by the Indians. Fomentations and cataplasms are useful for cutaneous affections, erysipelas and ringworms. An infusion or decoction of the same are efficient substitutes for those of sarsaparilla, and are even more powerful in all diseases of the blood, syphilitic complaints, chronic rheumatism, local pains, bellyache, &c. As a pectoral, both roots and berries may be used in syrups, cordials, decoctions, &c., and have been found useful in coughs, catarrh, cachexia, languor, pains in the breast, &c. The cordial of spikenard is recommended for the gout, and the juice or essential oil for the earache and deafness.

ARALIA RACEMOSA.

Common names—Spignet, Spikenard, Wild Liquorice,

Roots perennial, brown or brownish yellow, tapering, several growing from one common head, about the size of a finger. Stems sometimes one, sometimes more, arising from the same root, from two to four feet high, reddish brown, and somewhat branched. Leaves biternate, consisting of nine folioles or smaller leaves. Flowers growing in umbels, of a yellowish white. Berries resembling small elder berries.

The roots and berries are the parts used, and are popular remedies throughout the United States, for coughs, female weakness, and as general tonics. Used in tea or syrup. The roots bruised and used in poultice, are applied by the Indians to all kinds of wounds and ulcers, and also to ringworms. Rafinesque says, they are more efficient than the sarsaparilla, in syphilis and all other complaints in which that article is used.

ARALIA SPINOSA.

Common names—Xanthoxylon, Prickly Yellow-wood, Sea-ash, Toothache Tree, Shotbush, &c.

This article grows in the Southern States, where it is too common to need any description. The bark is the part used as medicine, and is a most powerful, pungent, warm aromatic, promising to become a highly valuable addition to the Botanic materia medica.

One pound of the pulverized bark, added to three pounds of the diaphoretic powders, makes, as we are informed by Dr. Reed, a highly valuable medicine in the treatment of dropsy, in addition to the courses of medicine and other means advised under that head.

It is a most powerful sialagogue, promoting the discharge of saliva in an astonishing manner; which renders it very valuable in ardent fevers where the mouth and throat are dry and parched. Dr. Gunnin styles the pulverized bark "saliva powders," saying that in cases of the most extreme dryness of the mouth, in which the African pepper will scarcely produce any effect, small portions of this powder, occasionally put into the mouth, will produce a moisture and relieve the difficulty of breathing, to the great advantage of the patient. He also cures the soar throat by the same means.

Dr. Quin also remarks, that a mixture of this with lobelia in proportion of seven parts of the latter to one of the former produces vomiting, in much smaller doses than the lobelia alone; seldom requiring more than one and a half or two tea spoonfuls.

ARCTIUM LAPPA.

Common names—Burdock, Clotbur.

The root of this plant is often used in decoction, for cutaneous complaints, and in many instances with good success.—It is also employed as a diuretic; and is also said powerfully to promote perspiration; the seeds still stronger and more valuable. The latter are likewise used with good success in rheumatism, scurvy, gout, inflammation of the kidneys, and venereal disease, in which it is said they are preferable to sarsaparilla. Combined with lobelia, they form a powerful diaphoretic medicine; and might be advantageously compounded with many other articles less nauseous than the lobelia. The seeds are bitter, and are said to be purgative. In doses of one to two tea-spoonfuls, pulverized, three times a day, they are said to have cured dyspepsy when other remedies had failed. The leaves, applied to the feet, are highly useful in many complaints, and particularly in febrile diseases.

ARISTOLOCHIA SERPENTARIA.

Common names—Virginia Snakeroot, Snakeweed, Snagrel, White Snakeroot.

The root of this herb consists of numerous small fibers issuing from one common head or caudex, and are of a dark yellow

ARISTOLOCHIA SERPENTARIA, (Snake-root).

ARUM POLLYPHYLLUM, (Many-leaved Wild Turnip).

Arum Pentaphyllum. (Many-leaved Wild Turnip).

color when fresh, but become darker on drying. Stem round, slender, weak, crooked, and jointed, from six to ten inches high, bearing from three to seven scattered leaves, and one to three flowers near the ground. The leaves are somewhat singular, long, and heart shaped at the base or broad part.

Snakeroot delights in shady situations, and abounds in all parts of the United States; said to be most abundant in the Alleghany and Cumberland mountains.

The root has an agreeable, pungent, aromatic smell, very similar to the fibrous roots of the spice bush; and a warm, bitter, pungent taste. Dr. THACHER says that by decoction, its medical properties are entirely destroyed; but in this he is most certainly mistaken. It may be used alone in tea or tincture, or compounded with other articles for bitters, or added to the diaphoretic powders, in which it will be found highly useful.

Snakeroot is greatly esteemed in typhus fevers, being considered diaphoretic, tonic, antiseptic, and stimulant. It is used in pleurisy, rheumatism, remittent fevers, and all other complaints.

ARUM TRIPHYLLUM.

Common names—WILD TURNIP, INDIAN TURNIP, DRAGON TURNIP, DRAGONROOT, PEPPER TURNIP, WAKEROBIN.

THIS is a hardy perennial plant, growing in almost every situation, shady or open, soil wet or dry, rich or poor. The root is round, flattened, tuberous, with many white fibers putting out around its upper part near the stem; externally it is dark and wrinkled; internally, white. Leaves, three in number, growing at the top of the stalk; and a single blossom of the same color of the leaves, producing a roundish cluster of red berries.

In its green state the Indian turnip is powerfully acrid, stimulant, expectorant, carminative, and diaphoretic. By drying, however, it loses the greater part of its intolerable pungency, together with much of its virtue; but even then it is a valuable medicine. It may be kept in its green state by burying it in sand in a cellar.

This article must be used in substance, and generally enters into compounds for cough, when in a dry state; or the fresh roots may be grated, and mixed with three times their weight of sugar, thus forming a conserve, which must be taken in teaspoonful doses, three times a day. A poultice made by bruising the green roots and leaves, is said to be very useful for scrofulous swellings, &c.

ASARUM CANADENSE.

Common names—WILD GINGER, COLTSFOOT, HEART SNAKEROOT, COLTSFOOT SNAKEROOT, &c.

ROOT perennial, horizontal, round, fleshy, jointed, throwing out fibers, brown outside and within. Leaves radical, round, hairy, supported on long foot-stalks, veined, kidney-shaped, somewhat resembling a colt's hoof, two from a root. Only one flower growing from the root between the two foot-stalks which support the leaves, of a dark purple, darkest inside, and growing so close to the ground as to be nearly concealed.

Grows in rich shady woods, often in a moist soil, in nearly, if not quite, all the States.

The root of the wild ginger is a warming stimulant; useful to promote perspiration, and may be used for that purpose in all cases of colds, female obstructions, whooping-cough, fevers, &c. It may be made in a tea and administered in small doses frequently repeated, as it is apt to nauseate the stomach in large ones. "The best preparation," says RAFINESQUE, "is a cordial made with the tincture and syrup [or melasses;] the tincture is colored a dark red by the resin."

The dried leaves, reduced to powder, make an excellent snuff which may be used in all diseases of the head and eyes; and the whole plant infused into beer makes it grateful and medicinal.

ASCLEPIAS SYRIACA.

Common names—MILKWEED, SILKWEED.

THIS is the common silkweed, which so plentifully abounds in almost all parts of the country, bearing a large pod containing a silky substance, which has sometimes been mixed with cotton and spun into yarn, for gloves, candle wick, &c., and has also been made into paper, hats, and even put into beds. It produces a most beautiful blossom, of a delightful lilac color, at the termination of the branches at the top of the plant.

The root of this herb appears to possess nearly the same properties as the butterfly root, but its powers are not so strong. It may be used for the same purposes and in the same manner. The Southwestern Indians are said to use it as an emetic.

Dr. SMITH observes, "the root has lately been found effectual in the cure of dropsy. It is a powerful diuretic, sudorific, emmenagogue," &c. "Boil eight ounces of the dry root [in six quarts of rain water] to three; of this a gill may be taken four times a day for dropsy, increasing the dose according to the

ASARUM CANADENSIS, (Wild Ginger).

Asclepias Syrica, (Cotton-weed).

Asclepias Tuberosa, (Pleurisy-root).

Baptisia Tinctoria, (Indigofera).

effects. For other complaints, a larger dose may be taken. Or the roots in tincture with gin, may be used in dropsy and gravelly disorders."

ASCLEPIAS TUBEROSA.

Common names—Pleurisy-root, Butterfly-weed, White-root, Canada-root, Silkweed, Windroot, Fluxroot, Swallow-wort.

This beautiful plant flourishes best in a sandy or gravelly soil, by the way side, along fences, and in old or uncultivated fields. It abounds throughout the United States, but is most plentiful at the South.

The butterfly-weed has a large, white, crooked, branching, perennial root, sending up several erect, though often decumbent, round hairy or woolly stems, branching at the top, green or red. Leaves promiscuous, very hairy, pale on the under side, of an oblong shape, and thick or fleshy. Flowers in terminal corymbose umbels, of a most beautiful brilliant orange color, distinguishable from all the flowers of the field.

The butterfly root is highly extolled for the cure of pleurisy, all cases of difficulty of breathing or shortness of breath, and in short, all diseases of the lungs. In every affection of this kind, it may be regarded as one of the most valuable of the milder articles of the materia medica; and as a diaphoretic is by some thought to be unrivalled.

In practice, it may be used alone in strong decoction, or in substance, giving it in tea-spoonful or larger doses, repeated as often as the exigencies of the case may require. Or it may be very profitably combined with other diaphoretics, or with the bitter, and astringent, tonics, as it cannot be used amiss in any complaint.

It also acts as a very mild purge, which makes it peculiarly applicable to the bowel complaints of children. It relieves pain in the breast, stomach and intestines; promotes perspiration, and assists digestion, and acts as an expectorant and carminative.

BAPTISIA TINCTORIA.

Common names—Indigofera, Wild Indigo, Indigoweed, Horsefly-weed, Indigo Broom, &c.

Root perennial, irregular, large and woody, blackish outside, yellowish within, and sending off many slender branches or fibers. Stems two or three feet high, round and smooth, of a

yellowish green color with black spots, very much branched at the top. Leaves alternate, small, somewhat heart-shaped, and broadest towards the outer end. The blossoms are of a golden color, and are succeeded by a swelled oblong pod, of a bluish or blackish hue, as indeed is the whole plant, and becoming quite black on drying. The taste of the root is unpleasant, sub acrid and nauseous. Growing on poor soils, mostly on hills.

Both the root and plant may be used for medicinal purposes, either externally or internally. If given in too large doses, however, it proves both emetic and cathartic. But it is not esteemed by any means valuable for those purposes, being regarded as too severe. Internally, in a weak decoction, it is considered highly useful as an antiseptic, in mortification, and all putrid complaints. For internal use, half an ounce of the dried root may be steeped in a pint of water, of which about two or three table-spoonfuls may be taken once in five or six hours. If it should prove too cathartic or loosening to the bowels, about half the quantity, more or less, of the dewberry, or of bayberry root, must be added to it. Internally, however, it must be used with caution, especially if in its recent or fresh state.

Externally, the indigofera may be applied in poultice, wash, fomentation, or ointment, to ulcers of every description, but particularly to those which are in a mortifying, or mortified state, being considered by some as the most powerful antiseptic or preventive of mortification known. It is also applied by some herbalists, in poultice, to swelled female breasts; and in putrid or ulcerous sore throat, it is highly recommended. It may also be made into an ointment with lard or cream.

As a substitute for the *B. tinctoria* which is scarce in Ohio and many other places, the *B. alba*, or prairie indigo, abounding in the Western prairies, may be employed in the same manner as the former. It very much resembles the *B. tinctoria*, but has one striking difference in the color of the flower, which is white.

BERBERIS VULGARIS.

Common name—BARBERRY.

THE barberry is a shrub growing from four to eight feet high, with long bending branches, covered with many small dots, and some occasional thorns, often three together. Leaves crowded, unequal, smooth, and glossy. Flowers nodding or pendulous, rather small and yellow. Found in mountains, hills, and amongst rocks, in barren soils. Most common in New England; rare in the Western country.

The bark of the barberry is a good bitter tonic, slightly astrin-

Capsicum Minimum, (Cayenne Pepper)

gent, and at the same time laxative. It may be used in putrid fevers, dysentery, and generally in all cases of disease, either alone or combined with other tonics.

BETULA LENTA.

Common names—Black Birch, Sweet Birch, Spice Birch, &c.

The black birch tree is too common to need any description. The bark smells and tastes much like the winter green. It is deemed a good tonic, and as such, may be either used alone in strong tea, or it may be combined with other tonics, and used in decoction, or made into a syrup, and taken to restore the strength, and tone of the bowels, after dysentery. It is also said to be useful in gravel, and to remove female obstructions. Always grows on upland. Scarce in the West.

CAPSICUM ANNUUM.

Common names—Cayenne Pepper, Red Pepper, Cockspur Pepper.

Cayenne pepper is cultivated in both tropical and temperate climates, and needs no description. The imported article, so extensively used in medicine under the name of cayenne, is most generally an indiscriminate mixture of the pods of several varieties of the capsicum. The common red pepper, of which so many varieties abound in our gardens, is a species of the capsicum, but possesses far inferior powers to that which grows in the tropical climates, and especially in Africa, which is considered best of all.

Cayenne pepper is one of the most pure and powerful stimulants ever introduced into the practice of medicine. It was perhaps first used by an English or Scotch physician, of the name of Makatrick, and has since become one of the most important articles in the physiological botanical practice of medicine, for which the world is much indebted to Dr. Thomson. It enters, in some proportion or other, into almost all our compounds, and is extensively and advantageously used as an external application in every case of disease requiring external remedies.

Rafinesque says that "even the use of it, (cayenne,) often produces fevers and inflammatory disorders, obstructions, bloody piles, sores," &c.—This is a gross mistake, founded on popular error, and rests upon nothing else. Dr. Thacher also favors the same idea, saying that the use of capsicum is not without danger "from the inflammation it is liable to induce." The

popular opinion from which this error originated is, however, fast wearing away, and more rational views of medicine and medical philosophy taking its place.

There can be no doubt that the cayenne pepper is a pure and unfailing stimulant, acting upon the living machine in a most forcible and healthy manner, in unison and harmony with the laws of nature or animal life. Instead of its being dangerous, or producing fevers, inflammatory disorders, obstructions, &c., there is nothing used, as a general stimulant, so valuable as capsicum. It removes obstructions, fevers, inflammations, piles, liver complaints, and all diseases to which the human frame is liable, in conjunction with other means, being universally applicable in all cases. We have confirmed these assertions by much experience and very extensive observation, and can therefore recommend it to the sick, with all the confidence which a knowledge of these facts inspires.

It sometimes, however, especially when taken into an empty or cold stomach, produces pain, occasionally very severe, so as to be alarming to those unaccustomed to it. This is attended with no danger, as it will, in general, soon pass over. All hazard of producing pain in this way may be avoided by giving smaller quantities, and thus increase the action of the stomach in a gradual manner; or if produced, may often be removed by taking a little sweet oil, cream, or milk. The intolerable burning sometimes induced by accidental contact of cayenne with any external sensitive part of the body, may likewise be effectually and speedily checked by the application of cream or sweet oil.

Cayenne is often employed with the highest advantage, sprinkled on foul or bad ulcers, and may be used, tinctured in brandy or steeped in vinegar, to bathe the bowels in dysentery and colic, or for rheumatism, inflammations, pains or soreness; and the tea or fine powder may even be put into the eyes to cure them when sore. A small quantity of cayenne is highly useful in what are termed passive inflammations, and indolent tumors, externally applied. Dose, from one fourth to a whole tea-spoonful, in ho water sweetened.

CARBO LIGNI.

Common name—Charcoal of Wood.

Charcoal possesses a number of singular properties, which render it important in medicine and the arts. It is incapable of putrefying or rotting like wood; and it is said there yet exists charcoal made of grain, probably since the days of Julius

Cæsar, which is so perfect that the wheat may be distinguished from the rye.

Charcoal possesses the peculiar property of correcting the empyreumatic or burnt taste of distilled spirits; of depriving rancid oil of its unpleasant flavor; and of checking the putrefaction of fresh meat and restoring it to its natural taste.

In medicine, charcoal is of great utility in arresting mortification, applied in the form of poultice with yeast, or taken internally in large doses if mortification of the bowels is apprehended. It is also very serviceable in costive habits, moving the bowels without producing much debility; and likewise in bleeding a the stomach, in intermittent fever, and in dysentery. It ought, for all purposes, to be fresh prepared, or kept in close stopped vessels.

A very eligible mode of preparing charcoal for use, free from impurities and disagreeable taste, is to put pieces of wood in an iron cylinder or tube, leaving it open at one end, when it must be placed in the fire and there kept until no more smoke issues from it; then the tube must be taken from the fire, and the open end is to be closed with clay until it becomes cool. Or, instead of wood, pulverise some well burnt charcoal and put it in the tube, or place it in a covered crucible or other vessel, and keep it in a red heat until it ceases to give out any flame or vapor; when it should be cooled and closely bottled for use. Old gun or pistol barrels answer the purpose of preparing charcoal very well. The reason why it should be kept in close stopped vessels is, it absorbs fixed air when exposed to the atmosphere, which renders it unfit for use, or at least very much impairs its virtues.

"The Paris Codex," says the United States Dispensatory, "directs the preparation of charcoal for medical use to be conducted as follows:—Take any quantity of thoroughly burnt charcoal, very light, sonorous, and pure, made from the wood of the linden-tree, willow, poplar, or some other of the lighter woods, and moisten it with water. Reduce it to powder in an iron mortar, or by means of a mill; and having mixed it with water to form a thin fluid mass, let it stand for a few days; after which, place it on a linen cloth to drain. Make up the paste into round cakes, and expose them to the rays of the sun until they are thoroughly dried. By this process of insolation, the charcoal is stated in the Codex to be completely deprived of all adventitious color and smell, and to be singularly improved in efficiency; advantages which are not equally obtained, when it is dried in the shade."

For correcting the empyreumatic taste of spirits, the charcoal must be added to, and agitated with it, when it may be allowed to subside, and then be poured off for use; and for restoring putrid

meat, it may be sprinkled on the meat, or boiled with it a short time, and then the water changed. For this latter purpose, or indeed for any of them, red hot coals taken from the hearth will answer, but is not so good as that prepared in the manner just described.

Charcoal is also useful as a tooth powder, to cleanse the teeth and sweeten the breath; and also to cleanse foul and fetid ulcers. When used as a tooth powder, it may be applied dry, or mixed with vinegar and water and used as a wash.

For internal use, charcoal may be given in doses of from one to three table-spoonfuls, in melasses, or, in obstinate cases of costiveness, in as large quantities, and as often repeated, as the stomach will bear; but in all ordinary cases of every kind, a table-spoonful three times a day will generally be sufficient.

CASSIA CHAMÆCRISTA.

Common names—PRAIRIE SENNA, PARTRIDGE-PEA.

THIS plant very much resembles the one which immediately follows, but is smaller and more delicate. Stem from one to three feet high, seldom much branched. Leaflets in eight or ten pairs, much smaller than those of the American senna, only about half an inch long, and one-eighth of an inch wide, margin entire. Flowers golden yellow, situated along the stems. The leaves are sensitive, folding up on being touched. Found on the Western prairies.

The virtues of this plant are said to be in all respects similar to the *C. marylandica*, but, at the same time, better.

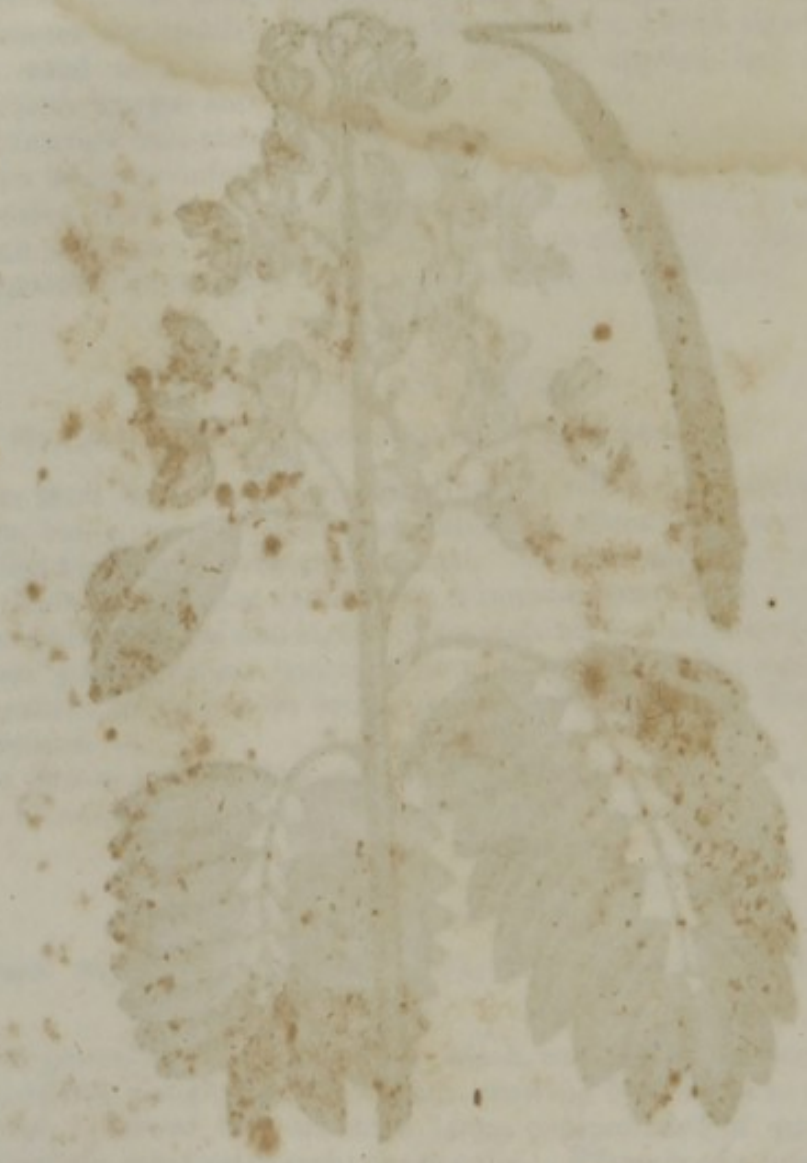
CASSIA MARYLANDICA.

Common names—AMERICAN SENNA, WILD SENNA, LOCUST PLANT.

ROOT perennial, crooked, woody, black, and fibrous. Stems, many, round, upright, nearly smooth, growing from three to six feet high. Leaves few, alternate, large, compounded of many small leaflets, growing in eight or ten pairs. Flowers of a bright golden yellow, with dark spots, forming a scattered cluster at the top of the stem. The fruit consists of long pods, a little swelled at the seeds, covered with a few slight hairs. Found in all the States, in rich moist soils, principally near streams.

The American senna, like the imported article of the same name, is a mild purgative, but is said by BIGELOW to be weaker by one third. It answers all the purposes of the Alexandrian senna, and is far cheaper; "operates," says RAFINESQUE. "with

Cassia Marylandica, (American Senna).



CAULOPHYLLUM THALICTROIDES, (Blue Cohosh).

Celastrus Scandens, (Bitter-sweet).

mildness and certainty, at the dose of an ounce in decoction." The leaves and pods are both employed, and may be advantageously used, either by themselves or compounded with other cathartic medicines. THACHER says, about half an ounce of the leaves infused in half a pint of hot water, is a proper dose for an adult. Its griping effects may be prevented by the addition of some aromatic, with sal æratus or soda; and its cathartic powers increased by its combination with bitters.

CAULOPHYLLUM THALICTROIDES.

Common names—BLUE COHOSH, BLUE COHUSH, BLUEBERRY. PAPPOOSE-ROOT, SQUAW-ROOT, &c.

ROOT perennial, yellow inside, brown outside, hard, irregular, knobby, with many fibers. Stem upright, straight, smooth, from eighteen to thirty inches high, divided at the top into two or three branches, each branch supporting three leaves, in the center of which, come out the flowers. Flowers small, yellowish-green, succeeded by dark blue berries, enclosing a hard drupe or stone.

The blue cohosh root is much used by the Indians, and by many herbalists among the whites. It is considered by SMITH the most powerful anti-spasmodic in the compass of medicine; and at the same time is perfectly safe.

Amongst the diseases in which it is useful, he names hickup, colic, cholera morbus, epilepsy, hysterics, and he supposes every other species of fits, and even the ague. He also says that he speedily cured one case of inflammation of the uterus by a decoction of this article. It is likewise esteemed very highly by some in worm compiaints; and by its anti-spasmodic power is said to prevent the griping of cathartics when combined with them for that purpose.

It is said that the facility of child-birth among the squaws, is owing to their drinking a tea of cohosh root for two or three weeks before their expected time; and experience, says SMITH, has proved amongst white women that it is of especial service. He directs a handful of the roots to make half a pint of tea; administer one half the quantity, and then fill up the vessel again with hot water. It may also be used in tincture, syrup, or cordial.

CELASTRUS SCANDENS.

Common names—BITTER-SWEET, FEVER-TWIG, STAFF-VINE.

BY most herbalists the bitter-sweet is treated of under the name of *amara dulcis*, or of *solanum dulcamara;* but thes

names belong to a plant very different from the one now under consideration.

The bitter-sweet is a woody vine, climbing trees, sometimes to the height of thirty feet, but commonly not higher than ten or fifteen; and at other times, when nothing comes within its reach to entwine upon, it creeps along the ground. When it happens to come in contact with a bush or sapling of suitable size, it frequently climbs in a beautiful spiral form around it, and is often taken off and converted into a walking staff, whence one of its names. The leaves are ovate and pointed; of a light green hue; the berries hang in bunches, and become red in the fall. The roots are of an orange red color, pretty large and long.

The bark of the root is esteemed by some as a tonic, taken internally in tea; said to remove obstructions of the liver and spleen, and to promote the secretion of urine. Externally, it is applied in poultice or ointment to hard tumors and indurated swellings of every description, and to swelled cows' bags, for which purpose it is very useful.

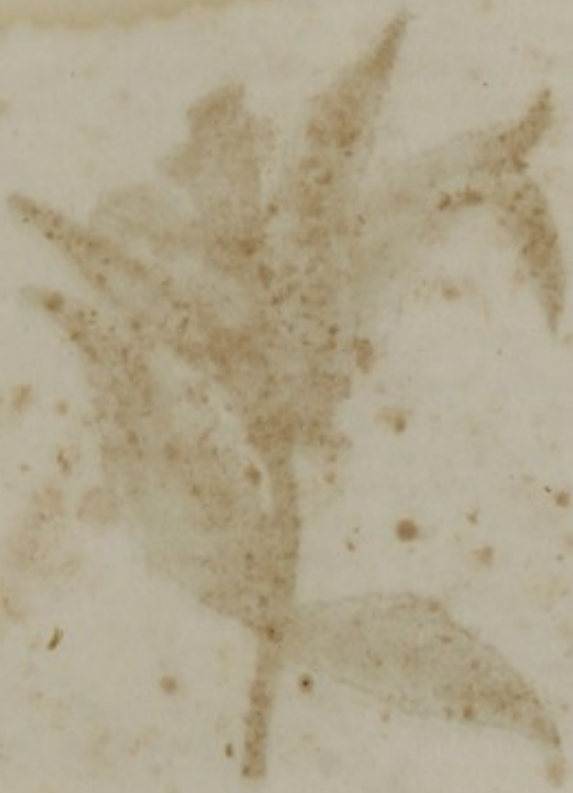
In addition to the foregoing account of the virtues of this plant, we find the following in the "Botanic Physician," by Elisha Smith:—

"The bitter-sweet is a powerful and useful medicine, though, like most of the invaluable medicinal plants which Nature so profusely furnishes to our hands, its virtues are appreciated but by a few. It increases all the secretions and excretions, particularly sweat, urine, and stool, and excites the heart and arteries. It is an excellent discutient, detergent, and resolvent medicine, and may be employed both externally and internally. It is peculiarly beneficial in real liver complaints, and in all cutaneous affections; also in rheumatism, scirrous swellings, ill conditioned ulcers, scrofula, whites, jaundice, and obstructed menses. Cancers of the breast have been cured by the application of the juice over the cancer, and the green leaves over the breast. For internal use, boil half a pound of the bark to one gallon; the dose, a gill three times a day. It is also good in fevers and dropsical swellings."

CENTAUREA BENEDICTA.

Common names—Blessed Thistle, Beloved Thistle, Holy Thistle.

This is an annual exotic plant, cultivated in gardens; and useful as a stomachic and tonic; said also to be sudorific and diuretic, purgative and emetic. Leaves, flowers, and seeds are used; very bitter and somewhat nauseous to the taste. "An infusion,



CHELONA GLABRA, (Balmony).

made in cold or warm water, if drunk freely, and the patient kept warm, occasions a plentiful sweat, and promotes the secretions in general."

CEREVISIÆ FERMENTUM.

Common names—YEAST, BARM, BREWER'S FOAM.

YEAST, for medical uses, may be procured from the brewers, or it may be made in either of the three following ways:

1.—Thicken two quarts of water with about three or four spoonfuls of rye or wheat flour, boil for half an hour, sweeten with half a pound of brown sugar; when nearly cold, put into it four spoonfuls of fresh yeast, shake it well together in a jug, and let it stand one day near the fire to ferment, leaving the jug unstopped. Then pour off the thin liquor on the top, and cork up the remainder for use.

2.—Boil one pound of clean washed potatoes to a mash, when half cold add a cupful of yeast, mix them, and it will be ready for use in two or three hours.

3.—Take one pint of yeast, and add half a pint of melasses, and one quart of lukewarm water. Stir these well together and let the mixture stand in a moderately warm place till active fermentation is produced; it may then be set in a cool place and kept for use. In warm weather it should be made fresh every day.

Yeast, says Dr. THACHER, has acquired considerable celebrity for its virtues in the cure of putrid fever and malignant ul cerous sore throat. Dose, one or two spoonfuls every two or three hours; should it purge or gripe, the dose must be diminished.

Externally, yeast may be combined with slippery elm and cracker, or with charcoal, and applied to dangerous ulcers, or parts threatened with mortification.

CHELONE GLABRA.

Common names—SNAKEHEAD, BALMONY, TURTLEHEAD, TURTLEBLOOM, SHELLFLOWER, BITTERHERB, &c.

ROOT perennial; stem erect, though sometimes decumbent, from two to four feet high, angular or four square; flowers terminal, generally white, though of different colors in different varieties; as white spotted with red, and purplish; and of a most singular shape, resembling the head of a snake with its mouth open. Leaves opposite, bearing a distant resemblance to mint leaves, of a dark green color when fresh, almost black when dry, and intensely bitter. Grows in wettish land, and by he side of brooks, both in open grounds and in the shade.

The snakehead is a most powerful bitter tonic, and one of the best things to promote the appetite we ever used, and may be administered by itself or combined with other articles. RAFINESQUE says that it is an active cathartic, as well as tonic; but of this we have had no experience. The leaves are the best, and may be given in fevers, jaundice, and all other diseases, either in powder, tincture, or decoction. Wine is thought to be the best menstruum to tincture them in.

It is said that the Indians make use of a strong decoction of the whole plant in eruptive diseases, biles, sores, and piles. It is the best bitter known. SMITH says, as a vermifuge, "I think it has no superior, rarely failing to expel the worms. It should be administered in infusion, continued for a time, and followed by a suitable purge. An ounce of the dry herb is sufficient in any case for children."

CHENOPODIUM ANTHELMINTICUM.

Common names—WORMSEED, JERUSALEM OAK, STINKWEED, WORMWOOD.

ROOT annual, branched. Stem upright, branched, branches axillary to the leaves, and terminating with panicles of flowers, which are yellowish-green, growing from two to four feet high. Leaves alternate or scattered, oval, dotted on the under side, margin or edges indented with large unequal obtuse teeth. The whole plant is distinguished by a peculiar smell, different from all others; and which to some is highly offensive. Found in all the States.

The wormseed is a powerful vermifuge medicine, used for worms both in America and Europe. Either the decoction, pulverized seeds, or oil, may be administered; the seeds may be formed into an electuary by mixing them with honey or melasses, in the proportion of about one part of the seeds to three parts of melasses, giving for a dose, to a child of three years old, a table-spoonful, two or three times a day. Care ought to be taken to disguise the taste of the wormseed in any form that it may be administered; for this purpose the oil of anise, orange peel, sugar, or honey can be employed.

CHIMAPHILA UMBELLATA.

Common names—PIPSISEWA, WINTERGREEN, RHEUMATIC-WEED, PRINCE'S PINE.

ROOT perennial, woody, creeping, sending up stems at various distances. Leaves growing in irregular whorls, few, ever-

CHIMAPHILA UMBELLATA, (Pipsisewa).

green, long, wedge-shaped, edges jagged with teeth, smooth and shining. Found in all the States, but most abundant in the mountainous parts of the Eastern and Middle States, growing in dry sandy lands, and elevated shady situations. Flowers, from three to six, purple and white, or reddish-white, growing at the top of the stem, forming an imperfect umble.

A tea of the tops and roots of this plant is a valuable internal medicine for fever, rheumatism, diseases of the urinary organs, scrofula, cancers, dropsy, and nervous debility. Externally it is used for bathing rheumatic joints, washing cancerous, scrofulous, and other bad ulcers, and hard swellings. It acts as a diaphoretic, diuretic, and tonic.

COLLINSONIA CANADENSIS.

Common names—Richweed, Richleaf, Oxbalm, Healall, Knotroot, Stoneroot, &c.

Root perennial, knotty, rough and hard, throwing out many slender fibers. Stem erect, round, straight, from eighteen to thirty inches high, terminating in several branches at the top which produce the flowers and seeds. Leaves few, opposite, broad, large and thin, not more than two or three pairs on a stem. Flowers numerous, pale-yellow, possessed of a peculiar balsamic fragrance. Found in all the States; rare towards the South and West, but is replaced in this section of country by other similar species.

The richweed is said to be tonic, carminative, diuretic, and stimulant; being highly prized as an external application to sores, painful parts, swellings, poison, headache, &c. Taken in tea, for headache, colic, cramp, dropsy, indigestion, &c., internally; applied in poultice or the whole leaves, externally; used both fresh and dry.

COMPTONIA ASPLENIFOLIA.

Common names—Sweetfern, Sweetbush, Fernbush, Ferngale, Sweetferry, Spleenwort-bush, &c.

The sweetfern is a small shrubby bush, very much branched, growing from two to four feet high; having long horizontal roots. Leaves many, alternate, from three to five inches long, and half an inch broad, each side or edge jagged, bearing some resemblance to the common ferns. Flowers appear before the leaves, succeeded by a kind of round bur containing the seeds. The whole plant possesses a strong, peculiar, resinous, and spicy scent, which is particularly observable on rubbing the leaves be-

tween the fingers. Found throughout the United States, particularly in mountains and sandy plains.

Sweetfern is an astringent tonic; much used in diarrhœa and all cases of looseness of the bowels, in children or adults. It makes a very grateful, pleasant tea, with the addition of cream and sugar, which children rarely, if ever, refuse. It is also used in asthma, fevers, inflammations, rheumatism, &c.; and often as a fomentation.

We are also informed by Ira Finch, Esq., that a strong tea freely drank, and the leaves put in a cushion to sit on, and between the sheets to lie on, has cured the St. Vitus' dance.

CONVALLARIA MULTIFLORA.

Common name—Solomon's Seal.

Leaves alternate, clasping the stem, ribbed, oval-oblong, color dark green. Flowers many, hanging along the side of the stalk, axillary to the leaves. Stalk always inclining to the earth, giving the plant an arched appearance.

The roots of this plant are said to be a mild, yet very healing restorative, and useful in all cases of female weakness, such as whites, and immoderate flowing of the menses. It is also recommended for consumption and general debility. May be used in tea, syrup, or cordial. The mucilage of the roots is recommended to be applied to inflammations and piles.

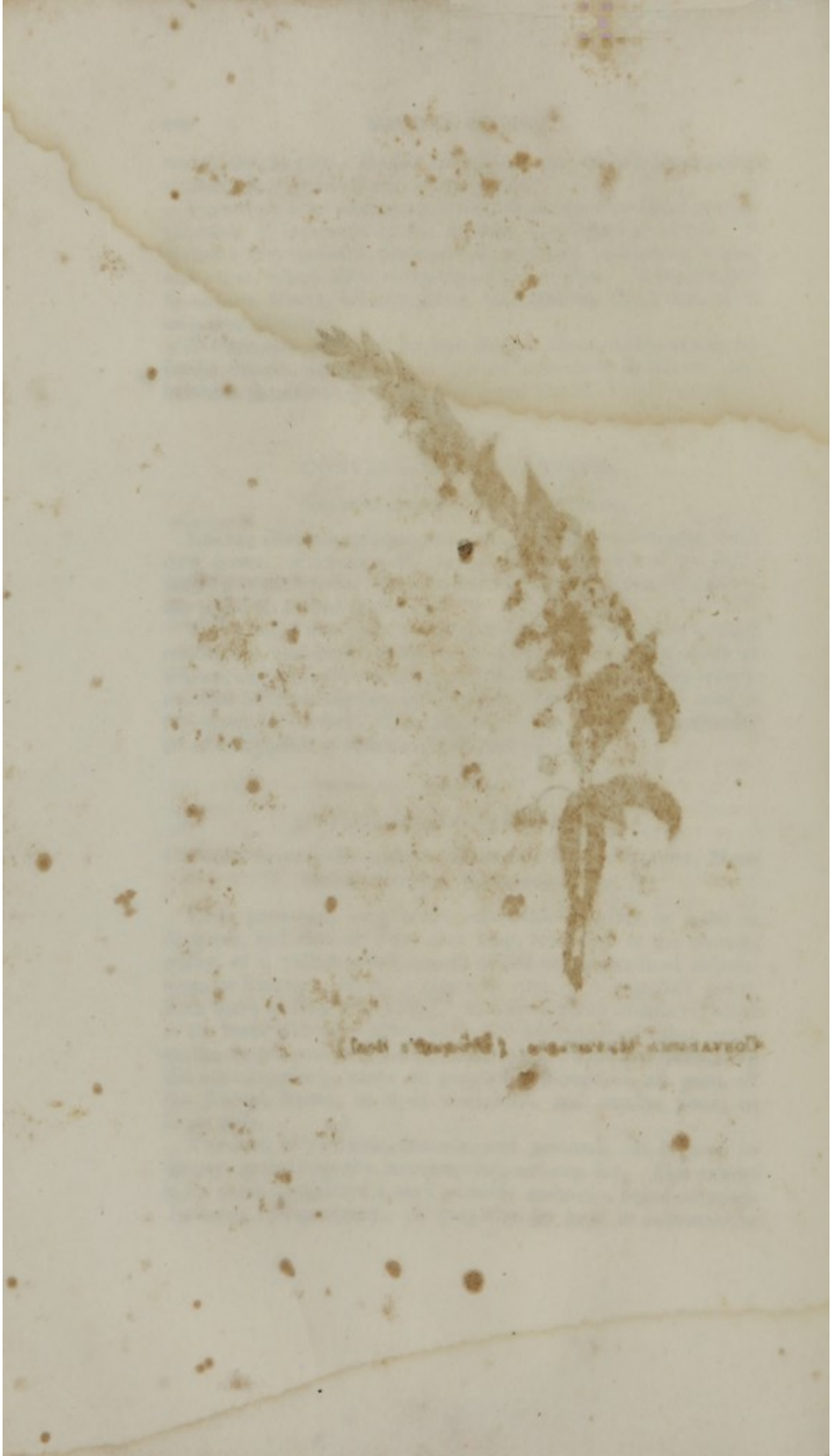
CONVOLVULUS PANDURATUS.

Common names—Bindweed, Manroot, Wild Potatoe, Man-in-the-ground, Kussander, &c.

Root perennial, very large, often three inches or more in diameter, and two or three feet long, branched at the bottom, milky, of a yellow color, rough or full of longitudinal depressions or fissures. Stem a climbing vine, of a purplish color, from three to twelve feet long. Leaves cordate or heart-shaped at the base, alternate, often somewhat fiddle-shaped, deep green on the upper, and pale on the under side. Flowers resembling the morning-glory, white or purplish. Found in all parts of the United States, in open situations, and sandy, poor, or loose soils.

The root is cathartic, diuretic, and pectoral. It is used in dropsy, gravel, coughs, consumption, asthma, &c. The extract is by some considered a very valuable cathartic, equal to jalap, heubarb, or scammony. It may also be used in substance or

Convalaria Multiflora, (Solomon's Seal).



Coptis Trifolia, (Gold-thread).

decoction. For coughs, consumptions, and asthmas, it may be made into a syrup with skunk cabbage.

COPTIS TRIFOLIA.

Comman names—Goldthread, Mouthroot.

Roots perennial, creeping, with many fibers, color bright yellow. Leaves ever-green, on long slender petioles or foot stalks, growing three together. Flowers, white and yellow, growing on a separate stem or scape, rising to the same height with the leaves. Found in Northern latitudes, in mossy swamps and bogs of ever-green woods, and on the rocks of the White mountains, in Labrador, Newfoundland, &c.*

Goldthread is a pure intense bitter tonic, promoting digestion and strengthening the system; useful in all cases of debility. It has also been used as a popular remedy in sore mouth canker, &c. The roots are the only part used, and may be given in the form of powder, or tincture, in tea-spoonful doses, two or three times a day.

CORNUS FLORIDA.

Common names—Dogwood, Boxtree, Boxwood.

The common dogwood is a shrub, or small tree, growing from ten to thirty feet high, with few crooked, spreading branches, having a rough blackish colored bark, outside, reddish within, bark of the extreme branches smooth and reddish on the outside, having rings where the old leaves grew. Leaves opposite, pale on the under side. Flowers terminal, large, white, of a peculiar shape, appearing very early, succeeded by oblong berries, ripening in the fall when they become red. Found all over the United States, on dry hills, and in swampy, moist lands.

The dogwood bark is tonic, astringent, antiseptic, and stimulant; that from the root being the strongest. By some it is considered equal to the cinchona bark; and may be used in all cases of fever, particularly intermittent, remittent, and typhus. It may be given by itself in powder, in doses of a tea-spoonful, often repeated, or it may be steeped and drink the tea. The berries may also be tinctured in spirits, and make a very good bitter. The fresh bark ought not to be used, as it is apt to affect the bowels.

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* We have recently been informed by Dr. J. L. Riddell that the goldthread abounds plentifully near Akron, Ohio.

The flowers appear to have the same properties as the bark and berries, and are used by the Indians as well as whites, for fevers and colics.

A decoction of the bark is esteemed a good medicine for the yellow water of horses; and joined with sassafras is employed to clean foul ulcers; would probably be good applied to them in poultice.

CROCUS OFFICINALIS.

Common name—SAFFRON.

SAFFRON is a bulbous rooted perennial plant, very generally cultivated in gardens in Europe, and is likewise found in similar situations in America. Its smell is pleasant and aromatic; the taste, a fine aromatic bitter, giving when chewed, a deep yellow color to the saliva.

Saffron is very fragrant, and is highly esteemed, as it exhilirates the spirits when taken in small portions; but if used in too large doses it produces immoderate mirth, with many of the consequences resulting from the inordinate use of ardent spirits. This article was formerly much used, and considered a good remedy in hysterical affections, and in female obstructions; but at the present time it has fallen very much into disuse, excepting for the complaints of infants, such as the jaundice, redgum, and eruptive diseases in general, &c., for which it is an excellent remedy. We think this article has been unjustly neglected, as there is no doubt it possesses valuable medicinal powers. Joined with nervines and tonics, it is, doubtless, useful in hysterics and hypochondriasis.

CUNILA MARIANA.

Common names—DITTANY, MOUNTAIN DITTANY, STONE-MINT, MOUNTAIN-MINT, SWEET-BASIL, &c.

ROOT perennial, fibrous, yellow. Stem about a foot high, smooth, yellowish or purplish, slender, hard, brittle, branched; branches opposite or nearly so. Leaves opposite, remote, small, smooth and of a deep green on the upper surface, and bluish-green on the under surface. Flowers numerous, small and handsome, bluish-purple, pink or white, forming terminal clusters or corymbs. Found in all parts of the United States, growing amongst rocks and on dry knobs and hills, unknown in the plains and alluvion soils.

The whole plant has a warm, fragrant, aromatic pungent taste and smell, residing in an essential oil, easily extracted by distillation.

Crocus Sativis, (Saffron).

CYPRIPEDIUM HUMILE, (Red Lady's-Slipper).

Dittany is deemed stimulant, tonic, nervine, and sudorific. The whole plant is used, commonly, in warm infusion; and is a popular remedy in many parts of the country, for colds, headaches, hysterical affections, fevers, and all cases in which it is an object to excite perspiration.

It is also said to be good for the bites of snakes, externally applied; killing rattlesnakes by holding it to the nose with a stick. The Indians, it is likewise said, use it for wounds, and to expel dead children.

CUCURBITA PEPO.

Common name—PUMPKIN.

THE common pumpkin needs no description. The seeds are highly recommended, in decoction, as a diuretic. If the oil can be obtained, however, it is better. "I make," says Dr. SMITH, "great use of it. The dose may be from six to twelve drops, three or four times a day, or oftener if required." He also says, "it is, perhaps, without exception, the most certain and efficient diuretic we possess," relieving spasm of the urinary passages, and scalding of the urine.

CYPRIPEDIUM PUBESCENS.

Common names—YELLOW LADY'S SLIPPER, MOCCASON-FLOWER AMERICAN VALERIAN, UMBIL, &c.

ROOT perennial, of a pale or dark yellowish cast, with many long, round, crooked fibers, growing in a mat. Stems one to five, growing from the same root, rising one or two feet, bearing from three to seven leaves, and from one to three yellow flowers. Leaves alternate, sheathing the stem, with many parallel nerves, giving them an uneven appearance. Found all over the United States; very rare in some places, inhabiting all kinds of soil, but most common in wet lands or swamps.

There are several species as well as varieties of the umbil, some smooth and some hairy; and exhibiting a diversity of color in the blossom. But all very nearly correspond in the shape of the flower, which is of a singular, hollow, bag-like form, open at the top, compared by some to a moccason; and hence, by the Indians, termed moccason flower.

The lady's slipper is one of the most valuable articles of vegetable medicine. Its operation upon the system appears to be in harmony with the laws of animal life, giving tone to the nervous system; and hence is useful in all cases of nervous irritation, hysterical affections, spasms, fits, and all derangements of

the functions of the brain; such as madness, delirium, &c., and in all cases of inability to sleep, particularly in fevers, consumptions, &c.

The roots are the only part used, and ought to be gathered in the spring before the tops begin to grow much, or in the fall after they begin to die. After digging, they must be carefully separated, washed clean, and dried in the sun or in a dry airy room. When fully dry, they should be packed away in barrels, or pulverized and bottled for use. Dose, one tea-spoonful in hot water sweetened, repeated as often as necessary.

DAUCUS CAROTA.

Common name—GARDEN CARROT.

THIS root is in frequent use, and though it will not yield any grained sugar, it affords a great deal of a sweet juice, strongly nutricious. When boiled, it affords a tender, and not very flatulent, food. The roots, when scraped small, and made up into a poultice, take off the disagreeable smell which attends ulcerated cancers. The raw carrot may be scraped or grated, then made into a cataplasm with cold water, and applied to any fetid ulcers; or carrots may be boiled a sufficient time till they become soft enough to mash into pulp. The raw carrots are, however, preferable. Turnips prepared the same way are said to answer a similar purpose. They are both to be applied immediately to the ulcer, without the intervention of any other substance.

DELPHINIUM CONSOLIDA.

Common name—LARKSPUR.

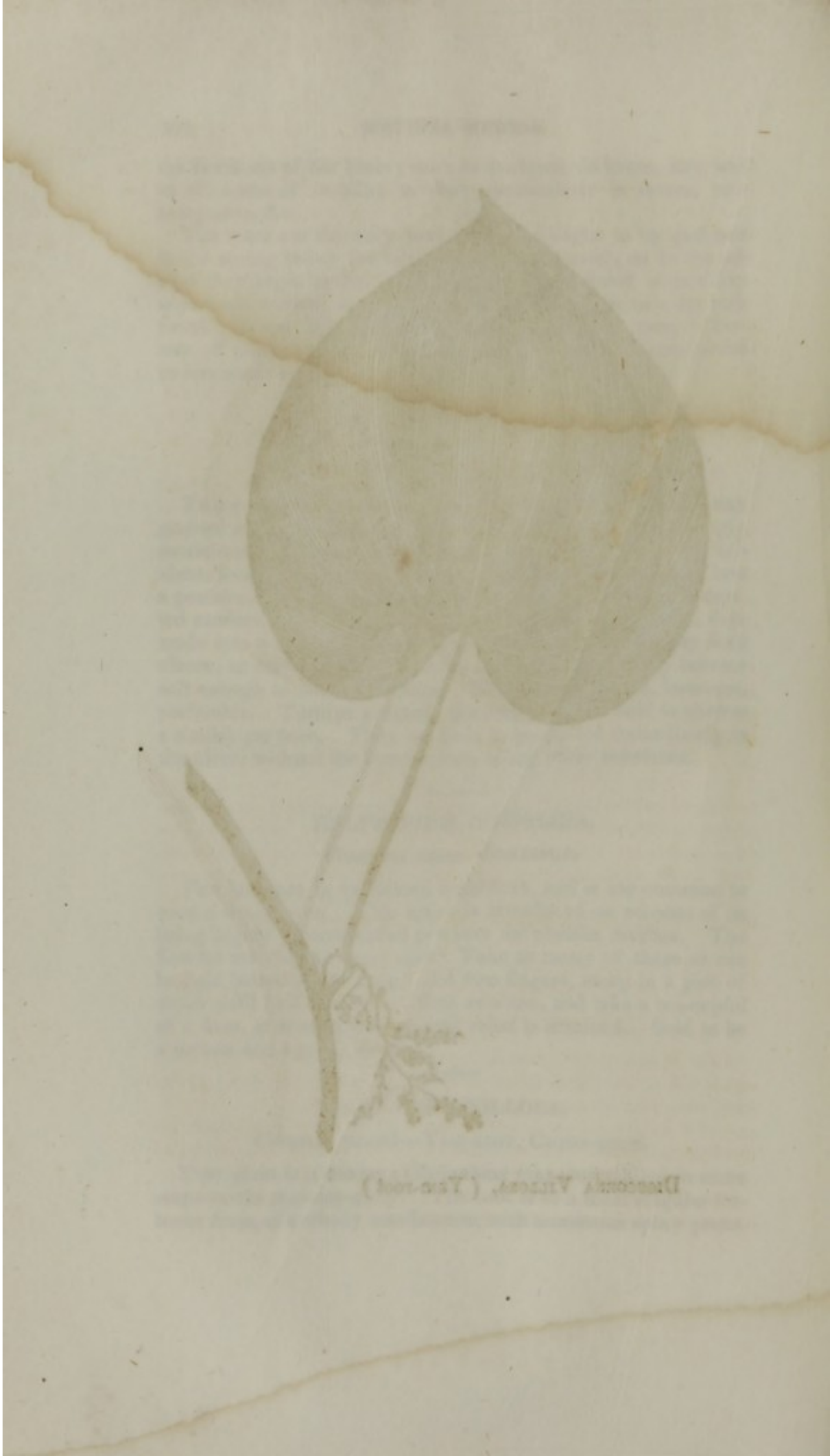
THE larkspur is cultivated in gardens, and is too common to need a description. This article is introduced on account of its being highly recommended as a cure for cholera morbus. The flowers are the only part used. Take as many of these as can be held between the thumb and two fingers, steep in a pint of water until half evaporated; then sweeten, and take a tea-cupful as a dose, at short intervals, until relief is obtained. Said to be a certain and speedy cure.

DIOSCOREA VILLOSA.

Common names—YAM-ROOT, CHINA-ROOT.

THIS plant is a twining and climbing vine, resembling in some respects the morning-glory. The root is of a most singular tortuous form, of a woody consistence, with numerous spiny protu-

Dioscorea Villosa, (Yam-root)



berances. It is perennial, and doubtless endures a greater number of years than the roots of most plants of similar habits. The sprangles are usually near half an inch in thickness, and the whole root in favorable situations is often found to weigh half a pound. The stem is a climbing annual vine, winding around small shrubs, and insinuating itself among brambles, often attaining the height of six or eight feet. Near the ground, the leaves usually appear in verticillate clusters, or whorls, varying in number from two to eight or more in a bunch, dependent on the luxuriance of the soil. Higher up, the leaves are alternate. They are always on pretty long footstalks, and of the form of a heart, with the point acute and turned to one side; commonly roundish as well as cordate and nearly two inches across. Almost always you may count just nine nerves or portions of framework, proceeding from the base towards the apex. The flowers show themselves in May and June; they are very small and white, arranged on little stems which come out just above the leaves. The seeds are triangular some like buckwheat, though four times as large, with wings at the angles. The yam-root grows plentifully in the Western States, delighting in fertile hillsides, thickets, and open woods.

An infusion of the root is a valuable remedy in bilious colic. An ounce of the powdered root must be boiled in a pint of water, and half of it given at a dose. It acts with remarkable promptitude in affording relief. I have been informed that Dr. MILLER, of Neville, Ohio, values the tincture highly as an expectorant. He says it is also diaphoretic, and in large doses emetic.

For the introduction of the dioscorea into this work, we are indebted to the kindness of our friend, Dr. J. L. RIDDELL.* He has not informed us upon what principle it is supposed to afford relief in bilious colic, whether as an anodyne, cathartic, or some other. We have no doubt, however, of its value in this complaint, and, at the same time, think it highly probable that further investigation will disclose its usefulness in other diseases.

DOLICHOS PRURIENS.

Common names—COWHAGE, COWITCH.

THE cowhage is an exotic plant, growing in hot climates, especially in the West Indies. It bears a pod about four inches long, round, and about the thickness of one's finger. These pods are thickly beset with stiff hairs, which, when applied to the skin, occasion an intolerable itching. The ripe pods may be

* To the same gentleman our acknowledgments are also due for the introduction of the *Cassia chimæcrista*.

dipped into melasses, which, with the hairs, are then scraped off with a knife. This process is repeated with fresh pods until the melasses becomes about as thick as honey with the hairs, when it is fit for use. Or the hairs may be first scraped from the pods, and then mixed with the melasses, to the proper consistence.

This medicine is a valuable vermifuge, acting mechanically, the sharp hairs penetrating and destroying the worms, without occasioning any inconvenience to the patient; the stomach and intestines being defended from injury by the mucus which lines the alimentary tube. From a tea-spoonful to a table-spoonful of the melasses may be taken as a dose, according to age, once or twice a day, for a day or two, and the worms carried off by a mild purge; the stools, in some instances, consisting almost entirely of these vermin.

A decoction of the roots of cowhage is said to be a powerful diuretic; and an infusion of the pods, twelve to a quart, is accounted a certain remedy for the dropsy.

EPIPHEGUS VIRGINIANUS.

Common names—Beech Drops, Cancer-root.

This is altogether a singular plant, chiefly found growing upon the roots of the beech tree. The root is bulbous, yellowish, covered at the bottom or lower end with a mat of short, crooked fibers. Stem from eight to fifteen inches high, much branched, beset with scattered short scales instead of leaves, of which the plant is quite destitute. Flowers remote, but numerous, situated just above the scales, all along the branches. The plant is usually of a yellowish-white color, intermixed with reddish or dark purple, white and yellow stripes. Found in all parts of the United States.

The beech drops are astringent, bitterish and nauseous; useful as a remedy for sore mouth, dysentery, and no doubt might be advantageously employed in other cases requiring astringent medicines; and are actually said to have been of great service applied to obstinate ulcers. They are also supposed to have been used in cancerous affections with a happy effect, and even to have performed cures of that dreadful scourge of the human race. For ulcerous and cancerous affections, the beech drops may be pulverized, both roots and tops, and the powder sprinkled on the ulcer, or a tea may be made and used as a wash. The internal use, at the same time might also be advantageous

ERIGERON PHILADELPHICUM.

Common names — Cocash, Frostweed, Scabious, Skevish, Skabish, Squaw-weed, Field-weed.

Roots perennial, yellowish, formed by many branching fibers. The whole plant is pubescent or hairy, growing to the height of two or three feet; stems from one to five, straight, branching near the top, terminating in numerous downy flowers, of a yellowish and white, or purplish and blue appearance. Leaves oblong, lower ones the largest, very small at the top. It continues in bloom until the autumnal frosts, which has given rise to one of its names, frostweed. Found all over the United States, growing in fields, which it often overruns; seldom seen in woods or mountains.

There are also two other species of this plant, *Erigeron canadense* and *Erigeron heterophyllum*, which are valuable articles of medicine, and may be used indiscriminately with the *Erigeron philadelphicum*. They are tonic, diuretic, sudorific, and astringent in a powerful degree. Their oil, says Rafinesque, is so powerful that two or three drops dissolved in alcohol, have arrested suddenly uterine hemorrhagy, in the hands of Dr. Hales, who employs the oil of the *Erigeron canadense*.

The last named species is very common in all parts of the country, abounding mostly in cultivated fields, particularly fallow grounds and stubble fields, growing from three to six feet high, branched near the top, the stem thickly set with long narrow leaves which give the plant a somewhat ragged appearance. This species is known by the common names of *marestail* and *fleabane*. The other two species are often found growing together, and are used indiscriminately under the common names given at the head of this article. Found in open woods and along the banks of streams.

The diseases already relieved or cured by these plants, continues Rafinesque, are chronic diarrhœa, dropsy, suppression of the urine, inflammation of the kidneys, gravel, gout, suppressed menstruation, cough, cutaneous eruptions, hemorrhagies, dimness of sight, rash, cold hands and feet, &c. Enough, one might well think, to be cured by three simple plants, all possessing the same virtues. They certainly contain active properties, as all who have used them can testify, and we sometimes fear that they are too powerful to be used without the utmost discretion. They certainly deserve a careful investigation, and if found too powerful for using without hazard, should be expunged from practice; but if not, they ought to be retained.

The whole plants are used fresh or dry, in infusion, decoction, or tincture The extract is rather fetid, but more astringent than

the infusion or tincture, and less so than the oil, which is one of the most efficient styptics.

The extract and syrup have been given with success in dry cough, bleeding at the lungs, and other internal hemorrhages. The dose of the extract is from five to ten grains, (about a quarter to half a tea-spoonful,) often repeated.

As a diuretic, the infusion, decoction, or tincture, are preferable as being more active; some of these preparations have increased the daily evacuations of urine from twenty-four to sixty-seven ounces. A pint or two of the infusion or decoction may be administered daily, and agrees well with the stomach. From two to four drachms of the tincture may be taken during the day; and is made by digesting one ounce of the leaves or flowers in a pint of proof spirits.

Some preparation or other of those plants is said to afford speedy relief in all diseases of the bladder and kidneys attended with pain and irritation. They are also useful, applied externally, to wounds, and a poultice is said to dissolve hard tumors. The essence, made by saturating alcohol with the oil, and a little taken in water, at the same time applying, if practicable, some of it externally, will instantaneously stop the most dangerous hemorrhage.

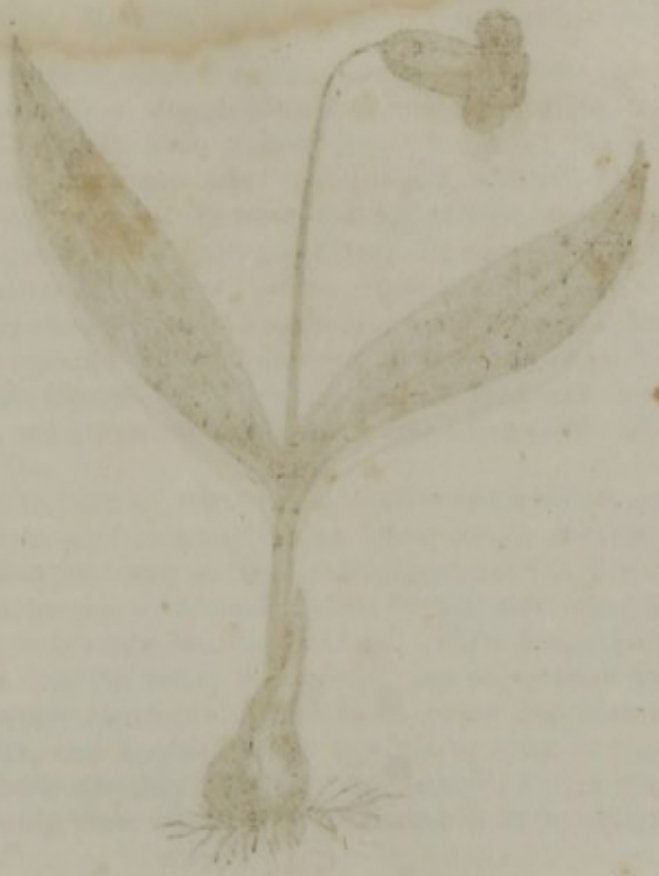
We are unwilling to leave this subject without advising those who may make use of these articles to do it cautiously, as our own experience would not justify recommending an indiscriminate application of them without some care and attention. It might, perhaps, be best to combine them with less active astringents.

ERYNGIUM AQUATICUM.

Common names—Corn Snakeroot, Button Snakeroot, Rattlesnake's Master.

Root perennial, somewhat bulbous, about one inch long, the lower end decayed or rotten, giving off many fibers. Stem round, about two feet high, somewhat branching, bearing on its top large balls covered with a white bloom. Leaves scattered, long, resembling young corn leaves, having spines or prickles along their edges, and one at the extreme point. The root is extremely pungent to the taste, possessing powerful and valuable properties. Found in the prairies of the Western States.

The corn snakeroot is a powerful diuretic, stimulant, expectorant, and antidote to the poison of snakes, and other poisonous bites or stings. The root, says Peter Smith, needs only be chewed (or bruised) and laid on the wound, and a little of it swallowed; which, if done when the bite is first inflicted, pre-



ERYTHRONIUM AMERICANUM, (Adder-tongue).

vents the place bitten from swelling. It is generally, continues he, first or last applied, a speedy cure.

When this root is employed for dropsy or gravel, it should be given in a weak tea and continued but a short time, and then followed by tonics, such as agrimony tea, columbo root, or bitters.

ERYTHRONIUM AMERICANUM.

Common names—ADDERTONGUE, DOGTOOTH VIOLET, SNAKE-LEAF, RATTLESNAKE VIOLET, YELLOW SNOWDROP, &c.

ROOT perennial, bulbous, very deep in the ground, covered outside with a brown loose tunic, white inside, with fibers issuing from the base or bottom of the bulb. Leaves appear to be radical because near the ground, smooth and shining, one the first year, two afterwards, long, narrow, broadest at the outer end, spotted green and purple, giving them a somewhat singular appearance. Flower yellow, nodding, supported by a smooth shining stem, at some distance above the leaves; appear very early in the spring. Found in the Northern and Middle States.

With regard to the virtues of this singular though common plant, we extract the following from SMITH's "Botanic Physician:"—

"The bulb of the root and leaves are emetic, emollient, suppurative, and anti-scrofulous when fresh, nutritive when dry. The dose to vomit is twenty-five grains of the fresh root, or forty of the recent dried root. But its greatest value consists in its being a remedy for the scrofula. This property which it possesses was but lately discovered, but experience has established it in many instances. The fresh roots and leaves are stewed in milk, and applied to the scrofulous sores as a poultice, healing them speedily; or the fresh bruised leaves may be laid on, renewing them often. The infusion is to be drank at the same time."

EUGENIA CARYOPHYLLATA.

Common name—CLOVE TREE.

THIS is a beautiful tall tree, a native of the Molucca Islands. Cloves are the unexpanded flowers, picked from the tree and dried. They have a strong aromatic flavor, and pungent taste.

Cloves are stimulant and sudorific; but in general only used in combination with other articles, such as the diaphoretic powders and bitters. The oil of cloves is used as a cure for toothache; a little of which may be put on some lint and introduced into the hollow of the tooth.

EUONYMUS ATROPURPUREUS.

Common names—Bitter-ash, Spindle Tree, Indian-arrow, Burning Bush.

The bitter-ash was introduced into the two first editions of this work under a wrong name and partially a wrong description, as well as having some properties attributed to it which it does not possess. It will be found in the two first editions under the head of *Cornus Hercules*.

The bitter-ash is a shrub, or large bush, growing from eight to fifteen feet high, bark smooth, dark gray, interspersed with large white irregular shaped spots, which disappear towards the termination of the branches; considerably branched, branches shooting up at very acute angles, often three together in the specimen which we examined; the extreme portions of the branches constituting the growth of the preceding year, are of a dark green color with many dark spots, whilst those portions which appear to have been produced two years preceding, are less green, with stripes or lines of white; at least such was the case with the garden specimen from which this description was drawn. Leaves petiolate, opposite on the young branches, alternate on the old, oblong ovate, acuminate, serrate, deep green on the upper, and light on the under side. Flowers a kind of *cyme* or a cluster, often axillary to the leaves, very small, dark reddish-brown inside, inclining to green outside, producing an angular shaped, rough involucre or husk, which opens in the fall, exhibiting the beautifully bright fiery red fruit, or berries, in strong contrast with decaying nature, which has procured for it the name of *burning bush*.

The bark of the root is the part employed as medicine, and should be gathered at the time that it will peal off easily, when it should be beaten with a hammer or mallet, carefully dried and preserved for use. The bark when dry is of a light brown color outside, white within, rough and much wrinkled, resembling in its appearance the dried root of spignet.

The bitter-ash is an excellent laxative, bitter tonic, useful in all cases of debility; particularly valuable as a tonic after intermittent fever or fever and ague. It may be used alone or combined with balmony or any other tonic. Dose from half to a whole tea-spoonful three or four times a day.

EUPATORIUM AGERATOIDES.

Common names—Poolroot, White Snakeroot.

Roots small, fibrous, of a dirty white, from two to four inches long. Stem from two to three feet high, somewhat angular and

furrowed, branched, branches axillary to the leaves, lower ones shortest, gradually becoming longer as they approach the top where they extend themselves so as to form a somewhat spreading head, producing clusters of white flowers, and overspreading the face of the country along roads and in open situations frequently to a great extent. Found in all parts of the country; most plentifully in the West. Leaves opposite, the pairs crossing each other, supported on long foot-stalks, very broad at the base, the extreme point very acute, edges jagged with very large obtuse teeth.

The root of this plant is the part used as medicine. It appears to be a warm stimulating tonic; producing in the mouth, when chewed, a warm aromatic pungent sensation. Its usefulness, in gravel we learned from Ira Finch, Esq. but the first knowledge which we obtained of its medicinal virtues was derived from the Indians, who use it as a cure for the ague. It no doubt possesses active properties worthy of further investigation.

EUPATORIUM PERFOLIATUM.

Common names—Boneset, Thoroughwort, Joepye, Fever wort, Thoroughstem, Crosswort, Sweating Plant, Indian Sage, &c.

Root perennial, horizontal, crooked, with few fibers, sending up many stems, which are upright, branched toward the top; from two to five feet high, hairy, pale or grayish-green color. Leaves opposite, and so formed as to give the stem the appearance of penetrating them through the center, where they are the broadest, and gradually tapering to a point, rough and woolly. Flowers in dense terminal corymbs, of a dull, or dirty white color. Found in swamps, marshes, and wet meadows, throughout the United States.

Boneset is sudorific, tonic, antiseptic, cathartic, emetic, diuretic, stimulant, &c. It is an intense bitter tonic, possessing very active powers. In large doses, the warm decoction proves emetic, and a cold infusion acts as a powerful tonic. It is also said to act with much effect upon the skin, removing obstinate cutaneous diseases. Large doses of the cold infusion often operate as a cathartic.

It is likewise said to be an antidote to the bite of snakes; and an excellent remedy for bilious colic attended with obstinate constipation of the bowels. For this purpose, a tea-cupful of the cold infusion must be given every half hour until it produces a cathartic effect.

The warm infusion acts as a sudorific, producing copious

perspiration. It is also an excellent article for coughs; and is likewise used in hysterical complaints. In dropsical complaints it is employed as a diuretic. The leaves are the part of the plant which is used for medicinal purposes, of which the extract and syrup contain all the medicinal properties, and are least disagreeable to the taste.

EUPATORIUM PURPURIUM.

Common names—QUEEN OF THE MEADOW, BONESET, GRAVEL-ROOT.

ROOT perennial, long, fibrous, white or brownish colored. Stems many, three to six feet high, round, smooth, of a purple color around each joint, bearing many corymbose, terminal, purple or pale reddish blossoms. Leaves in whorls, from three to five at a joint, broad, lanceolate, rough or wrinkled, and jagged. Grows commonly in wettish ground, or near streams, though sometimes on high dry land.

The root of this plant is stimulant, bitter, astringent, and powerfully diuretic, useful in all diseases of the urinary organs, dropsy, rheumatism, gout, and female weakness and obstructions. It is thought by some to be a solvent of the stone, and esteemed an unfailing remedy in gravelly complaints. Whether this be true or not, there is no doubt it is a very valuable article of medicine for diseases of this character, as well as for the peculiar weakness of females. Used in strong decoction freely.

EUPATORIUM TEUCRIFOLIUM.

Common name—WILD HOARHOUND.

THIS is an annual plant, growing from one to two feet high, found in all parts of the country, particularly at the south, where it grows in great abundance, and has obtained a high reputation as a domestic remedy in the prevailing fevers of that climate.

The wild hoarhound was first noticed in THACHER'S materia medica, to which, and to verbal information and personal observation, we are indebted for its introduction into this work. It is a valuable tonic; much used by the planters along the seaboard of the Southern States, and considered preferable to the Peruvian bark for the cure of fevers. It is also said, by Dr. JONES, to be diaphoretic, diuretic, and mildly cathartic. Usually administered in the form of infusion; one ounce of the dried leaves infused in a quart of water may be taken daily in doses of half a tea-cupful, more or less every hour or two.

EUPATORIUM PUPUREUM, (Queen of the Meadow).

TRIFOLIUM PRATENSE. (Queen of the Meadow)

FRASERA CAROLINENSIS, (American Columbo).

There is no doubt that it might be advantageously combined with other tonics.

FERULA ASAFŒTIDA.

Common name—Asafetida Plant.

The drug known by the name of asafetida is the resinous gum of a perennial plant, growing in the mountains of Persia. The gum is obtained from the roots of plants which are at least four years old. The roots are cut off and the juice suffered to exude, which is afterwards dried in the sun.

This article has a strong fetid smell, and a bitter, acrid, biting taste. It loses some of its smell and strength by age, a circumstance which ought to be particularly regarded in its administration. That which is accounted best is of a clear or pale reddish color, and variegated with a great number of elegant white tears.

Asafetida is a highly valuable remedy; acting as a stimulant, anti-spasmodic, expectorant, emmenagogue, and anthelmintic. Its action upon the system is quick and penetrating, affording great and speedy relief in spasmodic, flatulent, hysteric, and hypochondriacal complaints, especially when they arise from obstruction of the bowels. When spasms and constipations have weakened the power of life, and the functions are performed in a languid manner, the asafetida generally affords effectual relief; as it promotes digestion, enlivens the spirits, and increases the peristaltic motion, which makes it a valuable remedy for persons in advanced age.

It has been used as an anti-spasmodic and expectorant in asthma and whooping cough. As an anthelmintic it has often expelled worms; and may be administered for this, as well as for other purposes, either by the mouth or by injection. It may be given in the form of pills, tincture, or dissolved in simple water. One pill of a size convenient to swallow may be taken as a dose, in ordinary cases, and repeated as circumstances may appear to require; or from ten to fifty drops may be taken of the tincture, made by dissolving one ounce of asafetida in ten ounces (one and one fourth pint) of alcohol, digest seven days and filter.

FRASERA CAROLINIENSES.

Common names—Columbo Root, Indian Lettuce, Meadow Pride, Pyramid, Yellow Gentian, &c.

The root of this plant is triennial, that is, lasting three years, yellow, rough, horizontal, spindle shaped, growing sometimes

to the length of two feet, with but few fibers. Stem from five to ten feet high, erect, smooth, with but few branches, excepting near the top, where they form a handsome pyramid giving rise to numerous yellowish-white flowers. Leaves partly radical, forming a star, spreading on the ground; the residue of them in whorls around the stem, four to eight in a whorl, smaller than the radical or lower leaves. Found in the southern, western, and southwestern States; rare in many places, and in others extremely abundant.

The columbo root is both emetic and cathartic when fresh. When dry, an excellent bitter tonic and antiseptic. Used in fevers, colics, nausea, indigestion, debility, diarrhœa, &c.—Cures gangrene or mortification, by external and internal application. As a laxative it is substituted to rhubarb, particularly for children, and to remove the costive habits of pregnancy. A tea-spoonful of the powder in hot water will relieve the oppression of an over loaded stomach, so common with dyspeptic and other weak patients. Taken with cold water, it is said, adds to its efficiency, and prevents nausea and vomiting. It may be used alone, or combined with other tonics, and employed in all cases requiring this class of medicines. The root should be collected in the fall of the second year, or spring of the third year, of its growth.

GALIUM APARINE.

Common names—CLIVERS, CLEAVERS, GOOSEGRASS.

THIS plant grows to the height of two or three feet; stem square, slender, weak, having many joints, branched; rough or sharp with teeth or prickles; from each joint grow eight small pointed leaves; flowers small and white. Grows in woods and fence corners.

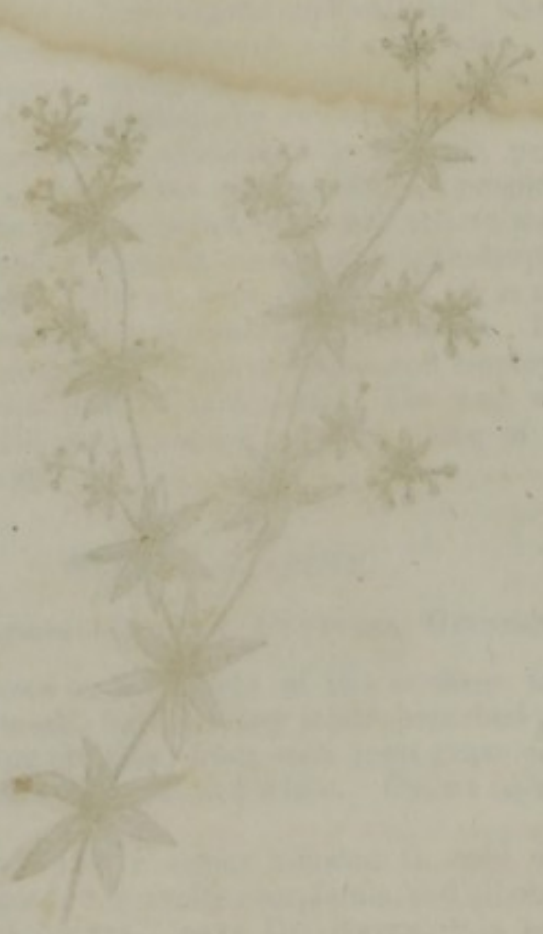
This plant made into a strong infusion in *cold* water, and drank freely, is good for gravelly complaints, and all obstructions of the urine. "Cleavers," says Dr. SMITH, "is one of the most valuable diuretics that our country produces. I have found it an excellent and speedy medicine in all suppressions of the urine and gravelly complaints, and is a powerful discutient." There are in this country many other species of Galium which possess similar virtues.

GAMBOGIA.

Common name—GAMBOGE.

THIS article is a concrete vegetable juice, of a gummy, resinous nature, the production of an East Indian plant. The best

GALIUM APERINE [ASPERULA], (Clevers).



sort is of a deep yellow color, without smell, and having but very little taste.

Gamboge is one of the most active cathartics, and also operates as an emetic. Its great activity and drastic nature render it an improper purgative administered alone; but it may be advantageously combined with other more mild substances, to give them activity. For this purpose it enters into BUNNELL's pills and many other cathartic compounds.

GEUM VIRGINIANUM.

Common names—EVANROOT, CHOCOLATEROOT, THROATROOT, CUREALL.

THE root is perennial, small, brown, horizontal, and crooked. Stem round, hairy, erect, growing about two feet high, surmounted by a few terminal, white flowers. Found in most of the eastern, middle, and western States.

The root of this plant is an astringent tonic; very useful in dyspepsy, and in bleeding at the lungs, consumption, diarrhœa, dysentery, colic, sore throat, &c. Said by Dr. JONES, to restore to health the most feeble and shattered constitutions. The root is used boiled in milk, or in water, sweetened, and makes a palatable drink, or in powder. The dose is a pint of the decoction, daily, or two or three tea-spoonfuls of the powder mixed with honey or melasses. There are several species of this plant, all of which are available as medicines.

DOG GLYCYRRHIZA GLABRA. WHOG

Common names—LIQUORICE, SWEET LIQUORICE.

THIS is a perennial plant, native of Europe. The root is the part used as medicine, and is of a sweet, agreeable taste. The sweetness is extracted by water, which, by evaporation, forms a dark colored extract called liquorice ball, possessing the virtues of the root.

Liquorice root, or its extract, is a useful article in coughs, hoarseness, and asthma, affording relief by lubricating the throat and loosening tough phlegm. It may also be combined with other articles, either to increase their usefulness, or modify their taste.

The *G. Lepidota*, of Missouri, and perhaps other Western States, would probably be a useful substitute for the European species.

HAMAMELIS VIRGINICA.

Common names—Witch Hazel, Spotted Alder, Winter bloom, Snapping Hazelnut, &c.

Witch hazel is a shrub, growing from ten to twenty feet high, branches irregular, crooked, and knotty; bark smooth, gray, with brown spots. Leaves rather large, smooth, alternate, oval or roundish. Flowers appear in the fall or winter, generally after the leaves have fallen off, the fruit ripening the next autumn. Found in most of the States; growing on hills, mountains, stony banks, and near streams.

The bark and leaves are slightly bitter, and very astringent The leaves are a most valuable article of medicine, as an astringent tonic and styptic. They may be employed in tea for bowel complaints, bleeding at the stomach, lungs, and all other internal hemorrhages; and in snuff for bleeding at the nose; and no doubt might be advantageously applied to wounds to stop the effusion of blood. As a styptic to check internal bleeding, the witch hazel, perhaps, is amongst the best articles known.

The Indians, it is said, consider the witch hazel a valuable article of medicine, applying the bark in poultice or wash to painful tumors, and external inflammations. A poultice of the bark is said to be efficacious in removing painful inflammations of the eyes.

HEDEOMA PULEGIOIDES.

Common names—Pennyroyal, Squaw Mint, Tickweed, &c.

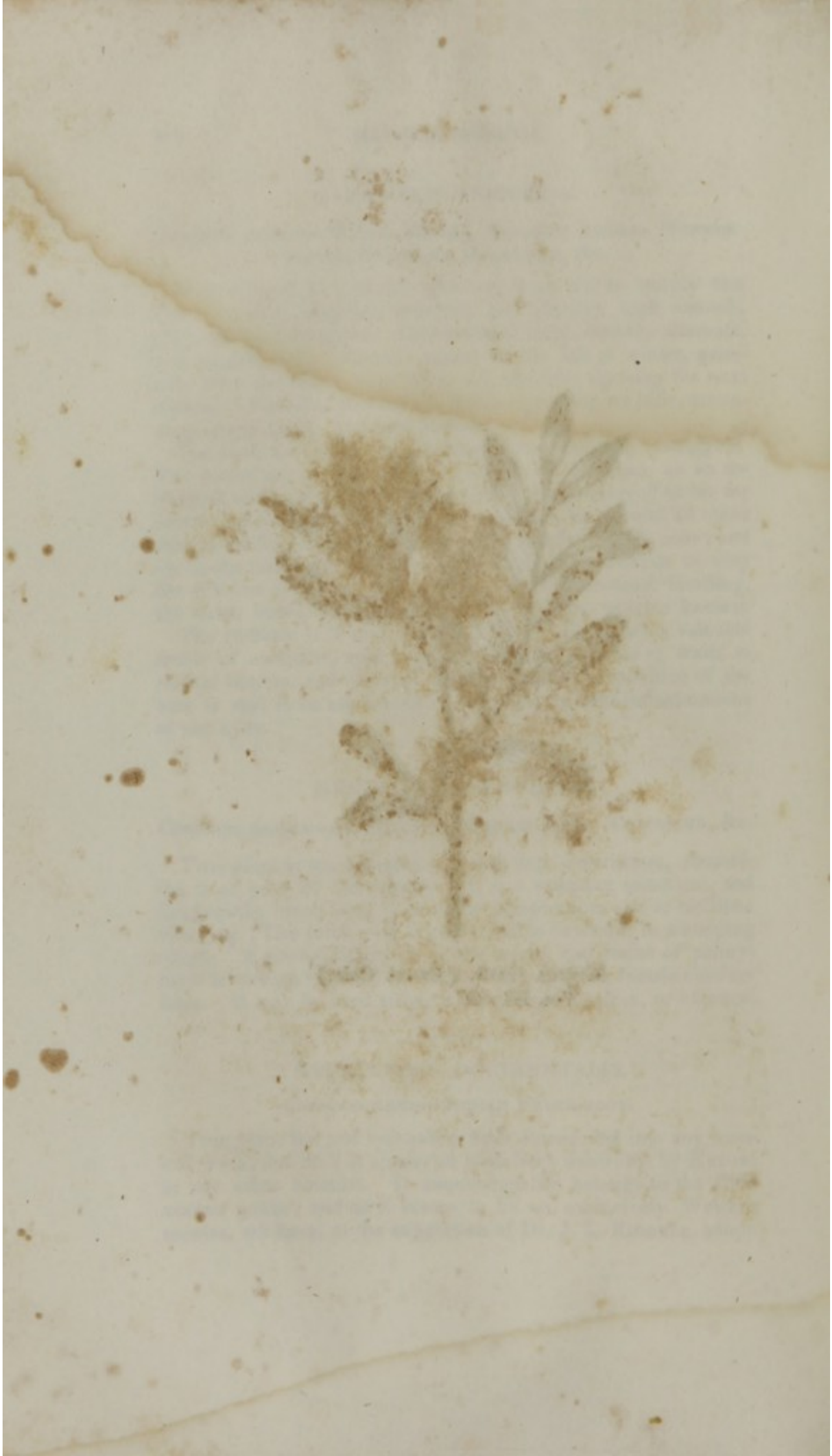
This plant is too common to need any description, abounding in all parts of the country. It is a warming stimulant, and diaphoretic, much used to promote perspiration, and to facilitate vomiting. The juice with sugar is said to be useful in whooping cough. A strong decoction of the leaves and stalks of pennyroyal is in high repute with some as a remedy in female obstructions. It may be used either in decoction, tincture, or essence.

HELIANTHUS OCCIDENTALIS.

Common name—Indian Fever-root.

This plant has not heretofore been introduced into any medical work, nor does it appear to have been described by Eaton, or any other botanist. It unquestionably belongs to the *Helianthus* genus; and as it seems to be an exclusively Western species, we have, at the suggestion of Dr. J. L. Riddell, adopt

Myrica Gale, (Sweet Gale.)



CASSIA, (Senna).

†Fig. 1, is a specimen leaf of the ovate leaved Alexandria senna. 2. Specimen of the acute variety of the same. 3. Specimen of the Tephrosia or silver leaved Alexandria senna. 4. Specimen of the India or Trinnevelly senna. 5. Specimen leaf of the Coriaria myrtifolia,—an article with which senna is sometimes adulterated. These are of a grayish-green color, and are tinged with blue. They have three parallel nerves, one prominent one in the centre, and one on each side between this and the edge or margin of the leaf. 6. A specimen leaf of the Cynancum oleæfolium or argel, a variety of the Alexandrian senna.

ed as the specific name, *occidentalis*, as descriptive of its location, or rather of the region wherein it was first discovered.

This plant has a perennial horizontal root, throwing off many fibers, dark colored, strong rich taste, sending up several stems, which are round, faintly striped, covered with short, almost imperceptible hair or down, from two and a half to three feet high. Leaves scattered, supported by long foot-stalks which sheath the stem, and like it are covered with down, which, towards fall, becomes stiff and rough. Flower heads yellow, large, one to two inches in diameter.

A strong decoction of the root of this plant, drank freely, will operate as an emetic, and by continuing its use more moderately, relaxes the bowels, promotes perspiration, and effectually cures fevers. This article is also one of the sweating plants used by the Indians, and there is no doubt that its usefulness in fevers is partly owing to its diaphoretic property. It promises to become a valuable article of medicine.

HELONIAS DIOICA.

Common names—Unicorn, Star-root, Blazing Star.

Root perennial, rather smaller than the little finger, irregular, from one to two inches long, of a dirty dark color, very hard, full of little pits, rough and wrinkled, having numerous small, darkish colored, fibrous roots, which when deprived of their outside bark somewhat resemble hogs' bristles; end of the caudex or main root often dead or rotten. Leaves radical, pale, smooth, ever-green, lanceolate, and in the winter lying flat on the ground in rays, resembling a star, whence some of its names. Stem from eight to eighteen inches high; upright, naked, terminating in a spike or tassel of white dioecious flowers, that is, bearing male and female flowers on different plants. Found in thin soils.

The root is the part principally used, and is highly celebrated as a tonic and general strengthener of the system. Dr. Rogers says it relieves colic, stranguary, rheumatism, and jaundice. It also has a powerful tendency to prevent abortion, and those who are liable to accidents of this kind, ought to make frequent use of it. Half a tea-spoonful of the powdered root may be taken three times a day, in a gill of warm water; or, for ordinary use, a portion of it may be added to the bitter tonic. By some it is highly valued in suppressed menstruation.

The Unicorn is also an excellent remedy for coughs, consumptions, and all complaints of the lungs, promoting expectoration and insensible perspiration. The constant use of it, however, sometimes makes the mouth sore, when it must be laid

oy, and some other expectorant used until the mouth gets well, and then it may be resumed again.

HUMULIS LUPULIS.

Common names—HOPS, HOP-VINE.

THIS common plant needs no description. It is a very strong bitter, accompanied with a small degree of aromatic flavor, and astringency. It also possesses some narcotic power, as its administration is often followed by sleep; reducing the pulse sometimes from ninety-six to sixty. The narcotic effects of hops are different, however, from those of opium, not being followed by that debility and languor which always succeed the use of that article.

The hop is also an excellent stomachic bitter, very useful in dyspepsy and other affections of the digestive organs. It has also been highly extolled as a remedy in inflammations of the kidneys, and gravelly complaints. A strong infusion of hops, it is said, proves a certain solvent of the stone out of the body, and hence has been inferred its usefulness in gravel and stone. It has been asserted by high authority, that it seldom fails to alleviate the pain, and increase the secretion of urine, when taken internally.

If, as has been stated, an infusion of the hop will dissolve the stone out of the body, we think it might be usefully employed by injecting it into the bladder. For this purpose, we would suggest the following plan:—A catheter may be introduced into the bladder and the urine suffered to pass off; then with a syringe whose pipe is fitted to the tube of the catheter, inject enough water about blood-warm to wash out the bladder; this must then be suffered to pass off by the catheter, and the hop infusion, also about blood-warm, injected and retained for half an hour, or as long as the patient can conveniently endure it, when it should be suffered to pass off through the catheter; and if the infusion of the hop have produced much irritation, another washing with warm water might be advisable, to which, perhaps, the addition of a little sweet milk, or of flax-seed, or slippery elm tea, might be useful.

We think also this course would be advantageous in using the injections recommended in our treatment of the gravel; but as it had not at that time occurred to us, we trust that the acknowledgment of it will be a sufficient apology for introducing it here. We are also aware that many obstacles to the successful treatment of gravel by injection will present themselves; yet, when we consider the hopelessness of effecting a cure by any other means than the dreadful operation of cutting out the stone, we

HYDRASTIS CANADENSIS, (Golden Seal).

ought cheerfully to give every thing a serious consideration that holds out even a faint prospect of relief by milder means.

The medicinal properties of the hop appear to be concentrated in a yellow powder which may be obtained by beating and sifting the hops before using them for other purposes. This substance, denominated lupuline, forms an important ingredien in Dr. J. T. Wells' ague pills.

Hops are also a very valuable external application for pains, especially of the spasmodic kind. For this purpose they may be put into a small bag, thoroughly moistened with hot vinegar, and applied to the painful part. A poultice or ointment prepared from hops, has likewise been employed as an anodyne application to cancers and other painful ulcers.

The hop is one of those medicines, the habitual use of which soon renders it inert upon the system; we must therefore begin with a small dose, and gradually increase it. One grain of the lupuline, four of the extract, a tea-spoonful of the tincture, or two ounces of the infusion, are considered sufficient to commence with. An over-dose is said to produce sore throat, nausea, purging, tremor, headache, &c.

HYDRASTIS CANADENSIS.

Common names—Golden Seal, Yellow Puccoon, Yellow Root, Ground Raspberry, Indian Paint, &c.

Root perennial, crooked, wrinkled, rough, and knobby, of bright yellow color, with many long fibers. Stem round, simple, straight, growing from eight to fourteen inches high, bearing commonly two rough leaves at the top somewhat resembling the leaves of the sugar maple, in the center of one of which appears the flower, which gives rise to a fleshy, red, many-seeded berry. Found mostly in the Western States.

The golden seal is a powerful and valuable bitter tonic; highly useful in all cases of debility and loss of appetite. It may be used alone or combined with other tonics. Very useful during recovery from fevers, for dyspepsy, or any other complaint, to remove the heavy, disagreeable sensation often produced by indigestible food, by taking a tea-spoonful in hot water sweetened. It is also employed by Dr. J. T. Wells as a remedy for inflammations, for which purpose he considers it highly valuable. Used both externally and internally, in powder or decoction.

A decoction of the golden seal is also a very valuable remedy as a wash for sore eyes. It is likewise highly probable that it may be found useful as an external application to ulcers, as Rafinesque says, the Indians use it for sore legs, and many external complaints, as a topical tonic.

ICTODES FŒTIDA.

Common names—Skunk Cabbage, Skunkweed, &c.

This common and well known plant takes its name from its smell, which greatly resembles the peculiar odor of the skunk. Grows in wettish lands, having a great many fibrous roots, running deeply into the earth; sending up numerous large, bright, green leaves, but without any stem or stalk.

The roots and seeds of the skunk cabbage are expectorant, anti-spasmodic, and anti-hysteric.

As an expectorant, they are useful in asthma, cough, consumption, and all affections of the lungs that need medicines of this kind. As an anti-spasmodic, they are used in hysterics, whooping cough, convulsions of lying-in-women, and in all spasmodic affections, and are said to be not inferior in efficacy to the best remedies of that class. As an anti-spasmodic, the pulverized root of skunk cabbage may be administered in half or whole teaspoonful doses, repeated according to circumstances; and as an expectorant, it may be given in similar doses once or twice a day, or combined with other expectorants. It may also be employed in syrup, for complaints of the lungs. An over-dose produces vomiting, headache, vertigo, and temporary blindness. It loses its strength by long keeping.

IMPATIENS PALLIDA.

Common names—Celandine, Touch-me-not.

This is an annual plant growing in wet lands, rising to the height of from two to four feet in rich soils, branched, with large joints at the origin of the branches, of a tender, watery, transparent appearance. Leaves alternate, ovate, pointed at each end, shallow scollops and little rounded projections along the margin. Flowers yellow, spotted with orange, hood-shaped, succeeded by pods, which, when fully ripe, burst suddenly, or if touched about this time will instantly fly to pieces and scatter the seed; hence called *touch-me-not*.

This common herb is highly esteemed by some as a remedy for jaundice, taken in tea either alone or combined with soot from the chimney. It is also esteemed a good diuretic, useful in dropsy; and its juice is found beneficial for removing warts and ring-worms, salt-rheum, or tetter, and for cleansing foul ulcers. It may also be used for the same purposes in decoction, or it may be applied to ring-worms, &c., in poultice boiled in milk.

Ictodes Fœtida, (Swamp-Cabbage).

INULA HELENIUM.

Common name—ELECAMPANE.

A VERY common plant, growing about houses, along roads, and in cultivated grounds, producing large leaves, and large yellow flowers.

The root of the elecampane has long been celebrated as a valuable remedy for various complaints, particularly all diseases of the lungs, such as coughs, consumptions, and asthmas. It likewise promotes urine and insensible perspiration, gently loosens the bowels, and possesses the general properties of a strengthening restorative medicine. It is also said to be good for worms. It may be used in the form of a tea, electuary, or syrup, or the roots may be candied in syrup or melasses.

JEFFERSONIA DIPHYLLA.

Common name—TWIN-LEAF.

ROOT perennial, small, fibrous, very numerous. Leaves many, growing on long petioles or footstalks, divided into two equal parts. Scape or flower stem producing one single white flower. Abundant in Ohio.

This root needs further investigation; but so far as known it is a good external application to sore eyes, ulcers, &c. It is said the Indians use this plant as a diuretic in dropsy; and there is no doubt, from the sensible qualities of the article, that it may become a valuable internal remedy in various diseases, as a tonic.

Since the publication of the second edition of this work, the tonic properties ascribed to this plant have been partially confirmed, and others ascertained of which, previously, we had no knowledge. It is said, on the authority of Dr. I. D. JONES, of Worthington College, O., to be stimulant, diaphoretic, anti-rheumatic, and anti-spasmodic. Especially useful in chronic rheumatism.. [*Flora of the Western States.*] Its stimulant and anti-rheumatic qualities are also confirmed by other respectable authority, from which source we have also obtained the following methods of preparing and using it. For making the tincture, infuse two ounces of the dried root in a quart of spirits; of which a dose is one large table-spoonful three times a day. For a decoction, steep one ounce of the roots in a quart of boiling water; of which a dose is about the third of a tea-cupful three times a day. Either preparation may be taken more frequently if deemed necessary.

JUGLANS CINERIA.

Common names—BUTTERNUT, WHITE WALNUT.

THIS tree is too well known to need any description, being found in rich, moist, or rocky soils, near streams, in almost all parts of the country.

The inner bark of the butternut tree, and especially of the root, is a mild and efficacious purge, leaving the bowels in a better condition perhaps than almost any other in use. In diarrhœa, dysentery, and worms, it is the best cathartic which we have ever employed. The bruised bark applied to the skin will produce a blister.

It may be prepared in extract, pills, syrup, or cordial. For preparing the cordial, take any quantity of the fresh bark, split it into slips, of half an inch wide, beat with a hammer so as to reduce it to a soft stringy state; then put it into an earthen vessel, packing it close, and pour on it of boiling water sufficient to cover the bruised bark; set the vessel on coals near the fire, having it closely covered, and allow it to stand and simmer for one or two hours. Then strain off the liquor, and add sugar or melasses sufficient to make a syrup, when it may be bottled and from one quarter to one half the quantity of proof spirits added to preserve it. Dose for a child, from half to two great spoonfuls, repeated at intervals of half or a whole hour, until it operates. For grown persons, the dose must be much larger. This preparation is mild but highly efficacious for the bowel complaints of children or adults, and will cure without giving enough to operate as physic: but for dysentery and worms enough should be administered to operate freely on the bowels. It may be given in all ordinary diseases of children with the happiest effect, being a most valuable family medicine.

The syrup is made in a similar manner, only it is boiled down so as to make it much stronger, and more actively purgative.

JUNIPERUS COMMUNIS.

Common name—JUNIPER SHRUB OR BUSH.

THIS is an ever-green, growing on dry, barren commons, and hilly grounds, in many parts of the United States, and in Europe. It is somewhat remarkable that no grass or herbage will grow beneath this shrub.

Wherever the juniper gets a hold in the earth it throws out roots from its branches, giving rise to new shrubs, and spreads in all directions, forming beds many rods in circumference. BIGELOW says it seldom rises more than two or three feet from

the ground. The tips of the branches are smooth and angular; leaves growing in threes, slender and pointed. Berries fleshy, roundish, oblong, of a dark purplish color, and are the part principally used in medicine.

When these berries are of a good quality they yield, by distillation, a large quantity of pungent, volatile oil, of a peculiar flavor, being the same that it imparts to gin, and which gives this liquor its diuretic qualities. The berries of juniper, or the essence made from the oil, is a valuable diuretic, useful in all dropsical complaints. The berries in a moderately strong infusion, with the addition of a little gin, are frequently used in dropsy.

LAURUS BENZOIN.

Common names—Spicewood, Spicebush, Feverbush, &c.

A description of this spicy, aromatic bush, is deemed quite unnecessary. A tea made from the twigs is esteemed a good drink in intermittent fevers, having a tendency to relax the solids, attenuate the fluids, and promote perspiration. It is also considered an efficacious remedy for worms, and is often given to children for this purpose. The berries boiled in milk have been found a salutary medicine in dysentery; and no doubt may prove valuable in all complaints of the bowels. The oil from the berries is a fine stimulant, used, says Rafinesque, for bruises, colics, itch, and rheumatism; and we think might become an article of trade in this country where the berries abound in such profusion.

LAURUS CAMPHORA.

Common name—Camphire Tree.

The camphor laurel grows in great abundance, and to a considerable size, in the forests of Japan; and is not uncommon in green-houses in England.

Camphor exists in distinct grains in the wood of the root, body, and branches of the camphor tree, and is extracted by the process of sublimation; which is conducted in the same manner as distillation, only that in sublimation, heat is applied to dry solid substances, whilst in distillation it is applied to fluids. Camphor, however, is a proximate principle of vegetable matter, and exists in many other plants besides the camphor tree, especially those of an aromatic quality.

When the camphor is brought to Europe, it undergoes a second sublimation, with the addition of one twentieth of its weight of lime, by which it is rendered more pure.

Great use is made of camphor externally, in the form of liniment, to disperse swellings, tumors, and pains, and to relieve bruises, sprains, &c. It is one of the ingredients in opodeldoc.

Camphor dissolved in spirits is an almost universal family medicine, used as a stimulant and anodyne, in fainting, headache, colic, &c.

LAURUS CINNAMOMUM.

Common name—Cinnamon Tree.

The cinnamon tree is a native of Ceylon, in the East Indies, but is now cultivated in Jamaica, and other West India islands. Grows from four to ten feet high, very bushy ; leaves resemble the laurel, and have the hot taste and smell of cloves when chewed. Cinnamon of the shops, is the inner bark of the tree.

This bark is a useful and elegant aromatic, very grateful to the taste and to the stomach. It is stimulating, tonic, carminative, and stomachic. Useful combined with bitters, diaphoretic powders, &c. The oil of cinnamon is a powerful stimulant, a little of which may be put on lint, and applied to hollow teeth, to cure the toothache.

LAURUS SASSAFRAS.

Common names—Sassafras, Saxafrax.

The sassafras tree has been long regarded as a valuable medicinal article. The bark has a fragrant smell and very agreeable spicy taste. The flavor of the root is most powerful ; that of the branches most pleasant. The flavor and odor reside in a volatile oil, which is readily obtained by distillation. The bark, leaves, and pith, abound with a large quantity of mucilage, which is useful in dysentery. A very small quantity of the pith infused in a glass of water gives to the whole a ropy consistence, like the white of an egg ; and is an excellent application to sore eyes. The bark of the root is the part principally employed.

Sassafras is stimulant, tonic, and antiseptic. A small quantity of the oil, applied to an inflammation on the surface, will generally cure it. The bark bruised, and formed into a poultice with corn meal, is a powerful antiseptic, applied to mortifying ulcers. It is probable that the oil or its essence may have a still more powerful effect, and might also be used internally for the same purpose, in all cases of mortification, and particular-

ly of the bowels. The mucilage is said to be good in gravel and catarrh.

The medicinal properties of sassafras are very volatile, and therefore lose much by long keeping.

LEONTODON TARAXACUM.

Common names—DANDELION, PISSABED.

THIS plant is too common to need a description, growing almost every where in improved lands that are not ploughed, as pastures, meadows, yards, &c.

We extract the following from a communication published in the "Eclectic and Medical Botanist," written by an individual whose practical knowledge is, we are assured, a sufficient guarantee for the correctness of his observations:

"*Diuretic.*—Producing an increased secretion of urine and serviceable in many of the nephritic affections; and when we take into consideration that even *vis medicatrix naturæ* when encroached upon by morbid excitement, and especially when aided by this diuretic article, frequently employs the emunctuaries of the venal organs to carry off the more serous parts of the blood, which in some instances (such as dropsy) is very considerable, thus reducing excess of action in particular organs.

"We perceive that this article is susceptible of a much more extensive practical application than it has met with. If diuresis be desired more than this article alone will produce, the *Apium petroselinum* (common garden parsley) is a valuable adjunct.

"*Diaphoretic.*—Promoting an increased exhalation from the external surface and sympathetically influencing almost every function in the animal economy—and directly relieving congestion by equalizing excitement and circulation—applicable to almost every form of febrile and inflammatory action. As an auxiliary the *Asclepias tuberosa*, (pleurisy root,) or *Eupatorium perfoliatum*, (boneset or thoroughwort,) I have found it serviceable, especially the former.

"*Aperient.*—Moderately purgative to the bowels, and is perhaps the best article we can resort to with expectation of radical cure in cases of constipation from biliary obstructions, or deficient peristaltic action. To increase its cathartic effects add *Iris germanica*, Flower-de-luce (or common blue flag of the gardens—the large.)

"*Anti-spasmodic Expectorant.*—In pulmonary diseases I have found the dandelion an invaluable remedy. I believe I will venture a prediction. If ever any one article cures a

confirmed consumption, it will probably prove to be this. Possessed of such active and extensive medical properties, which may be so managed in its exhibition as to produce almost any effect to any extent desired on any function, tissue or set of organs, in the animal machine, what may we not expect from it? In asthma and catarrhal coughs, let those who *persevere* in its use, judge for themselves.

"*Tonic.*—The bitter principle with which the dandelion is endowed renders it a valuable strengthening remedy in *all cases of debility*, especially such as are connected with much *nervous irritability*, where tonics are generally inadmissible. To the dyspeptic (especially if *nervous*,) I would say, try it *perseveringly*.

"*Alterative.*—In no one point do I esteem the dandelion more valuable than this, especially on the biliary system—here I could write a volume—but I have already extended this article beyond my design when I commenced; suffice it to say in conclusion, that I consider the dandelion much better adapted to chronic than acute forms of disease.

"My common form of employing it, is the expressed juice of the herb, (top and root,) obtained at any time in the spring or summer, or a decoction of the roots obtained in autumn. I sometimes use a semi aqua spiritous tincture *saturated*. In many cases, at first I employ a *quantity sufficient to produce a decided effect* on the *urinary organs*, the *bowels*, or the *skin*."

It is also remarked in the same communication, that the action of any of the foregoing properties may be augmented and its specific effects increased, by combining with the dandelion other articles whose action upon the system is known to be such as will facilitate the operation we wish to produce.

Rafinesque says that the milky juice of the stem of this plant removes freckles from the skin.

LEPTANDRA VIRGINICA.

Common names—Blackroot, Brintonroot, Bowmanroot, Culver's Physic, &c.

Root perennial, black or dark colored, many small fibers growing from a long woody caudex or head. Stems, several rising from the same root, round, somewhat hairy, growing from two to four feet high, branching, branches bearing on their tops a spike or tassel of white crowded flowers. Leaves in whorls, of four or five at a joint, long, narrow and pointed edges set with unequal sharp teeth. Growing in wettish lands, near streams, and in open glades and plains.

The blackroot is very highly celebrated by those best ac-

LEPTANDRIA VIRGINICA, (Black-root).

Liatris Spicata, (Colic Root).

quainted with its virtues and effects, as an efficient purge, operating with mildness and certainty, without producing that depression of the living powers so common to other purgative medicines. In typhus and bilious fevers, it removes the black, tarry, morbid matter, from the intestines, which it seems so necessary to carry off by some means or other, and does it in a most natural manner, without weakening the tone of the bowels, or leaving behind it the poisonous sting so often remaining after the use of calomel, that almost universal cathartic in fevers. The blackroot is also a diaphorectic, antiseptic, and tonic. It may be taken in doses of a heaping tea-spoonful, in half a gill of boiling water, sweetened if most agreeable, repeated in three hours if it do not operate.

This appears to be the same article mentioned by PETER SMITH, under the names of *Culver's* or *Brinton's* root, with which he says his father "used to cure the pleurisy with amazing speed." This root was also a favorite medicine with the famous Indian Doctor HOUGH. He says it is "a most mild and efficacious purge in fevers, in disorders of the stomach or bowels, to destroy vicious humors in the blood, to remove costiveness, or to cool fevers."

The Wyandot Indians likewise speak of this root in terms of high commendation; saying it is a very good healing purge.

LIATRIS SPICATA.

Common names—COLICROOT, BUTTON SNAKEROOT, BACKACHE-ROOT, DEVILSBIT, GAYFEATHER.

ROOT perennial, about the size of the finger or larger, and from one to two inches long, rough and knobby, sending off a great many very small fibrous roots, almost like hair. Stem round, about three feet high, supporting on its top a long spike or tassel of scaly, purple colored, blossoms, in shape bearing a distant resemblance to an oak acorn. Found in the prairies of the Western States.

The colic root is a warming stimulant, diuretic, sudorific, carminative, and anodyne. The root is used in colic, backache, dropsy, &c. It may be given in tea alone, or advantageously combined with other articles, particularly the diaphoretic powders.

LINUM USITATISSIMUM.

Common name—FLAX.

THIS valuable article is said to have come originally from those parts of Egypt which are exposed to the inundations of the Nile

An infusion or tea of flax-seed, sweetened with honey, is useful for coughs, asthma, and scalding of the urine. The seeds also make an excellent poultice; and the fresh oil is by some esteemed equal to the castor oil.

LIRIODENDRON TULIPIFERA.

Common names—Yellow Poplar, White-wood, Tulip-tree.

This is a native of, and well known tree in, the United States. It attains a great size, and may be ranked amongst the noblest trees of the forest.

The bark of both body and root has long been employed in this country as a tonic of high rank. It is a strong bitter, somewhat aromatic and astringent; found useful in dysentery, hysterics, dyspepsy, worms, and all cases of debility. For worms it is highly recommended, and has become a popular remedy in many places.

The pulverized bark of the poplar may be given in half or whole tea-spoonful doses; or it may be combined with other tonics. It is best given in substance, though it may be administered in infusion, decoction, or tincture. The bark of the root is best for medicine, and ought to be gathered in the latter part of winter or spring.

LOBELIA CARDINALIS.

Common names—Cardinal Flower, Cardinal Plant, Red Lobelia

Roots perennial, fibrous, whitish, of a nauseous pungent taste, affecting the mouth and throat in a manner similar to the lobelia inflata. The stem is erect, pubescent or hairy, growing from two to four feet high, terminating in a long spike of brilliant red colored flowers, which distinguish it from all other plants common to the soil where it grows. The leaves are broad-lanceolate, of a shining green, and unequally toothed on the margin. The time of flowering is from the last of July till September, when it may readily be distinguished in marshes, meadows, and in low wet situations, in all parts of the country.

"Few plants," says Barton, "equal in beauty this gaudy flower. Indeed it is far more showy and elegant than a multitude of exotics so industriously cultivated. Wherever seen, it is greatly admired, and perhaps it only requires to be generally known, in order to obtain a high station in the catalogue of favorite plants." We can add, on these points, our own testimony to the truth of Dr. Barton's remarks.

LOBELIA CARDINALIS, (Red Lobelia).

Lobelia Inflata, (Lobelia).

Of the medicinal powers of the lobelia cardinalis, but little at present is known. The Cherokee Indians, it is said, employ it with success in the treatment of worm complaints. A "root doctor" of some respectability, considers it a most powerful nervine, superior to any thing else known. He employs the roots, but in what form or quantity we do not know. Of the medicinal properties of this plant, we can say nothing from our own experience; but from its sensible qualities, reputed powers, and the well known activity of the lobelia genus, we think it worthy of further investigation. Indeed we could wish to see a more thorough examination of the medicinal properties of every plant belonging to this genus, as there is little doubt that a valuable addition of active and useful plants might thereby be added to the vegetable materia medica. And we will take the liberty of suggesting, that those who may feel disposed to investigate the properties of the plant under consideration, should not confine themselves to the root alone, but extend their experiments to the leaves also.

LOBELIA INFLATA.

Common names—Lobelia, Emetic Herb, Emetic Weed, Indian Tobacco, Eyebright, Puke Weed, &c.

Lobelia inflata is a biennial plant, growing from eight to thirty inches high; stem erect, milky, branched. Leaves alternate, milky, oval, or oblong, acute, edges jagged with unequal teeth. Flowers scattered along the branches, small, pale blue, axillary to bracts somewhat similar to the leaves but much smaller, upper ones the smallest. Seed vessel a small oblong, roundish pod, crowned with several little bracts which are the calyx of the flower. Dr. Thomson fancifully supposes the pod to resemble the human stomach. Seeds many, very minute, brown, resembling tobacco seeds.

Lobelia is a common plant in most parts of the United States, growing by the road side, rarely in woods, in the greatest abundance in stubble fields, especially the next season after the crop is taken off. When broken, a milky, acrid, juice exudes from the plant, of a most penetrating diffusible nature, which, if applied only to the eyelid, produces a powerful effect upon the eye, whence the name eyebright. This plant being biennial, throws out the first year only a few radical roundish leaves laying close to the ground; the next year it produces the stem, branches, and seeds. The leaves and roots of the first year are as powerful as the mature plant, excepting the seeds, which are the strongest.

The whole plant is acrid and nauseous, producing salivation;

whence, we suppose, originated the mistaken supposition that it causes the slavers in horses and cattle. It is not known to produce this affection; but, on the contrary, horses and cattle are affected in this way when feeding on pasture grounds where this invaluable herb does not grow.

The lobelia is the most valuable and efficient emetic known; its full merits being scarcely appreciated even by those who are in the habit of making frequent use of it. It also acts as a sudorific, expectorant, and diffusible stimulant; and for the relief and even cure of asthma, and as an anti-spasmodic, its equal has not yet come to the knowledge of the world. As a stimulant it extends its effects to every part of the system, removing obstructions, and restoring a healthy action, wherever the one exists, or the other is needed. Its action or effects may often be sensibly felt or known by a pricking sensation over the system, particularly in the fingers and toes, frequently attended by another singular sensation, comparable to the purring of a cat. Professor RAFINESQUE says that some of the medicinal properties of lobelia were known to the Indians; it being used by them to clear the stomach and head in their great councils.

A diversity of symptoms attend the operation of lobelia emetics, evincing the magnitude of its power and the surprising energy of its operation on the human system, which often terrify those who are unacquainted with its superior and astonishing influence and efficacy in arresting diseased action, and restoring health and harmony to the human machine. Its effects are different on different individuals, and upon the same individual at different times. Sometimes there will be severe pain in the stomach and bowels; strange, agitated, and indescribable, but not always unpleasant, sensations. Convulsive motions of the lower jaw, often attended with a convulsive breathing, like the sobbing of a child. General distress, or universal sickening feeling. Sometimes perfectly easy and quiet, without the power to move hand or foot, or even of rolling the eyeballs in their sockets; and at other times great restlessness and anxiety, with symptoms of a most alarming character, prevail. In some instances the countenance becomes pale, and the skin cold, with the appearance of approaching death; whilst in others, the countenance assumes a florid appearance, bearing the marks of health.

These symptoms, together with a great variety of others which it would be impossible to describe, are very alarming to those who are unacquainted with the lobelia; and we mention them here in order to guard such, against unnecessary fears from their occurrence. The practitioner and patient may be assured that we have never seen nor known of an instance in which those alarming symptoms produced, or were followed by, any

LOBELIA SYPHILITICA, (Blue Lobelia).

permanently bad effect. Dr. THOMSON, who claims the honor of first introducing the lobelia into general notice, speaking of them, says, "they appear to be the effects of the last struggle of disease, and are a certain evidence of a favorable turn of the disorder." However we may disagree with Dr. THOMSON in calling that a *cause* which is only an *effect*, we must acknowledge that he has hereby furnished us with a valuable hint. The alarming effects of lobelia are probably caused by the restoration of a healthy action to diseased parts which have long been accustomed to a morbid sensibility and a diseased action. A healthy operation being thus suddenly restored, and the organs not being properly prepared to receive the new impulse, an unusual and oftentimes alarming train of symptoms are produced. But this state is generally of short duration; the organs soon become accustomed to their new and healthy action, the perturbation of nature subsides, and the patient feels no ill effects from the previous unpleasant symptoms. And what still further confirms these views is, that those alarming symptoms are almost always followed by a more rapid improvement of health, and are, therefore, to be regarded as indications favorable to the prospects of a speedy recovery.

As an antidote to poisons of all kinds, whether animal or vegetable, the lobelia stands unrivalled; particularly in the cure of hydrophobia. Several well attested cases of cures of this terrible and fatal disease, have come to our knowledge, one of which occurred in the city of Cincinnati, an account whereof is published in the appendix to this volume.

The lobelia is used in powder, infusion, or tincture, of the leaves and pods, or the seeds, either simply by itself or compounded with other articles. The best time to gather it is in the fall, when the leaves are beginning to turn yellow, as the seed is then ripe, and we have the advantage of the whole plant For preparation and doses, see under the heads of compounds and course of medicine.

LOBELIA SYPHILITICA.

Common names—BLUE LOBELIA, BLUE CARDINAL FLOWER, HIGHBELIA.

THE blue cardinal flower is a common plant in the Western country, and is found in most of the Western, Southern, and Southwestern States. The roots are perennial, white, fibrous, from one to three inches long. Stem erect, somewhat angled, hairy towards the top, from one to three feet high, terminating in a spike of dense, clustered, large, pale blue blossoms. Leaves large, diminishing in size towards the top, crowded on some

plants, and resembling the leaves of the lobelia inflata, finely indented on the edges with unequal teeth. Growing in wettish lands, along dry runs or drains, often in clusters. The whole plant is milky.

The root of this species of lobelia is the part which is principally used for medicine, and is said to be diuretic, cathartic, sudorific, purgative, emetic, and anti-syphilitic, from which last reputed property it has derived its specific name. It is said by CHAPMAN, that some of the Western physicians use it with success as a cure for the dropsy. Its diuretic properties are certainly worthy of further investigation; but it is introduced here principally from its high recommendation as a remedy in diarrhœa and dysentery. From half to a whole tea-spoonful of the pulverized root taken in water, and repeated if necessary, is said by some who have often tried it, to be a certain remedy in those complaints. We think it worthy of a trial.

MACROTRYS RACEMOSA.

Common names—RATTLEWEED, SQUAWROOT, RICHWEED, BLACK COHOSH, BLACK SNAKEROOT, &c.

ROOT perennial, black, with a large caudex or head, and many long fibers. Stem from three to six feet high, sometimes slightly crooked, jointed, and terminating in a spike of white blossoms. The leaves are of that kind termed biternately compounded, arising from the root and forming a considerable cluster about eighteen inches or two feet high. Found all over the United States, growing in rich open woods, particularly on rich hill sides, and near fields.

The rattleroot is considered astringent, diuretic, sudorific, anodyne, emmenagogue, and tonic. It is an Indian remedy, and much used in rheumatism, and also to facilitate child-birth, whence its name squawroot. It is used as a popular remedy in the treatment of rheumatism, fever and ague, and is also a powerful medicine in cases of female obstructions. It is likewise said to be a valuable remedy in small pox, an account of which has already been given under that head. It is used by the Indians as an antidote for the bite of snakes; for which purpose it is bruised and applied to the wound. It is also said to cure the itch.

Rattleroot has, however, acquired the greatest celebrity as a cure for coughs and consumptions. In diseases of this character, we have many testimonials of its value, which are entitled to the fullest confidence, even in cases of confirmed consumption. A number of cases of pulmonary complaints are detailed in a late inaugural essay, by G. W. MEARS, M. D. that came

Macrotrys [Botrophis] Racemosa, (Black Cohosh).

Macrotyra [Portulaca] Blackburn. (Black Coburn).

MENTHA PIPERITA, (Peppermint).

Mentha Piperita. (Peppermint).

under our notice within the last few days, in which it appears the rattleroot produced the most decidedly beneficial effects. He also tried it in one case of intermittent fever which had resisted the ordinary treatment for six weeks, and cured it in four days, by administering the saturated tincture, beginning with twenty drops, afterwards increased to a tea-spoonful, and after the chills ceased to return, using a strong decoction. Dr. MEARS also records several cases of diarrhœa in which the rattleroot effected speedy cures. He likewise records one very bad case of pain and inflammation of the shoulder, in which the squaw-root was used with the most decisive advantages.

Dr. MEARS appears to use the tincture, decoction, or powder, of this article indiscriminately. Of the tincture, he administers from twenty drops to one tea-spoonful at a dose; the decoction, he appears to have used in doses of one great spoonful, every two hours for children of three or four years old; and the pulverized root, in doses of from five to ten grains, (about half a tea-spoonful) three times a day. The decoction is made by steeping from a fourth to half an ounce of the powdered root in a pint of water.

The tincture has been known sometimes to produce an alarming effect, and is thought, by some, to be dangerous, which we, however, think doubtful. The decoction may be taken in much larger quantity without producing any unpleasant effect; and on that account is preferable to the tincture.

MARRUBIUM VULGARE.

Common name—HOARHOUND.

THIS is a common perennial plant, growing on road sides, along lanes, near houses, and amongst rubbish. The leaves have a very strong smell and bitter taste. Said to be good for poisons, to check and cure salivation, to remove obstructions, and highly valuable in a sweetened infusion for coughs and asthma; and in large doses laxative.

MENTHA PIPERITA.

Common name—PEPPERMINT.

VERY common in wet land. Hot and pungent, being the strongest of all the mints. Useful to check nausea and vomiting, to expel wind, relieve hysterics, and prevent the griping effects of cathartics; for which purposes it is very frequently employed by the Reform Colleges of New York and Worthington. Bruised and applied externally to the stomachs of chil-

dren, it is useful to allay sickness and vomiting. It is mostly used in the form of essence.

MENTHA VIRIDIS.

Common name—SPEARMINT.

GROWS on the banks of streams, and in wet land; has a warm, rough, bitter taste, and strong aromatic smell. Used in decoction, oil, or essence, for complaints of the stomach, and to expel wind. Also very valuable to remove sickness at the stomach, and to check vomiting.

Dr. BEACH, in his "American Practice," recommends what he terms "the spirits of mint, which is made by bruising the green plant, and adding sufficient fourth-proof Holland gin to make a saturated tincture, which makes a preparation remarkably efficacious in suppressions of urine, gravelly affections, &c." "The dose of this preparation is a wine-glass full, drank as often as the stomach will bear. Cotton wet with the above liquid, and applied to *piles*, affords immediate relief."

MINISPERMUM CANADENSE.

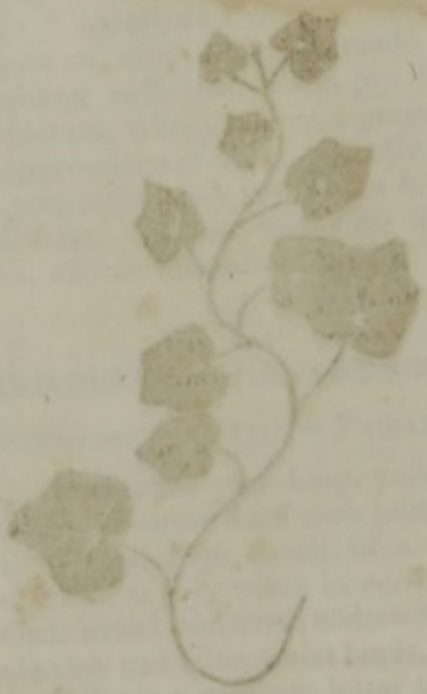
Common names—MOONSEED, YELLOW PARILLA, VINE MAPLE.

ROOT perennial, horizontal, very long, yellow, woody, with somewhat jointed, fibers issuing from each joint. Stem a woody vine, from three to six feet high, small, of a dark green color, twining around whatever it may come in contact with. Leaves scattered, very broad, round cornered, somewhat resembling the maple leaf, grows in rich and often moist lands, near streams, &c.

The root of the parilla is a pleasant bitter tonic and laxative; useful in all cases of debility; strengthens the nervous system; very good for worms. May be used simply by itself, or combined with other tonics.

This article has also acquired much popularity in many places and with many persons, as a remedy in both the venereal and mercurial diseases; and there seems to be no doubt that it is highly valuable in both these complaints. In the following extract from Dr. GUNN's "*Domestic Medicine*," there is no doubt he alludes to the yellow parilla, although he calls it sarsaparilla, and thinks it (erroneously) the same as the imported article sold under that name. "It may be considered," says he, "as one of the most valuable roots in the Western country, and although possessing great power, is entirely innocent. It ought most certainly to be used in all cases where mercury has had any effect on the system, or in which there is the least doubt

MENISPERMUM CANADENSES, (Yellow Parilla).



that any infection lurks in it connected with venereal." We will also add, that by some it is considered as a specific in this loathsome disease.

MITCHELLA REPENS.

Common names—PARTRIDGEBERRY, CHECKERBERRY, ONEBERRY, WINTER-CLOVER, SQUAW-VINE.

THIS is a small, ever-green, perennial procumbent vine, lying close to the ground. Leaves opposite, small, and round. Flowers in pairs, white, and hairy within. Fruit a bright scarlet red berry.

Wherever this little vine grows, it is commonly abundant; being usually in beds or mats, covering the ground with its evergreen verdure. It is found in shady woods on almost every variety of soil, from rocks and poor dry knobs, to the wet rich surfaces of swamps.

The checkerberry is highly esteemed by some as a remedy in diarrhœa and piles, for which it is prepared by boiling in sweet milk, and drinking freely of it. The tea, says RAFINESQUE, is used in New England as a diuretic for dropsy, and also the same preparation for gout. He likewise adds, that the berries are a popular remedy for diarrhœa in the North, and for suppression of urine in Carolina.

We extract the following account of the singular virtues of this plant from SMITH's "Botanic Physician:"—

"This is an invaluable plant for child-bearing women. I first obtained the knowledge of its use from a tribe of Indians residing in the west part of New York, though not without considerable difficulty and intrigue. The squaws drank it in decoction for two or three weeks previous to, and during delivery, and it was the use of this herb that rendered that generally dreaded event, so remarkably safe and easy with them."

MONOTROPA UNIFLORA.

Common names—FITROOT, ICEPLANT, PIPEPLANT.

THIS plant is not uncommon in the Western States, growing in shady solitary places. It is a singular herb, several plants often growing from the same root, white, each stem bearing a single blossom on the top, and without leaves.

It is said to be a good nervine, useful in epilepsy and convulsions, simply by itself or combined with lady's slipper. The juice mixed with water, used for sore eyes; and probably might be available in other cases, both externally and internally, in which astringents are useful; considered equal to the beech drops.

MYRICA CERIFERA.

Common names—Bayberry, Candleberry, Wax Myrtle, Sweet Gale, Waxberry.

Bayberry is a shrub, growing in almost every kind of soil, from Canada to Georgia. It rises from two to twelve feet high, being largest in the South; the top is much branched, and covered with a grayish bark. The leaves are oblong, wedge-shaped, broadest at the outer end, sometimes entire, but frequently toothed near the extremity. The fruit is a grayish berry, which grows in clusters on the sides of the branches, and is covered with a substance called bayberry tallow, of which candles are often made.

The bark of the root is the part used as medicine, and is possessed of powerful medicinal properties, being an astringent tonic of the purest and best kind, available in all diseases. In large doses, when the stomach is foul, it often operates as an emetic. It is also a powerful errhine, making an excellent sneezing and headache snuff. It enters into a number of compounds, being useful in all complaints, particularly diarrœha and dysentery. Dose, from half to a whole tea-spoonful in hot water sweetened.

MYRISTICA MOSCHATA.

Common name—Nutmeg Tree.

The nutmeg tree, the fruit of which is the common nutmeg, is a native of the Molucca Islands. The involucre, husk, or shell, of the nutmeg is called mace, and possesses all the virtues of the nutmeg, with less astringency.

Nutmeg is a pleasant aromatic, stomachic, astringent, and nervine. We direct its use only in two compounds, though it might be employed in any others which the taste or fancy may indicate or desire.

MYRRHA.

Common names—Myrrh, Gum Myrrh.

This article is not a proper gum, but a gum-resin, and is the concrete juice of an East Indian shrub, of which little or nothing is known to botanists. The best myrrh is of a reddish-brown color, partly transparent, of a bitter and slightly pungent taste, and strong aromatic, but not disagreeable odor.

Myrrh is a good tonic, antiseptic, and vermifuge. It strengthens the stomach, assists digestion, and promotes the secretions

Myrica Cerifera, (Bayberry).

Myrica Cerifera, (Bayberry).

Myrrha, (Myrrh).

NEPETA CATARIA, (Cat-mint).

Nymphæa Odorata, (White Pond-lily).

NYMPHÆA ODORATA, (White Pond-lily).

It is highly useful in malignant, putrid, and pestilential disorders; and eminently serviceable in ulcers, both externally and internally applied. It is prepared in tincture, twelve ounces of the best myrrh to a gallon of alcohol, high wines, or Frenchbrandy. The myrrh should be pulverized and added to the brandy in a bottle, placed in a sun heat, often shaking for eight or ten days, and then poured off or filtered. Or it may be placed in water and boiled, and after the brandy remains for a few minutes at the boiling heat, must be taken out and corked. After it has become cool and well settled, pour off or filter, and bottle for use. This is also a valuable remedy for dysentery. The addition of an equal quantity of the tincture of aloes is supposed to add to its efficacy as a worm medicine. The tincture of myrrh may be taken in doses of a tea or table-spoonful, or more. For the best mode of preparing it, see under the head of "*Compounds.*"

MYRTUS PIMENTA.

Common names—Allspice Tree, Pimento Tree.

This tree is a native of Jamaica, and produces the allspice or Jamaica pepper. Allspice is the fruit plucked from the tree before it is ripe, and dried in the sun. Its smell resembles a mixture of cinnamon, nutmeg, and cloves, whence the name *allspice.* It is a warm, grateful, aromatic stimulant, much used as a condiment in cookery; and in medicine is very advantageously substituted for the more costly spices. It enters into Dr. Wells colic drops.

NEPETA CATARIA.

Common names—Catnip, Catmint.

This common plant is accounted valuable as an external application in poultice to swellings; internally for headache, colic female obstructions, hysterics, worms, and spasms. Administered by injection, it relieves the restlessness and colic of children, for which it is highly valuable. It may also be administered by the mouth for the same purpose. Very valuable common herb.

NYMPHÆA ODORATA.

Common names—White Pondlily, Toadlily, &c.

Root perennial, nearly the size of one's wrist, very long, somewhat hairy, horizontal, blackish, and knotty, always growing i

the water. Leaves large, round, cleft from the edge to the stem which is in the center, each lobe ending in a short, acute point, upper surface smooth and glossy, without veins, lower surface reddish, with radiating nerves. Flowers large, white, giving out a sweet odor, opening to the sun in the morning and closing at night.

The root of the white pondlily is a very valuable article of medicine, for either internal or external use. Internally it is an astringent tonic, used in diarrhœa, dysentery, and all cases of debility. Externally it is useful, in poultice, for biles, tumors, inflammations, ulcers, &c. The leaves are also useful for the same purpose. The fresh juice of the roots mixed with lemon juice, is said to be good to remove freckles, pimples, or blotches from the skin. A tea of the root may be used at discretion; or it may be compounded with other astringent or bitter articles, and employed as a tonic.

ONOSMODIUM HISPIDUM.

Common names—False Gromwell, Wild Job's-tears, Gravel-weed.

Roots perennial, large, resembling elecampane roots, dark colored on the outside, light yellow within. Stems several from the same root, from one and a half to three feet high, branched towards the top, branches curved. Leaves lance-oval, with an acute point, scattered large on the stem, much smaller on the branches, several prominent nerves visible on both sides, very rough, seeming to be drawn into little dots or elevations. The whole plant is very hispid or hairy. Flowers yellowish-white, axillary to the leaves on the branches, producing a hard whitish oval seed, about the size of hemp seed, and resembling the garden Job's-tears. Grows on the borders of prairies, on hill sides and other open situations, and is said to delight in a rich limestone soil.

This plant was introduced to our notice by Dr. A. Robinson, of Indiana, as a solvent of the stone. Its medical properties have been discovered by the Indians in Tennessee, by roasting and eating the roots for food. Both the roots and seeds are employed for curing the stone. They are used as follows:—

Take half a pound of the bruised roots and two table-spoonfuls of the pulverized seeds, steep the roots in three pints of boiling water until the strength is extracted, then pour the decoction on the seeds, and drink a tea-cupful of it once in two hours for twelve hours, or until it operates on the bowels as a cathartic, when, as directed in the original recipe, the sediment or seeds must be taken. Th s finishes the process, which, it

PANAX QUINQUEFOLIUM, (Ginseng).

would seem, is relied upon to effect a cure. There is a caution in the recipe, however, not to continue the use of it too long, for fear of producing too great a discharge of urine, from which we infer that if once taking the medicine as described, it must be repeated. It would seem, also to be a powerful diuretic, as well as solvent of the stone.

OXALIS STRICTA.

Common names—Wood Sorrel, Sheep Sorrel.

This is a very common, perennial plant, growing in woods and shady places. Stem from five to ten inches high, branched; leaflets in threes, at the ends of the branches, obversely heart-shaped. Flowers yellow, with the central part inclined to orange. The leaves have a pure and pleasant acid taste; and may be used in all cases in which acids and antiseptics are indicated.

The inspissated or concrete juice of the sheep sorrel has, of late, become somewhat celebrated as an external application for cancerous affections. Repeated cures of cancers are reported to have been performed with this simple article; and we have no doubt that much confidence may be placed in it, in the treatment of this painful and highly dangerous affection. A salve made of the sorrel has also been very advantageously used in cancers; a remarkable instance of which is related in the appendix in the case of John Pegg.

The juice of the sorrel is prepared for use in the following manner:—Take of the sorrel, any quantity, bruise it in a mortar, and then press out the juice, put it on pewter plates or dishes, and set it in the sun. When it has become of a proper consistence to form a plaster, it ought to be put into earthen or glass vessels to preserve it for use. When applied to the ulcer, spread a thin plaster of it on a piece of bladder, leather, or cloth, of a size suitable to cover the sore. These plasters must be occasionally renewed, washing the cancer with soap suds at each renewal. Two plasters have been known to cure a bad cancer of the female breast; and in other instances one has been sufficient.

This remedy has been kept a secret, and the knowledge of it sold at a high price.

PANAX QUINQUEFOLIA.

Common names—Ginseng, Ginsang, Ginshang.

Root perennial, fleshy, yellowish-white, spindle-shaped, often forked. Stem from eight to eighteen inches high, round,

smooth, divided at the top into three branches, supporting from three to five oblong leaves, broadest towards the outer end, and jagged. Flowers small and white, producing a large red berry.

This plant is said to be the famous ginseng of China, to which country it was formerly exported, and commanded a high price. Ginseng, in the Chinese language, means, according to RAFINESQUE, man's health, which indicates the high estimation in which this article is held by them. The American ginseng is said, however, to be inferior to the celebrated Chinese plant, though possessing the same virtues.

The roots have a pleasant camphorated smell, and sweetish, pungent, and slightly aromatic, bitter taste. We introduce the article here, as a gentle stimulant, tonic, and nervine. But the Chinese attribute to it wonderful powers; such as that by chewing the root, when walking, a person will not become fatigued; it warms the stomach and bowels; cures the colic and obstructions of the breast; sustains excessive labor of both body and mind, preventing weariness and dejection; quenches thirst, assuages hunger, prevents dropsy, promotes the appetite, assists digestion, prevents unpleasant dreams and frights, strengthens the judgment; cures nervous, asthmatical, and hysterical affections; removes all the disorders of weakness and debility; and also cures or relieves, according to JARTOUX, almost "every ill that flesh is heir to." "Such," says RAFINESQUE, are the wonderful properties ascribed to this plant by the Chinese authors, after an experience of two thousand years. They often unite it with orange peel, ginger, liquorice, cinnamon, peach-kernels, honey, &c., to aid its effects; and prescribe it in powders, electuary, extract, pills, and decoction."

The root of the ginseng is a mild but pretty efficient nervine. either taken in powder, decoction, or tincture. It is also a good stomachic and restorative medicine; and as a gentle and agreeable stimulant, is a valuable medicine for children. Drs. GREENWAY and CUTLER, have found it useful in convulsions. nervous affections, palsy, vertigo, and dysentery. The leaves are also said to make a very grateful medical tea. Dose, from one to two tea-spoonfuls of the powder, in hot water sweetened or it may be mixed with honey or melasses.

PARTHENIUM INTEGRIFOLIUM.

Common names—NEPHRITIC PLANT, CUTTING ALMOND.

ROOT very singular, issuing from a caudex or head, at first small, but gradually enlarging until it terminates very abruptly, and then giving off other roots of the same or similar form, each portion forming a distinct root resembling in shape and

PARTHENIUM INTEGRIFOLIUM, (Cutting Almond).

size a young radish, but growing horizontally with the large end foremost, giving off a few fibrous roots and sending up stalks from near the large ends or buts of the principal roots, which are blackish outside, and bluish-gray within.

Stems several arising from the same root, round, very hard, of a dark red color, growing from eighteen inches to two feet high, branched towards the top, branches axillary to the leaves. Leaves, some of them radical or nearly so, the others scattering and few, very obtusely dentate or notched, lower ones petiolate, upper ones partly clasping the stem, stiff and harsh, upper ones the smallest, partly diamond shaped.

Flowers a kind of white button, cymous or partly umbelliferous, growing at the extremities of the branches.

This plant is highly esteemed by some practitioners as a remedy in diseases of the urinary organs. The root may be sliced, infused in cold water, and drank in moderate quantities, for suppressions of the urine, and especially when a painful scalding or burning sensation attends its discharge, or when it is voided by drops or in very small quantities.

PHYTOLACCA DECANDRA.

Common names—Poke, Scoke, Pigeonberry, Garget-root.

Root large, perennial, branching, covered, with a very thin brownish bark or skin. Stems many, annual, large, green at first, afterwards purple or red, smooth, branching, rising from four to eight feet. Leaves large, scattered, smooth, oblong. Flowers opposite the leaves, on long racemes or spikes, producing many fleshy, dark purple berries, depressed or flattened. Found in abundance throughout the United States.

The poke root is generally regarded as a strong poison, though by some recommended as a good emetic. We think it, however, not to be relied upon for this purpose. Externally, the roasted root is often advantageously applied as a poultice to swellings, bad ulcers, and rheumatic joints. The juice of the berries, dried in the sun to a proper consistence for a plaster, is said to have cured cancers; and the external application of the juice of the leaves, is recommended for the cure of the itch, ring-worm, &c.

The poke is introduced into this work principally on account of its high reputation as a remedy for rheumatism. For this purpose, the ripe berries are collected in the fall, the juice pressed out, and about half the quantity of brandy (or enough to preserve it,) added to it, and bottled for use. We are also very strongly of the opinion that equal quantities of this juice and a strong decoction of the rattle root, with brandy

enough to preserve the mixture, taken in small doses, would probably make a better medicine for rheumatism than any single remedy ever tried. We wish some individual whose opportunities allow him to make frequent and extensive trials, would test the power of this compound.

[We have the pleasure of informing the reader that the above suggestion, which was made in the first edition, has been seized upon by Dr. T. PITTMAN, of Georgia, and two most inveterate cases cured by this prescription, after all other remedies usually employed, both by the medical faculty and the Botanic practitioners, had proved unavailing.]

PIMPINELLA ANISUM.

Common name—ANISE.

THIS is an annual plant, native of Syria, Crete, and other parts of the East. The seeds, which is the part of the plant used, have an aromatic odor, and a warm sweetish taste.—They afford by distillation a considerable quantity of oil, which has a strong flavor, and sweet but not pungent taste.

Anise is good to expel wind from the stomach or bowels, and is a grateful stimulant and stomachic. The seeds enter into bitter tonic compounds; and the oil or essence, into several compound tinctures, either as medicinal agents, or to cover the bad taste of other articles.

PINUS BALSAMEA.

Common names—BALSAM FIR, HEMLOCK FIR, CANADA BALSAM.

THE fir tree is a native of northern climates, where it is most common. It also grows as far south as Tennessee, where it is confined to the highest mountains.

The liquid resin, called balsam of fir, or balsam of Canada, is of a light color, very tenacious or sticky, and inflammable. It is found in small blisters on the surface of the fir trees; these blisters are pierced with a knife or some sharp instrument, from which the balsam exudes, and is thus collected for use.

As an internal remedy, this balsam is advantageously employed in complaints of the breast and lungs, either pain, soreness, or cough; it strengthens the nervous system, loosens the bowels, cleanses and heals internal ulcers, and diseases of the urinary passages, often proving useful in the cure of gleet as well as the preceding stages of the venereal complaint; and in fluor albus or whites. Externally, this valuable balsam is applied to

ulcers and wounds, being an excellent ingredient in healing salves. Dose, internally, half a tea-spoonful, or less, with sugar or melasses.

PINUS CANADENSIS.

Common name—Hemlock Tree.

The inner bark of the common hemlock tree affords a very good astringent, which may be employed in all cases where articles of that class are indicated. The leaves and boughs are famed for producing perspiration by drinking the tea and sitting over the steam. The oil and essence are a good stimulant tonic, useful in colds, &c. The oil is also a valuable ingredient in bathing drops. It is said that a fomentation of the hemlock is highly useful, as an application to swelled testicles, caused by the translation of the mumps to these parts. It may likewise be applied to similar swellings of the breasts of females.

PIPER NIGRUM.

Common name—Black Pepper.

The vine which produces the black pepper is a native of the East Indies, which seems, indeed, to be the nursery of the spices. The dark color of black pepper is owing to the berries being gathered and dried before they are ripe.

Black pepper appears to possess, in an inferior degree, the stimulant properties of cayenne, for which it may be substituted, but is probably slightly astringent. It may be used as a substitute for the cayenne, or red pepper, when neither of those articles can be obtained. Dose, from half to a whole tea-spoonful, in hot water sweetened.

PLANTAGO MAJOR.

Common names—Plantain, Great Plantain.

This common herb needs no description. Its most popular use is as an antidote to poisonous bites and stings. Also said to be good for ulcers, sore eyes, bowel complaints, bloody urine, &c. For either external or internal application, the tea or expressed juice may be used, or the bruised leaves may be applied externally for stings, bites, slight wounds, sores, or tumors.

"The ancients esteemed it highly, and employed it in visceral obstructions, hemorrhages, particularly from the lungs, consumptions, dysentery, and other complaints."

PLANTAGO CORDATA.

Common name—WATER PLANTAIN.

ROOT perennial, having one or more tap roots issuing from the caudex or head, and immediately on the under side of the caudex is a singular cup or depression. Leaves radical, ovate, often somewhat cordate, with irregular tooth-like projections from the margin, supported on long footstalks, of a light green color, very much resembling the common plantain. Stem from ten to twenty inches high, terminating in a spike or tassel, in all respects similar to the common plantain; found in the wettest soils, and shady places.

The root of water plantain is considered very valuable as an astringent in dysentery, for which purpose it may be given in strong decoction, after the bowels have been cleansed with a mild cathartic. It should be gathered in the fall.

In a late tour amongst the Indians, we were assured by the Wyandots, that it was a very useful external application for old sores, wounds, and bruises, whether inflamed or inclined to mortify. For this purpose, take the roots, wash them clean, and boil till soft. Mash into a poultice, and apply to the sore, first washing it with the water in which the roots were boiled, and repeat two or three times a day, if the case be bad. It removes inflammation, reduces swelling, and cleanses and soon heals the most foul and inveterate ulcers.

PODOPHYLLUM PELTATUM.

Common names—MANDRAKE, MAY-APPLE.

THE mandrake is a common plant, growing throughout the United States, in shady, and oftentimes, moist situations. Root perennial, horizontal, round, long, larger than the largest goose-quill, jointed, with fibrous roots issuing at each joint. Stem smooth, round, and erect, from eight to eighteen inches high, divided at the top into two branches, each branch supporting a single large leaf. Flowers large, white, only one on a plant, growing from the forks of the stem.

The root of the mandrake is, by some, considered poisonous and unfit for medicine, whilst by others it is regarded as one of the most valuable articles. All who have written upon the subject, however, agree in recommending it as a most certain, safe, salutary, and efficacious purge. Almost all botanical physicians make use of it for this purpose, and one, of some celebrity, (Dr. S. ANNIBIL,) it is said, calls it "the king of roots," relying upon it in all cases of disease. The dose usually given, is from half

PODOPHYLLUM PELTATUM, (May-apple).

POLEMONIUM REPTANS, (Greek Valerian).

to a whole tea-spoonful. The best time to give it is at night on going to bed, and it will commonly operate the next morning, it being slow but sure. In small doses it is a gradual and easy laxative; but in large ones it is active and drastic. Useful in dropsy and pleurisy.

Dr. LOBSTEIN says he has never known its employment fail of procuring immediate relief in cases of incontinence of urine.

The root is also prepared in syrup which makes a mild pleasant purge; the dose being two spoonfuls. The Cherokees use the fresh juice of the root for deafness, putting a few drops into the ear. [*Rafinesque.*] The Wyandot Indians say that roasting the root destroys the poison it contains, and makes it less drastic.

The Indian Doctor HOUGH, recommends the powdered root as an escharotic to cleanse foul and ill-conditioned ulcers, and dispose them to heal, and to promote the exfoliation or removal of carious or rotten bones. He directs the powder to be sprinkled on the affected part once in from two to five days. It will destroy proud flesh, he says, without injury to the sound parts. We have also seen the whole roots used to cure the poll-evil of horses, by plunging the root into the very bottom of the sore, and letting it remain there for several days.

POLEMONIUM REPTANS.

Common names—GREEK VALERIAN, ABSCESS-ROOT, BLUEBELLS, SWEATROOT.

ROOTS perennial, small, numerous and fibrous, white, or dirty white, all growing from one common head. Leaves many, radical, pinnate or compounded of many small oblong-ovate folioles or little leaves arranged in two rows, one on each side the petiole or footstalk which grows from six to sixteen inches in length, reclined or spreading, the inner or upper side of the footstalk channeled its whole length, the edges of the channel being thin and sharp. Flowers small, blue, appear early in the season, producing small seeds. Several stems often arising from the same root, growing in damp woods to the height of one or two feet.

The root of this plant is the part employed as medicine, the knowledge of the virtues of which was derived from the Indians, and has been confirmed by the experience of several Botanic practitioners. The Indians make a tea of the roots and drink freely of it in fevers, pleurisies, and in all cases where they wish to produce a copious perspiration.

A tincture is made by infusing a handful of the roots in a quart of whisky, taking half a wine-glassful three times a day, to cleanse the system or blood of vitiated humors, and has thus been found

very valuable to persons afflicted with boils. There is no doubt that further experience may prove this to be a valuable article in most cases of disease.

Since the publication of the foregoing, all the virtues therein ascribed to the sweatroot have been amply confirmed, and others assigned to it, of which we then were ignorant. The sources whence our information has been obtained are such that we think it entitled to full credit, and we therefore, with greater pleasure, offer it to the public.

A valued correspondent at Zanesville, Ohio, assures us that we "will find this plant excellent for consumptions, and all affections of the lungs and liver." He also states that a lady who had a severe affection attended by violent pain in the left side, was cured by taking a compound of this article with manroot, (*Convolvulus panduratus*,) after other means had failed. "The person," says our correspondent, "who communicated this plant to me, received his knowledge from the Indians; and he informed me that he cured his mother of consumption with it. The tea made from it," says he, "may be drank freely, though it will sometimes vomit when the stomach is overloaded with it; but this is rare. I believe it to be a valuable root, and that it may be combined with other articles to advantage."

From two other respectable persons, who reside near Mechanicsburgh, in this state, we learn verbally, that the sweatroot is not only highly valuable for consumption, but is also very useful in all chronic complaints, particularly scrofula, scrofulous and other ulcers, and for the bites of snakes. They call the article Abscess-root.

They state that consumptions have been repeatedly cured by it, and in some instances, when the disease was in its worst stage, and after other approved means had been perseveringly tried but failed.

For use, they direct a small handful of the roots to three pints of boiling water, steeped down one half. Dose, half a tea-cupful every four hours. In chronic complaints, after using a short time, it often produces a singular sensation on the surface of the body—a kind of prickling. It is thought best before employing this article in consumption, to administer a course of medicine, which promotes a free expectoration from the lungs.

For snake bites, take the roots and tops of the sweatroot, bruise them in a mortar and mix with new milk to the consistence of a poultice, and apply to the bitten part; or if this be impossible or inconvenient, as is the case with cattle and horses, wash the part with the milk, after the root has steeped awhile in it. The tea is also to be taken internally at the same time. Or if inconvenient to make a poultice as directed, chew the roots and apply them to the part, and drink the tea or eat some of the roots.

POLYGALA SENEGA, (Seneca Snake-root).

The same individuals also say that the sweatroot acts upon the bowels as a powerful astringent, and its use must, therefore, be followed with or attended by laxative or cathartic medicines.

POLYGALA SENEGA.

Common name—SENECA SNAKE-ROOT.

ROOT perennial, firm, hard, branching, crooked, and woody. Stems many, annual, smooth, occasionally tinged with red, from eight to twelve inches high. Leaves numerous, alternate or scattered, long, narrow, and pointed, bright green on the upper, and pale on the under side. Flowers white, in a close terminal spike. The spike opens gradually, so that the lower ones are in fruit while the upper ones are in blossom. The root has an unpleasant and somewhat acrid taste, and is the part to be used. Grows in most parts of the United States, generally on the sides of hills, and in dry woods.

The Seneca snake-root is deemed an antidote to snake bites, as well as being stimulant, diuretic, expectorant, emetic, purgative, sudorific, and emmenagogue. Useful in coughs, pleurisies, asthma, croup, and female obstructions. It may be given in powder, tea, or syrup. The proper dose of the powder is from one third to half a tea-spoonful, every three hours until the desired effect is produced. For the croup of children, the decoction is used, which must be made strong, and given in tea-spoonful doses every hour or half hour, as the urgency of the symptoms may demand, until it acts as an emetic and cathartic. During the intervals between giving the tea-spoonful doses, a few drops should be often administered so as to keep up a sensible action in the throat; and this must also be continued after the vomiting, by which means, in the course of from two to eight hours, a membrane is oftentimes discharged by the mouth, of one, two, or even three inches in length; though sometimes swallowed and discharged by stool. Nothing ought to be drank for some minutes after each dose.

POLYGONUM PUNCTATUM.

Common names—SMARTWEED, SMARTGRASS, WATER-PEPPER.

THIS valuable plant, growing almost every where near the habitations of man, is too common to need any description. "It is a powerful antiseptic, and allays inflammation, discusses cold swellings, particularly such as affect the knee joint, and dissolves congealed blood in bruises, blows, &c. For these purposes, it should be applied in strong decoction and poultice The juice destroys worms in the ears, when dropped into them.'

To remove inflammation or to prevent or check mortification, take the herb, bruise and boil it in a suitable quantity of water; bathe the part affected with the liquor, and apply the bruised herb hot, as a fomentation, renewing as it becomes cold. This we are assured, by good authority, has been used with happy results.

The decoction has also been successfully employed as a diaphoretic to promote perspiration, and also for bowel complaints, gravel and other obstructions of the urinary organs, coughs and colds, worms, and piles. For the latter it may be applied externally as well as internally. When the virtues of this article become fully developed, there is no doubt it will be found highly valuable.

POLYMNIA UVEDALIA?

Common name—BEAR'S FOOT.

A VALUABLE vegetable, of which the following is the best description that we have been able to obtain:—

Roots very abundant, large and long, enlarging as they proceed from the common head so as to resemble, in some degree, a small sweet-potato, blackish outside and whitish within. Stems frequently several together, growing five or six feet high, bearing leaves the size of a man's hand, and very much resembling in shape the foot of a bear, whence its common name.

The great value of this article principally consists, so far as at present known, in its being a specific for the cure of white swelling. For this purpose the root is boiled in any kind of oil or soft grease, and made into an ointment, with which the swelled parts are to be bathed two or three times a day, and after each bathing place a flannel cloth over the swelling, when, having a flat iron or smoothing iron heated to a suitable temperature, it should be *ironed* by passing the iron quickly over the flannel for a short time. The ironing not only facilitates the absorption of the ointment, but also relaxes the parts and stimulates the languid vessels to more vigorous action, thus assisting in the removal of the disease.

This method of removing white swelling was kept a secret and employed with uniform success by a woman in Carolina, for several years. It has effected cures in many instances after all other means had been tried in vain. One case is related, of a very severe character, in which the swelling had extended from the hip to the ancle, that was cured with this remedy in one month. The ointment also affords relief applied to the ear in earache and deafness.

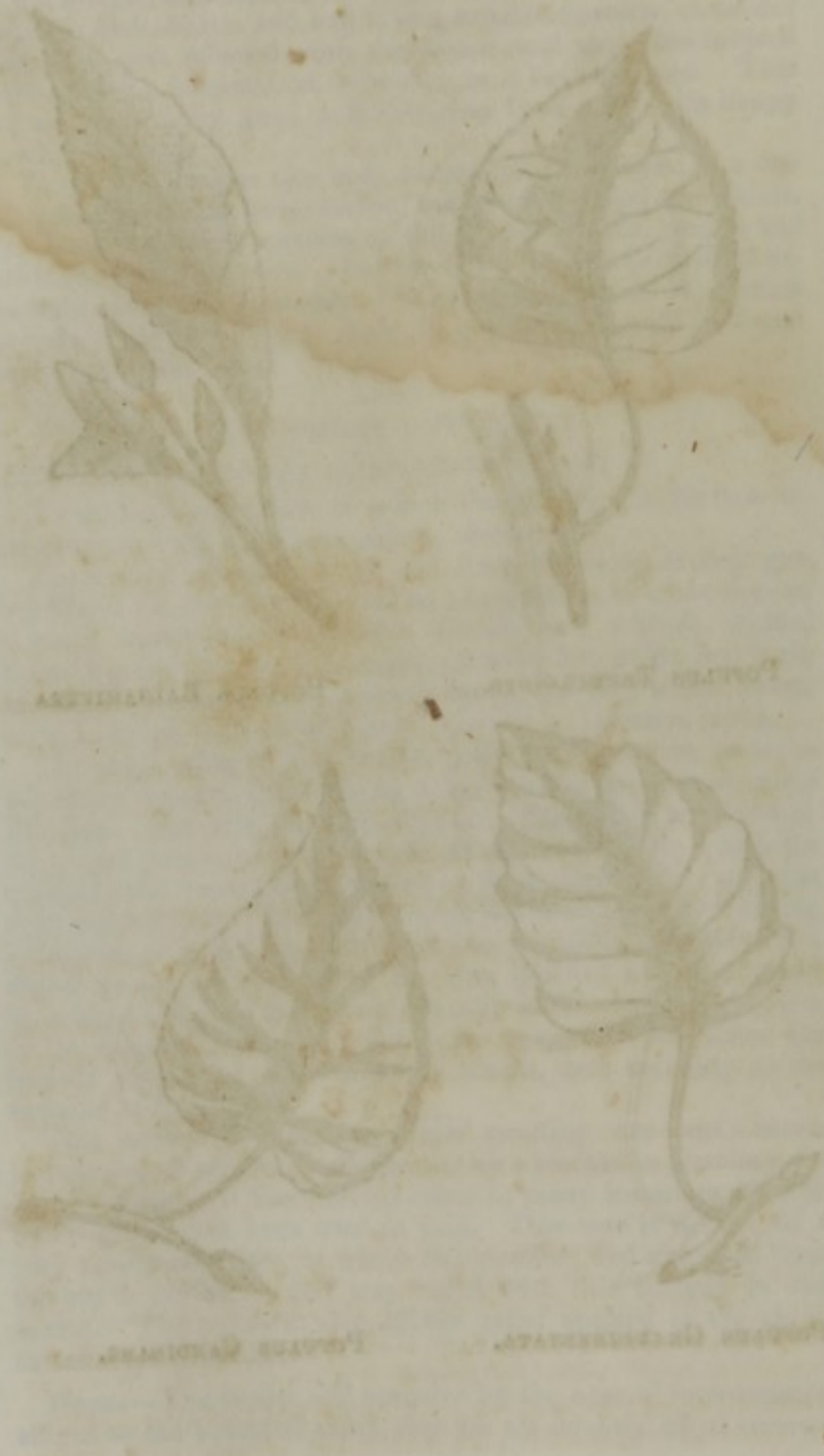
NOTE.—The reader will perceive by the note of interrogation affixed to the botanical name, that we are doubtful of its correct-

Populus Tremuloides.

Populus Balsamifera

Populus Grandidentata.

Populus Candicans.



ness. We adopted it on the suggestion of an experienced botanist, who, without being positive, thinks it probably correct. If it be the *P. uvedalia*, we may add, that the leaves are opposite, flowers yellow, compound, somewhat resembling the cup-plant, and belongs with that to the same class and order in both the *artificial* and *natural systems*. This order (LV) of the natural system is noted by botanists as being "tonic and secernant stimulant."

POPULUS TREMULOIDES.

Common names—Poplar, Quaking Asp, Quiver Leaf, Aspin.

The quaking asp is a common tree in most parts of the country, growing to various sizes, some trees large enough for sawing-timber. The leaves are round, smooth, and jagged, and the petioles or footstalks, being flattened transversely with the surface of the leaves, the least breath of air agitates and keeps them in motion; whence the name of quaking asp, &c. There are several species of the poplar, all valuable for medicine, but that with tags is considered best.

The bark of this tree affords one of the finest of bitter tonics. It may be used in powder, decoction, or tincture, for diarrhœa, obstructions of the urine, indigestion, faintness at the stomach, consumption, and worms. The bark may also be pulverized and compounded with other tonics, and used in all cases.

POTENTILLA CANADENSIS.

Common names—Fivefinger, Cinquefoil.

A trailing vine, common in old fields, or other poor uncultivated grounds; too well known to need any description.

"The root," says Smith, "is a gentle astringent, and has been found by experience to be very beneficial in fevers, particularly when there is great debility, lassitude, and night sweats, which last it seldom fails to check; it also helps the appetite. It is taken in decoction, or may be boiled with milk. It is serviceable in allaying fluxes, immoderate flow of the menses, &c."

PRINOS VERTICILLATUS.

Common names—Winterberry, Black Alder.

This is a common shrub or branching bush, growing usually in swamps, near ponds and streams, and in wet lands. It is usually found in bunches, from six to ten feet high, having alternate branches; bark of a dark ash color, spotted with white.

Leaves alternate or scattered, oval, pointed, edges jagged with sharp teeth. Flowers small, and white, producing irregular bunches of berries which remain attached to the sides of the branches until winter, presenting, with their beautiful red color, a delightful contrast with fading nature. This shrub may be readily distinguished by its berries, from the *Alnus serrulata*, another shrub called black or tag alder, which we have heretofore mentioned.

The bark of the winterberry is highly celebrated as a tonic, alterative, antiseptic, and vermifuge. Useful in all cases of recovery from fevers, and other sickness; in dropsy, jaundice, mortification, eruptions of the skin, and externally for foul ulcers, mortified parts, &c. For mortification, it may be used alone, or combined with sassafras or other stimulating tonics, in decoction, both externally and internally. For all complaints of the skin this article is an excellent remedy, by drinking a teacupful of the decoction several times a day, and using the same frequently as a wash.

The berries are also used for the same purpose as the bark, and may be tinctured in spirits, which makes a good tonic for all complaints, particularly for worms.

Dose, from half to a whole tea-spoonful of the bark three or four times a day, in hot water sweetened; or an ounce of the bark may be steeped in a pint and a half of water down to a pint, and taken in gill doses every two or three hours.

PRUNUS VIRGINIANA.

Common names—Wild Cherry, Black Cherry.

Too common to need a description. Bark bitter, tonic, astringent, and anthelmintic. Useful in all cases where astringent or bitter tonics are indicated, and especially so in disorders of the stomach and bowels, and those attended by nervous excitability and local irritation; and hence peculiarly useful in cholera, as we have in some measure tested. The bark of the root most powerful, and may be used externally as a wash for foul or mortifying ulcers; internally, it should be used with care. Leaves poisonous to cattle.

PTELEA TRIFOLIATA.

Common names—Healall, Aguebark, Pickaway Anise, Wingseed, &c.

The Ptelea trifoliata is a shrub or bush, growing usually in clusters from five to ten feet high. The roots are long and

crooked; of a singularly mottled and rough appearance outside, which consists of a kind of brawny or scurvy material, and when rubbed off, leaves a smooth, white, thick unctuous bark, inclined to yellow when dry, which is the medicinal part.

The stems or shrubs are covered with a lightish colored, sometimes spotted, bark, on which arise peculiar little ruptured elevations, whilst the branches, towards their ends, are dark or brown, very smooth, and of rather a thick or clumsy appearance.

Leaves on long footstalks, scattered on the branches, ternate, entire, dark green on the upper, and light on the under side, recurved or bent backward.

Flowers diœcious, panicled or clustered, the clusters either scattered, or growing from the ends of the branches, of a greenish-white color, producing, towards autumn, a cluster of light colored, two celled samaras or double winged flat seed vessels containing two seeds.

The bark of the root of healall, is an excellent stimulant expectorant tonic; useful in all cases of debility, and particularly in agues or intermittent fevers. It has also been highly extolled as a remedy in consumptions of the lungs, having been sold, as a nostrum, at a high price. In this instance it was tinctured in whisky. The powdered bark of the root may be administered in doses of a fourth or half a tea-spoonful in hot water, three times a day; or a table-spoonful of the tincture an equal number of times during the same interval. The tincture is made by infusing two ounces of the powdered bark in a pint of proof spirits and the same quantity of water.

Equal parts of the ptelea and the bitter ash, (Euonymus atropurpureus,) is highly recommended in all complaints of the breast and lungs. Used in the same way as the bitter tonic or other bitters. The ptelea is also a valuable addition to any of the bitter preparations.

The leaves, according to Rafinesque, are useful in healing wounds and for worms, either in tea or poultice. He also says, that in Louisiana this shrub is called *Boispuant*.

PYROLA ROTUNDIFOLIA.

Common names—Wild Lettuce, Wintergreen.

Root perennial, long, round, white, and horizontal. Leaves evergreen, small, round, smooth, resembling the round smooth-leaved garden lettuce. Flower stems, ten or twelve inches high, supporting numerous white flowers. A tea of this article is good to take internally for diseases of the skin; and externally to wash ulcers and all eruptions of the skin

RHAMNUS CATHARTICA.

Common names—Buckthorn, Purging Buckthorn

This shrub grows in woods, or hedges; and attains, if cultivated, the height of fifteen feet. The berries have a faint disagreeable smell, and nauseous bitter taste. They have been long esteemed as a cathartic, celebrated in dropsy and rheumatism. They occasion griping, sickness, and dryness of the mouth and throat, leaving a thirst of long continuance. They may, however, be combined with other cathartics, and are thus united in Dr. Reed's celebrated anti-bilious pills.

The bark of the buckthorn is said to be of great service in reducing inveterate inflammation of the eyes, and for curing the itch, as it cleanses the skin and relieves the burning heat without repelling the humors. Used in decoction as a wash Also said to be tonic, and antiseptic.

RHEUM PALMATUM.

Common name—Rhubarb.

This root is a native of China and the East Indies, but is now cultivated in both Europe and America. The rhubarb employed in medicine is imported from Russia, Turkey, and the East Indies. But that which is raised in our own gardens, if allowed to attain to the age of six, eight, or ten years, is said to be equally good or better than the imported.

Rhubarb is a fine mild and tonic purge, very useful in bowel complaints, as it has a tendency to leave the bowels in a costive state; it therefore should never be used in costive habits. Dose from one to two tea-spoonfuls.

A very elegant and pleasant medicine for children may be made by scorching or rather roasting, but not burning, pulverized rhubarb, and putting about one ounce to a pint of brandy with enough essence of cinnamon to give it a good flavor, and then sweetening very sweet with loaf sugar. This, in tea-spoonful or larger doses, is a very valuable remedy for all bowe. complaints.

RHUS GLABRA.

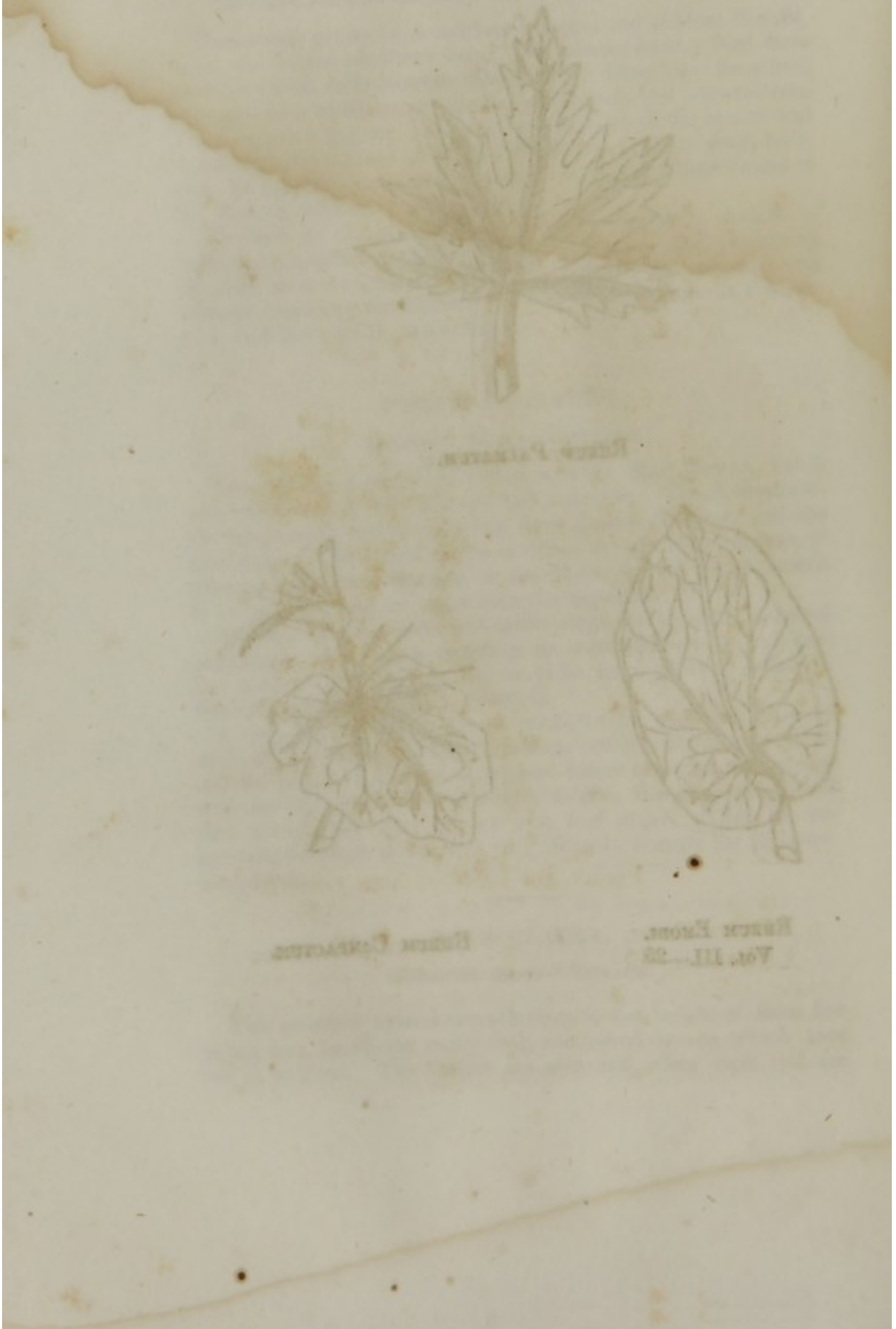
Common name—Sumach.

The common upland sumach rises to the height of from five to ten feet, producing many long compound leaves which turn red in autumn. The berries are also red when ripe, and are

Rheum Palmatum.

Rheum Emodi.

Rheum Compactum.



Rubus Strigosus, (Red Raspberry).

of an agreeable but very sharp acid taste. The bark, leaves, or berries, may be used as medicine, and possess valuable properties, being astringent, tonic, and diuretic. Either of them may be used in strong decoction, in all cases in which medicines of this class are needed. The berries made into a tea and sweetened, make a pleasant drink for children. The bark of the root is said to be a mild cathartic.

In strangury the sumach is said to promote the discharge of urine, relieving difficulties of the kidneys, and strengthening the urinary organs. The berries and leaves are found equal to nutgalls in dying or making ink, giving a deep and permanent black.

An infusion of the bark of the root is said, by Dr. Fahnestock, to be almost a specific for mercurial salivation.

RUBUS STRIGOSUS.

Common name—Red Raspberry.

There are several species of the raspberry good for medicine, but the red is the kind most highly recommended, the leaves of which are the part used. The stem grows from two to four feet high, commonly straight and without branches, very thickly covered with stiff hairs. The leaves are somewhat similar to the common black raspberry leaves, pale green on the upper, and almost white on the under side.

No author, we believe, has mentioned this article medicinally but Dr. Thomson. The leaves are a valuable astringent; in decoction, useful in bowel complaints, and for external application, to moisten poultices for burns and scalds, and for washing sore nipples. A strong tea is an excellent article, says Dr. Thomson, to regulate the pains of women in travail.

RUBUS TRIVIALIS.—*Common name*—Dewberry.

RUBUS VILLOSUS.—*Common name*—High Blackberry.

These articles are too common to need a description; and as both possess the same properties, they are arranged under the same head. They are valuable astringents, rather too powerful to use without some care. The dewberry is considered the best; and has cured dysentery after the bayberry and Dr. Thomson's best remedies had failed. The tea of the roots may be administered in tea-cupful doses, for adults, and table-spoonful, for children, and is far less offensive to the taste and stomach than most other astringents in use. One ounce of the root to a pint of hot water makes a decoction of suitable strength.

A jelly made of the berries when they are turning from red to black, is much esteemed by some for gravel; and Dr. THACHER suggests that a tea of the root might be more efficacious.

The ripe fruit, either fresh gathered or made into jam or jelly, taken at pleasure, is a very pleasant and highly efficacious remedy in diarrhœa and dysentery.

RUMEX CRISPUS.

Common names—CURLED DOCK, NARROW DOCK, SOUR DOCK, YELLOW DOCK.

ROOT perennial, spindle-shaped, yellow, with a few fibers. Leaves mostly radical, very long and narrow, waved and curled on the margin.

The root of this plant is slightly purgative; and both root and seeds are said to have been successfully used in the cure of dysentery. The bruised or pulverized roots made into an ointment or tea is a valuable external application for itch and most other diseases of the skin, using at the same time a decoction internally. The dry root pulverized and steeped, one tea-spoonful to a tea-cup of hot water, is an excellent alterant and corrector of the fluids in all cutaneous affections and various other complaints, particularly ulcers and scurvy. In this last disease it is recommended very highly; one case successfully treated with nothing but the decoction of the dock root, has fallen under our own notice. Bad ulcers and hard tumors have been removed by the application of the bruised root in poultice. A strong decoction in milk, is recommended by Dr. J. WILLIAMS as an infallible remedy for bleeding at the stomach.

SAMBUCUS CANADENSIS.

Common names—ELDER, SWEET ELDER, BLACK ELDER.

THE common sweet elder grows too plentifully in this country to need any description. The inner bark, flowers, and berries, are used as medicine, being cathartic, emetic, and diuretic.

The inner bark is highly recommended as a diuretic in dropsy. For this purpose take of the inner green bark of the common elder, two handfuls, Lisbon, Teneriffe, or Maderia wine, or cider, two quarts, digest for twenty-four hours, when it is fit for use. Dose, one gill every morning before eating, or a larger quantity may be taken if the stomach will bear it. This preparation is a certain diuretic, producing a copious discharge of urine.

The flowers, in decoction, are a mild anodyne purgative,

useful for the complaints of children. The bark may also be made into an ointment with cream, lard, or fresh butter, and is a cooling application for most eruptions of the skin. Likewise the bark boiled and applied to the cheek, is said to cure the toothache. The berries may be used for the same purposes as the bark and flowers, gently loosening the bowels, and promoting perspiration and the secretion of urine. The young leaf buds are purgative in a high degree, being too powerful and drastic for use.

SANICULA MARYLANDICA.

Common names—Sanicle, Indian Sanicle, Black Snakeroot.

Root small, fibrous, and black. Leaves, growing at the top of a long naked stem, five in a whorl, several stems rising from the same root. The scape or flower stem rises considerably higher than the leaf stalks, with two or three whorls of small leaflets near the top. Flowers few, white, in terminal corymbs. Growing in woods or thickets to the height of eighteen or twenty-four inches.

A tea of this root is considered by some of the Indians as a sovereign remedy for rattle snake bites. For this purpose, take three bunches of roots, and boil them in a pint of water, and drink in divided doses, at intervals of twenty or thirty minutes. At the same time prepare a decoction of the leaves and stems, and bathe the bitten part. By pursuing this course the Indian doctors say they can cure a snake bite although it may have happened two days previous to the application.

The sanicle is also a good remedy for sore throat, croup, hives, and other diseases of the skin, and for fevers. They use it in tea, or chew the root and swallow the juice. One Indian said he was cured of a fever, with this article, after other remedies had failed.

SANGUINARIA CANADENSIS.

Common names—Bloodroot, Red Puccoon, Redroot.

Root perennial, horizontal, fleshy, throwing out a few fibers, reddish outside, emitting, when fresh and broken, a bright red juice. Leaves few, roundish, or heart-shaped, upper side a light green, under side almost white, only one on a stalk. Flowers white, supported on several stalks, putting forth very early in the spring before the leaves are near grown. Grows in rich woodlands, along roads, and in fields around stumps.

It is said the Indians highly esteem this article for its medi-

cinal properties; and it has also acquired considerable celebrity amongst the whites. We, however, think it a rather unsafe medicine applied internally, except in small quantity combined with other articles to modify its action. The powdered root, in doses of fifteen or twenty grains, is a powerful emetic, but it ought not to be administered in this way.

The bloodroot is used as an expectorant in coughs and inflammations of the lungs; and for croup it is, by some, deemed a sovereign remedy. For this complaint, a strong infusion may be given in table-spoonful, or less, doses, according to the age of the patient. Infused in vinegar, the bloodroot is an excellent application to tetter or ring-worm; and the powder applied to fungus or proud flesh, removes it. It has also cured polypus of the nose, when used as a snuff. But the principal use which we make of this article has been in combination with other substances in the form of cathartic pills.

SCROPHULARIA MARYLANDICA.

Common names—FIGWORT, SQUARE-STALK, CARPENTER'S SQUARE, HEALALL.

ROOTS perennial, white, branching, something larger than a goose quill. Stem erect, square, jointed, branched, branches axillary to the leaves, opposite; issuing from each joint. Leaves opposite, oblong-cordate, broad at the base and tapering to a long point, edges jagged with large unequal, broad, acuminate teeth, supported on a pretty long footstalk, having a peculiar smooth or unctuous feel, and becoming spotted towards fall. Flowers greenish-purple, growing on branched footstalks, which form loose panicles at the tops of the branches, producing roundish pods containing many small seeds. Grows in considerable abundance along roads and open situations in the neighborhood of fields, houses, &c., attaining the height of from three to six feet.

The root of this plant is said, by PETER SMITH, to be very valuable in female complaints, particularly to relieve the peculiar pains attending difficult menstruation, and will, he says, restore obstructed lochia, and may be usefully employed both before and after child-birth; "in tea or decoction, which may be freely drank, being quite innocent, but very efficacious." These properties have also been confirmed by others, being very highly recommended by good authority. The leaves are useful as an external application to bruises, wounds, ulcers, &c., and both leaves and roots may be made into a salve with lard, or butter, and applied to sores and swellings.

Scutellaria Lateriflora, (Blue Skullcap).

SILPHIUM PERFOLIATUM (Indian Cup-Plant.)

SCUTELLARIA LATERIFLORA.

Common names—Scullcap, Madweed, Hoodwort, &c.

Roots perennial, fibrous, yellow. Stem erect, square, from one to three feet high, much branched, branches opposite, smooth, square. Leaves opposite, very thin, supported on long petioles or foot-stalks, broad at the base, end acute, dentate or toothed. Flowers pale blue, growing on the branches, which contain nothing but the flowers and very small bracts or leaves.

Dr. Beach says this plant is "tonic, nervine, and anti-spasmodic; remarkably efficacious in *chorea* or *St. Vitus' Dance;* with the infusion I have cured a great number of cases of this disease." Much interest was also excited a few years since, respecting this plant, by its being reported to be a specific for the cure of hydrophobia. It was, however, soon discarded by the Faculty, and its merits have not been much investigated since.

"This plant," says Rafinesque, "has been carefully analyzed by Cadet, in Paris, and found to contain many powerful chemical principles, which evince active properties." It is recommended in convulsions, lock-jaw, hydrophobia, and all cases of nervous irritations, either in tea, or infusion. We think this article well worthy of the attention of botanic practitioners, with a view to ascertain its real virtues.

SILPHIUM PERFOLIATUM.

Common names—Ragged Cup, Indian Cup-plant.

Root perennial, large, long, crooked, forming a joint where the old stalk grew, which, decaying, leaves a hole, several of which are found in all the old roots, with fibers issuing at each joint. Stem rising to the height of seven or eight feet, being angular or square, with the sides concave or sunk, which makes the corners very sharp. Leaves opposite, very large, and jagged with deep, large teeth, connate, or united at the base, the edges of the wings by which they are united being so raised as to form a deep excavation or cup, which may contain from two to four table-spoonfuls of water. Flowers numerous, yellow, and large. Grows in rich bottom or intervale lands.

The root of this plant is very useful in fevers, ague-cakes, inward bruises, weakness, ulcers, and, if persevered in, will, the Indians say, make an old man young; the inference from which is, that it is a powerful alterative restorative. It is used in strong tea, the root requiring long steeping to extract the

strength. The Indians say that it dissolves ague-[illegible] and carries them away, cures fevers, &c. It is also one of the articles which they employ in their vapor bathing or [illegible] to promote perspiration, and is regarded as a highly valuable medicine.

SPIGELIA MARYLANDICA.

Common names—Carolina Pink, Indian Pink, &c.

Root perennial, branched, and very fibrous. Stems erect, simple, smooth. Leaves opposite, long-oval, outer points acute, entire, smooth. Flowers terminal, large, bright red outside, yellow within, upper end resembling a golden star. Found in Tennessee, and at the South.

Carolina pink is an active vermifuge, and somewhat cathartic. Its properties were first learned from the Cherokee Indians. Used in decoction, most beneficial in large quantities, in syrup, or made very sweet. In too large doses it causes headache, stupor, and delirium. When these symptoms occur it should be discontinued.

TANACETUM VULGARE.

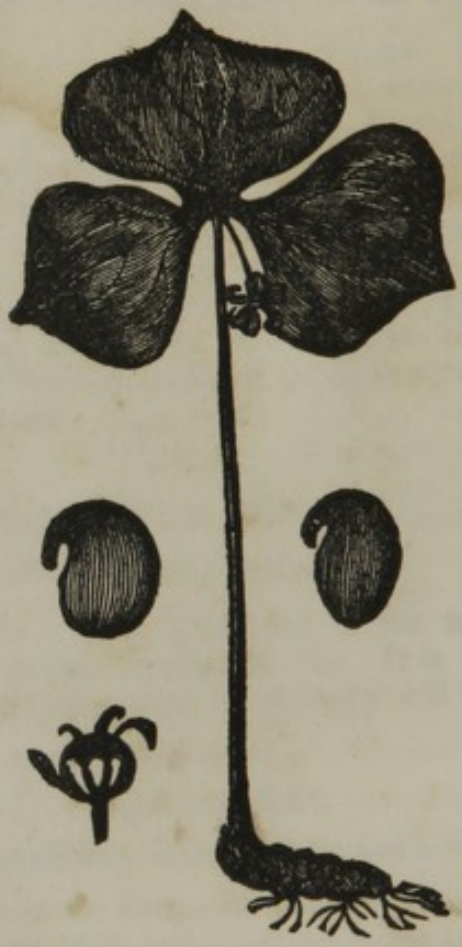
Common name—Tansy.

Common tansy is a warm bitter, and in the form of tea, is useful for worms, female complaints, &c. It is also said that if fresh meat be rubbed with it, the flesh-fly will not injure it.

TELA ARANEI.

Common names—Cobweb, Spider's-web.

Although some of the virtues of the cobweb were known and published as early as 1644, and notwithstanding it has long been ranked amongst empirical remedies for the ague, yet it is but recently that it has attracted the attention of medical men. And whether it will sustain the high character which has been given it, on further trial, is uncertain; and even if it does, it will probably be considered too disgusting ever to be extensively introduced into the practice of medicine. It is said to be almost a specific for intermittent fever, and has afforded extraordinary benefit in consumption, by allaying irritation and procuring relief in at least one case past the reach of common remedies. Dr. Jackson observes, that he might multiply instances of its efficacy and tranquilizing effects on the human system.



TRILLIUM LATERIFOLIUM, (Birth-root).

Cobweb has afforded remarkable relief in asthma, having in one instance, procured sleep the first night after taking a dose, (nearly a scruple,) which the patient had not enjoyed for more than six years. It is recommended as being useful in spasmodic complaints; and as procuring the most tranquilizing sleep, followed by no bad effects. In one case, that of an old infirm asthmatic, slight but pleasant delirium was produced, resembling a dose of nitrous oxide gas, (sometimes called exhilarating gas,) though of longer duration. The muscular energy was very much increased, so that the patient could not be kept in bed, but jumped and danced about the room nearly all night; but towards morning fell into a quiet sleep, and no unpleasant symptoms followed. The cobweb has also proved highly beneficial applied to irritable sores.

The kind of spider which is said produces the best web, is of a brown or black color, and inhabits cellars, barns, and other outhouses and dark places. It is in these situations, therefore, that the web ought to be procured, as that which is found in fields is said to be of no value. The dose is five grains, given in the form of pill, once in three hours.

From all the facts recorded respecting the medical properties of this article, it seems to merit a trial in all cases of irritability, in fever and ague, hysterics, and hypochondria. The fact, that no unpleasant symptoms have followed its most violent operation, is certainly favorable to its further trial.

TRILLIUM LATIFOLIUM.*

Common names—Birthroct, Bethroot, Jewsharp, Indian Balm, Snakebite, &c.

There are several species of this valuable family of plants having the same general appearance, and all, or nearly all, of which may be used indiscriminately for the same purposes.

Roots perennial, oblong, thick and short, somewhat resembling the wild turnip, wrinkled, giving out many small fibers. Stem, smooth, erect, from ten to twelve inches high. Leaves three in a whorl at the top of the stem; and one terminal flower rising above the leaves; color white, red, purple, and sometimes mixed.

The birthroot is astringent, tonic, styptic, pectoral, and anti septic. Useful in all kinds of hemorrhage, immoderate menstruation, asthma, catarrhal cough, diarrhœa, dysentery, &c. The pulverized root may be given in tea-spoonful doses, or it may be steeped, one ounce to the pint, and given in gill doses; or the root may be combined with other astringents or bitters.

* Rafinesque.—Probably the *Trillium erectum* of Linnæus.

Externally the root is beneficial in poultice applied to tumors. carbuncles, bad or putrid ulcers, and mortification. The leaves are also said to be useful applied to tumors. In all excessive female evacuations, the birthroot is one of our most valuable articles, and is likewise highly esteemed by the Indians for the same purposes. They also use it to cure the bites of rattlesnakes. Dyes red with alum.

TRIOSTEUM PERFOLIATUM.

Common names—GENTIAN, GINSON, YELLOW GENTIAN, HORSE GENTIAN, FEVERWORT.

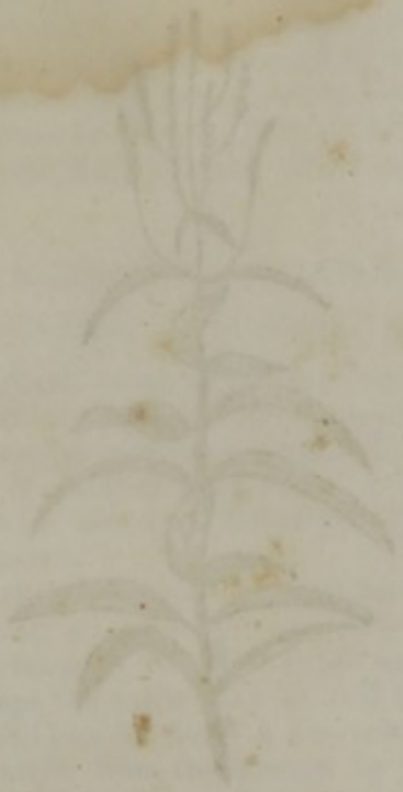
ROOTS perennial, round, long, and tapering, darkish brown, or light color; taste, a pungent bitter, leaving, after being chewed, a biting and somewhat warm impression on the tongue and mouth. Stems many, erect, eighteen to forty inches high, hairy and round. Leaves opposite, lower ones connate at the base, that is, growing together so that the two leaves seem to form but one, with the stem passing through the center, like the thorough-wort. Flowers two to six, reddish or purple, growing at the base of the leaves, giving rise to large yellow berries crowned with four or five small leaves which are the calyx of the flower. Found in dry oak, hickory, and other lands; most abundant in limestone soils.

The gentian root is a very good bitter tonic, mildly stimulating, and in large doses actively cathartic. Useful in intermittent fevers, and generally in all cases where tonics are needed. The riper berries are often tinctured in spirits for fever and ague. The root may also be used in the laxative bitter tonic. Dose as a purge, about two tea-spoonfuls.

ULMUS FULVA.

Common names—SLIPPERY ELM, RED ELM.

THE bark of the red elm is an article of much importance in the practice of medicine, and particularly in medical surgery. Infused in water, it affords an abundant mucilage, which is useful in dysentery, coughs, pleurisies, quinsies, &c. A very good way of preparing the bark for internal use is, to pulverize it finely, mix an equal quantity of sugar with it, and add warm water enough to form it into a soft pulpy mucilage. Some practitioners, however, prefer employing the under bark, simply infused in cold water, the patient drinking off the mucilaginous liquid. Prepared in either way, it is excellent in diarrhœa and dysentery, to sheath and lubricate the intestines. It is likewise valuable in sore throats, colds, coughs, fevers, &c.



VERBENA HASTATA, (Blue Vervain).

But the most valuable purpose to which the red elm can probably be applied is to the making of poultices, for all kinds of ulcers, inflamations, &c. See under the head of *Poultices*.

URTICA DIOICA.

Common name—NETTLE.

A WELL known weed, growing in rich lands, either dry or slightly moist, covered with sharp prickles which, when applied to the skin, irritate and inflame very much. Hence useful in palsy applied to the diseased side or limbs. Used in decoction for gravel, inflammation of the kidneys, pleurisy, spitting of blood, and all hemorrhages; the juice said to be the most powerful styptic known. Also highly recommended as a tonic in fevers; the seeds and flowers, to be taken in doses not exceeding one drachm (eighth of an ounce) three times a day.

VERBASCUM THAPSUS.

Common name—MULLEIN.

THIS valuable plant is too common to need any description, growing in old fields, wastes, by the road sides, &c.

The leaves are used instead of flannel for frictions, and dipped in hot water or medicated decoctions they are valuable for fomentations. Also useful in poultices applied to swellings and contracted sinews.

A strong tea, taken internally, is good for agues, croup, asthma, cough, bleeding at the lungs; and externally, in wash, for piles, scalds, and burns. The flowers are said to be better than the leaves; perhaps the seeds may be still better; they are recommended for children for fits. A fine relaxing oil, we are informed, may be made from the flowers by putting them into a vial or bottle, corking it tight, and placing it in the sun.

VERBENA HASTATA.

Common names—VERVAIN, VERVINE, PURVAIN.

VERVINE is a common plant, growing at the road sides, in unploughed fields, and in open waste lands. There are three kinds or varieties, differing in their appearance, as well as in the color of their blossoms, being white, red, and blue.

It is said to be a good emetic, ranking, among herbalists who are accustomed to use it, next to the lobelia, and is said, by Dr. THOMSON, to have cured the consumption. It is an excellent

sudorific, and may be used in decoction in all cases of colds, or obstructions of any kind.

XANTHORHIZA APIIFOLIA.

Common names—Yellow-wort, Yellow-wood, Parsley-leaved Yellow-root.

This small shrub is a native of the Southern States, and is also said to be very abundant along the Ohio river. It grows from two to three feet high, somewhat thicker than a goose quill, bark smooth, but that on the young shoots covered with angular fissures, the wood a bright yellow. Leaves compound, leafets very deeply jagged with acute teeth, and crowded together at the top of the stem. Flowers on drooping racemes or spikes, of a dark purple color. Roots from three to twelve inches long, about the size of one's little finger, and sendihg up many scions or suckers.

The yellow-wort is a pure bitter tonic. Both the wood and bark of the roots, may be used for medicine. It may be prepared by itself, and given in decoction, or combined with other tonics, and employed in all cases of disease.

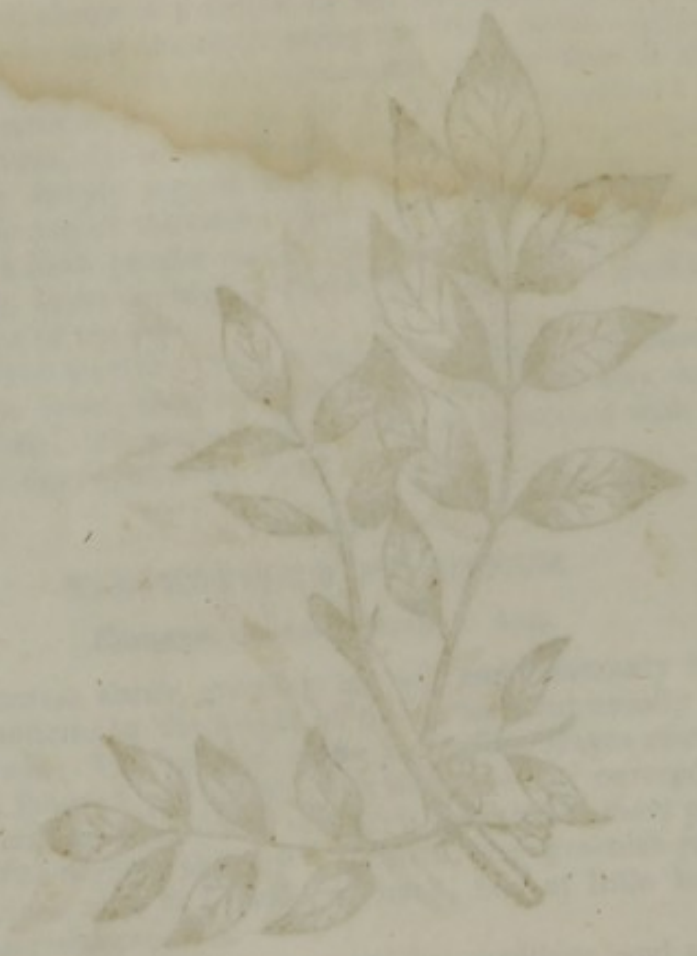
XANTHOXYLUM FRAXINEUM.

Common name—Prickly Ash.

A perennial shrub, growing in rich and commonly wettish soils, sometimes to the height of fifteen feet, but usually about eight or ten. The bark is of an ash color, leaves somewhat similar to those of the elder. The branches are covered with strong sharp prickles, from which it derives its most popular name. The berries, as they are called, are greenish-red and hard, covered with a capsule, or husk, full of little holes or dots; warm and pungent.

Both the bark and berries are useful as medicine, and are very valuable; berries the best. They are good in rheumatism, cold hands and feet, and added to the bitter tonic, are a very useful remedy in almost all complaints, particularly intermittent fevers. It has also been recommended, both as an external and internal remedy for malignant ulcers, &c.

XANTHOXYLUM FRAXINEUM, (Prickly Ash).



DIRECTIONS

FOR THE GATHERING, SELECTION, AND PRESERVATION OF VEGETABLE MEDICINES.

The gathering of medicinal herbs, roots, and barks, at the proper seasons, and the judicious selection and careful preservation of them, are matters of the utmost importance. Too much attention to these subjects can scarcely be given; and all persons engaged therein, ought to have their minds suitably impressed with the vast importance of their avocation. When we reflect upon the sufferings of the sick—their anxiety, as well as the sympathy of their friends, and the necessity, in many instances, of promptly administering the best remedies in order to save life, we shall be the better able to appreciate the high importance of carefully selecting, preparing, and preserving the various articles of medicine, and the heavy responsibility of those who for gain, or from any other motive, are either selling, or using in practice, articles which have been damaged, or are otherwise of inferior medicinal powers. By using inferior medicines the sufferings and anxiety of the sick may not only be protracted, but many valuable lives may also be actually lost. And we cannot close these remarks without expressing an ardent wish that all persons engaged in the purchasing of the simple articles of botanic medicine, would exercise the utmost care to instruct those engaged in gathering and curing them, in the best manner of doing it, and then rigidly enforcing a compliance with those instructions by refusing to purchase damaged articles. It is from the extreme and criminal carelessness or negligence in the curing of medicine, that disappointments, as to their efficacy, arises, and by which means also, valuable articles have often fallen into disrepute. Great care ought also to be taken to reject or separate every thing from the medicinal article which does not belong to it; as poisonous substances are sometimes gathered along with medicines.

1. Roots which are *annual*, that is, grow from the seed every year, should be gathered just before flowering, as they are then in the highest state of perfection. Roots which are *biennial*, that is, spring from the seed one year, live through the winter, arrive at maturity, bear seed and die during the second year, ought to be gathered in the fall of the first year, or

early in the spring of the second. *Triennial* roots should be collected in the fall of the second, or spring of the third year; and *perennial* roots ought to be collected either in the fall after the leaves and tops begin to die, or in the spring before they begin to grow. Roots which are gathered out of season, either lose in their properties, weight, value, or in all these respects.

Soon after the roots are collected, and before they become dry, they must be washed clean, first trimming off the extraneous or useless parts, and carefully throwing out such as are worm-eaten, unsound, or dead; being mindful in washing not to let the roots remain too long in the water, as that will extract some of their virtues. After washing, they should, if large, be cut into small pieces and spread in a dry, airy place, or in the sunshine; but if spread in the open air, great care must be taken to prevent their getting wet with rain or dew, as this will very much impair their value. When perfectly dry, they should be carefully packed away in jars, boxes, or barrels, according to the quantity, and placed in a dry, airy room, but never in a damp one.

2. Herbs and leaves ought generally to be gathered about the time of flowering, as they are then in their greatest perfection. Some, however, the lobelia for instance, with an eye to economy, may be collected about the time the leaves begin to change from green to yellow, or rather before, as the seed is then ripe. Herbs and leaves should be dried in the same way, and with the same precautions as roots, and preserved in the same manner, after drying. They ought to be gathered in dry weather, after the dew goes off in the morning, and before it falls at evening. Such as are imperfect or injured, dry, withered, or dead, must be rejected.

3. Barks should be gathered in the spring or fall; and ought to be taken from young thrifty trees, freed from every thing but the inner living bark, carefully dried, and preserved, as directed for roots and herbs.

4. Flowers should be collected when in perfection, and in dry weather, after the dew is off, carefully and rapidly dried in the shade, and preserved as directed for other articles.

5. In the preparing of roots and herbs for use, if to be done on a large scale, grinding in a grist mill, and bolting most articles, is to be preferred. To prepare them for grinding, if the weather be dry and a hot sun, the article to be ground must be spread in the sunshine, until it becomes perfectly dry and brittle; or if the weather be not suitable, the article may be put into an oven moderately heated, or, what is better, spread on an upper floor over the fire where there is no ceiling over head. When sufficiently dry, if it be roots, put them into a barrel or box, and with an axe or any thing else more suitable, beat and break

them up so that they will readily go into the mill; and if they have not been well washed, they may be sifted, and as the dirt, by the process of beating, is separated from the roots, it will readily sift out and leave the roots clean.

Herbs are sometimes put into a box made for cutting straw for horses, and cut up in pieces of from one to two inches long, then they are run lightly through the mill and the stems or woody parts separated from the leaves, when they are run through again and again, if necessary, until made sufficiently fine.

Bark must also be cut into short pieces, and run through the mill, repeating the operation until reduced to a proper fineness. In general, bark is not made so fine as other articles, it being sifted instead of bolted.

For pulverizing medicines in a mortar, on a smaller scale, the drying must be done in the same manner as for grinding.

After the medicines are pulverized they should be kept in bottles, jars, boxes, or barrels, according to the quantity. But as all medicines lose something by being long pulverized, unless completely excluded from the air, all persons using or dealing in them, should, when grinding or otherwise pulverizing them, have in view the probable quantity which they might use or dispose of in any given time.

COMPOUNDS.

Having gone through with a description of the simple articles, and pointed out their most obvious properties and acknowledged virtues, together with their mode of preparation, doses, &c., we now direct our attention to the various compounds into which they enter.

In the first place, under the different heads, we will give the compounds for which *patents* have been obtained, and then introduce such others of the same class as we may think most valuable or necessary to give an idea of the various ways in which simple articles may be combined to increase their virtues or improve their taste. We shall, however, omit some of our own prescriptions to make room for others which have been obligingly communicated, usually giving the name of the individual who communicated the article, or the work from which it is taken. We also intend introducing, in a promiscuous manner, a variety of recipos selected from the great numbers which have been furnished us by the friends of the work. Many, however, that we have rejected are unquestionably valuable, but we are compelled to omit them in order that we may confine this volume within its assigned limits.

We are, however, constrained, before leaving this subject, to observe, that to many, no doubt, our selection of simples, as well as preparations of compounds, may be considered by far too large. In reply to objections of this kind, should they be raised, we will observe, that the object was to benefit as far as possible, individuals and families in all parts of the country, enabling them, from their own gardens, their own fields, or their own forests, to obtain the healing balm, the potent remedy, to cure their various ills. We believe that every soil, in every clime, that produces the means of sustaining the body while in health, also abounds with a profusion of remedies suitable to the wants of the sick. But these remedies are not every where known, and for the want of this knowledge the people must suffer, must languish, and die. It is the duty of those who wish to confer all the benefit in their power upon

suffering humanity, to diffuse, not only the knowledge of the medicines of their own particular neighborhood, but, as far as in their power, the medicines which have been found useful in other places and in other climates. The people of one country ought not to be made dependent upon those of another for their medicines any more than for their bread; and it was under these impressions that we took so wide a range in the articles of our materia medica. Every section of country should be zealously engaged in developing its own medical resources, in testing and proving the remedies of its own soil. Medicines might then be had, fresh and sound, free from adulteration, and at half, or less than half, the expense at which many of them are now procured.

It is also no less with the same view of benefiting the people generally of the United States, that we introduce such a large number of compounds and recipes, to show how variously the great profusion of medical plants may be combined, and thereby either increased in value or rendered more pleasant and agreeable.

DOSE OF MEDICINE.

The quantity of medicine to be taken as a dose of the following compounds, as well as throughout the whole work, are calculated for an adult or grown person, unless otherwise stated; for children, the doses may be graduated by the following rule:—

For a youth of fifteen years, the dose may be two-thirds the quantity for a grown person; for a child of ten years, one-half the quantity; for one of five years, one-third the quantity; for one of two years, one-sixth the quantity; and for a child of one year, one-tenth the quantity. These doses, however, will necessarily be often either lessened, or enlarged, according to circumstances and the effects produced; the grand object being to give enough; but, at the same time, using proper discretion, and not give too much.

The circumstances, besides age, most commonly having an influence in graduating the quantity of medicine to be given as a dose, are, *sex*, *temperament*, and *idiosyncrasy*. Females generally require less doses than males, and those of a warm sanguine temperament, than the cold phlegmatic. Idiosyncrasy is a peculiarity of constitution by which, independently of temperament, the individual is rendered unusually susceptible, or insusceptible of certain remedies. For instance, some persons will bear but the smallest, or even less than the smallest dose of cayenne. Others again, require a uniformly lesser or greater than usual

dose of the different preparations of lobelia to produce any given effect; whilst other individuals are to be found upon whom certain medicines act in a manner quite different from what they do upon people in general. These deviations, however, are far less frequently met with in the employment of innocent botanic remedies, than they are in those of a contrary character; nevertheless, when they do present themselves they ought always to be taken into consideration in prescribing for the sick.

ADHESIVE AND STRENGTHENING PLASTERS.

ADHESIVE PLASTER.

Take of,	Common turpentine,	2 lbs.
	Salt butter,	1 lb.
	Beeswax,	1 lb.
	Balsam of fir,	1 lb.

Melt all the articles together; then strain and simmer down to the consistence of soft wax. This plaster is for the purpose of confining together the edges of deep or large wounds and ulcers, and thus enable them with greater facility to heal. When their application is necessary, spread some of this plaster on a long narrow slip of cloth, then bring the edges of the wound or ulcer together; or as nearly so as possible, when a piece of the cloth, cut to the proper length, is to be applied across the wound, and so continue laying them on until it is covered from one end to the other. In some instances, the wound may be covered wholly by one plaster, in which case small holes must be made through it to permit the matter to escape should any be formed.

STRENGTHENING PLASTER.

Take of,	Rosin, Beeswax, White turpentine,	1 lb. each.
	Black pepper, pulverized,	1 table-spoonful,
	Brandy,	1 pint.

Put the whole into a new earthen crock, and melt and simmer until the brandy is all evaporated.

This plaster is also useful applied to ulcers, wounds, &c., as a salve.

Strengthening plasters may also be made by melting turpentine with a quantity of rosin sufficient to give it a proper consistence. For summer use it will require more, and for winter less, rosin.

ADHESIVE AND STRENGTHENING PLASTER.

Take of,	White rosin, (or any other,)	3 lbs.
	Beeswax,	4 oz.
	Burgundy pitch,	4 oz.
	Mutton tallow,	4 oz.
Melt these together, and then add:		
	Sweet oil,	½ oz.
	Camphor,	½ oz.
	West India rum,	1 gill,
	Sassafras oil,	½ oz.

When the latter articles have become incorporated with the former, let the whole be poured into a vessel of water, and work it in the hands till cold. In some seasons, and climates, a little more rosin, or a little more sweet oil, is required, to make it of the right consistence.

This is used as a sticking plaster; and also, in rheumatism. It is likewise useful in cuts, ulcers, &c.—[*American Practice.*]

ANODYNE DROPS.

Take of	Papaverine (*Kost's*),	1 oz.
	Colic drops,	1 pint,
	Diaphoretic drops,	1 pint,
	Essence of anise,	1 pint,
	Simple tincture of valerian,	4 pints.

Mix and shake well together. *Dose*, five to ten drops, repeated at discretion, until relief is obtained.

These drops are good for pains of every description, particularly in the stomach, bowels, or head. Also, for cholera morbus, diarrhœa, dysentery, &c., to be taken alone, or mixed with tea of the anti-morbific, anti-dysenteric, or astringent powders.

For the method of preparing the several ingredients which compose the above compound, the reader is referred to their respective heads, in the subsequent part of this volume.

ANTACIDS.

These are medicines which neutralize the acidity of the stomach. A sourness of the contents of this organ very often occurs with persons who are apparently otherwise in good health; but is more especially attendant on dyspepsy or indigestion; and is likewise often met with in many other complaints. It is at all

times proper to make use of the antacics when a sourness or acidity of the stomach prevails. The article which can most readily be obtained for common use, is,

WHITE LYE.

Take of good wood ashes, from four to six table-spoonfuls, put them into a vessel, and then pour about three gills of boiling water on them, and immediately cover the vessel with a plate, or other suitable article, to exclude the air. Made in this way, the lye is deprived of that sharp biting taste which it always acquires if left uncovered and exposed to the air, in lieu of which it has, to many at least, a sweetish and rather pleasant taste. This may be used in doses of half a tea-cupful, more or less, in all cases of acidity of the stomach, especially when taking an emetic.

NEUTRALIZING MIXTURE, OR PHYSIC.

Take of,	Rhubarb, (pulverized,)	2 scruples,
	Sal æratus, do.	2 "
	Peppermint plant, do.	2 "

Add half a pint of boiling water, sweetened with loaf sugar, and add a table-spoonful of brandy. *Dose*, one or two table-spoonfuls every quarter, half, or one or two hours, according to symptoms. *Use.*—This is one of the most valuable preparations known for cholera morbus, cholera infantum, or summer complaint of children, diarrhœa, dysentery, &c. Its operation and action appear to be specific, or almost infallible.—[*American Practice.*]

For other preparations, of this class, see under the head "*alkalies*," in the *Materia Medica.*

ANTHELMINTICS, OR VERMIFUGES.

WORM DROPS.

Take of, Spirits of turpentine,
Castor oil,
Anodyne drops,
Wells' anti-spasmodic drops,
} each equal parts. Mix. Shake before using.

Dose—for a child of five years old, one large tea-spoonful every hour until it operates mildly as a purge. Then followed by bitter tonics.—[*Dr. J. T. Wells.*]

ANTHELMINTIC OIL.

Take of,	Castor oil, (best quality,)	1 oz.
	Wormseed oil,	1 drachm,
	Anise oil,	1 drachm,
	Tincture of myrrh,	1 drachm.

Mix, and warm it to the temperature of milk, which is necessary in order that the ingredients may become fully incorporated. *Dose*—for an adult, one large tea-spoonful, three or four times a day, for three days. For children, in proportion, according to age. Should the bowels remain inactive until the second day in the evening, give rhubarb, or any other approved cathartic medicine.

This preparation is highly recommended by a person of competent knowledge and experience, and therefore merits a trial.

SPEARMINT TEA.

Take of,	Spearmint,	½ oz.
	Hot water,	1 pint.

Infuse fifteen minutes and strain. *Use.*—This tea is said to be one of the most powerful vermifuges in the vegetable kingdom. It is also a warm stomachic, useful in relieving nausea, and retching to vomit. Those who have children that are subject to an excess of worms in the alimentary canal, will find the importance of the use of this tea, with other anthelmintic medicines. It is also strongly diuretic, and diminishes fever and inflammation, by promoting a discharge of urine. *Dose*—one table-spoonful every two hours, for a child one year old.—[*American Practice.*]

WORM POWDER.

Take of,	Skunk cabbage balls,	1 oz.
	White wood bark,	1 oz.
	Indian hemp root,	1 oz.

All pulverized fine and mixed. *Dose*—from half to a whole tea-spoonful, in melasses, three mornings in succession, before eating.

ANTI-EMETICS.

These medicines are calculated to allay the irritation of the stomach and stop vomiting. They may be used in all cases where emetics operate too long, or to check spontaneous vomitings which exhaust the patient and prostrate the powers of the system. Spearmint or peppermint tea is an excellent article for this purpose, and may be freely used; but should be made very strong.

ANTI-EMETIC DROPS.

Take of,	Table salt,	2 oz.
	African cayenne,	1 oz.
	Vinegar, best quality,	1 quart.

Mix and bottle for use. *Dose*—one table-spoonful, or less, once in from fifteen to thirty minutes, according to the urgency of the symptoms. This is the best remedy to stop vomiting which we have ever used. A very common and ready way to make it, is to take a heaping tea-spoonful each, of salt and cayenne pepper, and add a tea-cupful of good vinegar. The most common name for this compound is pepper sauce, of which notice is sometimes taken in the treatment of disease. It is also an excellent external application to painful parts, such as rheumatism, headache, inflammations, bruises, sprains, and to palsied limbs, &c., &c.

SPEARMINT SLING.

Take of, The bruised herb, a sufficient quantity, or
Essence of spearmint;
Brandy and loaf sugar, enough to make palatable

Taken at pleasure. Very good to check vomiting.

ANTISPASMODIC AROMATIC DROPS.

Take of,	Valerian root,	3 lbs
	Ginger root, pared,	8 oz.
	Cinnamon bark,	8 oz.
	Anise seeds,	8 oz.
	Prickly ash berries,	4 oz.
	Oil of sassafras,	1½ oz.
	Alcohol,	6 quarts

Pulverize the solid articles, put them into the alcohol, digest ten days in a hot sun heat, often shaking. Then strain or filter. *Dose*—from one to three tea-spoonfuls, in twice the quantity of water, once in fifteen or twenty minutes until the vomiting stops

MINT FOMENTATION.

Take of fresh spearmint a proper quantity; let it be bruised, and add spirits, and simmer. *Use.*—In cases of great irritability of the stomach, attended with frequent vomiting, this fomentation, applied to the pit of it, will often relieve when other means fail.—[*American Practice.*]

ANTISEPTICS.

This class of medicines is used either to prevent, or to stop, mortification. They may act as stimulants, tonics, or as chemical remedies. Antiseptics include stimulants and tonics of all classes, and especially the astringents. They all produce their beneficial effects upon the same general principles by which they act in other diseases: giving action and tone to the diseased

organs. They ought to be freely used in all cases of mortification, or where there is good reason to apprehend that it may take place; both internally and externally applied, if the mortified part be so situated as to admit of external applications.

COMPOUND TINCTURE OF MYRRH.

Take of,	Best myrrh,	12 oz.
	Capsicum,	1 oz.
	Balsam of fir,	1 oz.
	Nutmeg,	1 oz.
	Brandy,	1 gallon.

The solid articles all to be finely pulverized, and infused in the brandy for ten days, in a hot sun heat, and often shaken, when it may be strained or filtered. This is a powerful antiseptic, and is highly valuable to wash and cleanse old foul ulcers, which are obstinate to heal.

SIMPLE TINCTURE OF MYRRH.

Take of	Myrrh,	12 oz.
	Capsicum,	1 oz.
	Peach or cherry kernels,	2 oz.
	Brandy, alcohol, or highwines,	1 gallon.

Pulverize the myrrh and capsicum, peach or cherry kernels, and digest ten days in a hot sun heat, strain or filter.

For internal use in cases of dysentery, or mortification, either of the above tinctures are best made with brandy; but for external use and for internal application in common cases, the alcohol or highwines, as they are much cheaper than brandy, will answer the purpose very well. The simple tincture of myrrh is a very valuable family medicine; useful for worms, pains in the stomach, colic, headache, &c. *Dose*, from one to four tea-spoonfuls, or even more.

In addition to these compounds, the bitter and astringent tonics, as well as the diaphoretic powders, are useful internal remedies in mortifications. Poultices are also valuable external applications to mortifying sores or wounds. They may be made by boiling dogwood, (*Cornus florida*) alder or winterberry, sassafras, bayberry or white oak barks, or pond-lily, birth, or blackberry root, making a strong decoction; then skim out the barks or roots, and thicken with slippery elm, cracker, and a little ginger, to the consistence of a poultice. Or any of these barks or roots may be pulverized and mixed with slippery elm, cracker, and ginger, and moistened with the aforesaid tea. In bad cases, a small quantity of cayenne mixed with the poultice makes it more stimulating, is a valuable addition, and ought not to be neglected.

Yeast and charcoal are also amongst the most powerful and

valuable antiseptics, whether separately applied internally, or combined in a poultice externally.

ANTISPASMODICS.

MEDICINES of this class act upon the same principle as the *Nervines*, but are much more powerful. The kinds most to be relied on, in the worst cases, such as fits, spasms, locked jaw, hydrophobia, &c., contain the nauseous properties of the *lobelia*, and are therefore not the most agreeable to use in ordinary cases as nervines.

ANTISPASMODIC TINCTURE.

Take of,	Tincture of lobelia seeds,	1 pint,
	Tincture of cayenne	1 do.
	Nervine tincture,	3 gills.
	Papaverine (*Kost's*),	1 drachm.

Mix and bottle for use. *Dose*—from half a tea-spoonful to a table-spoonful, repeated according to circumstances. This tincture is used not only in cases of fits, spasms, &c., but in all violent attacks of disease, and in cases of suspended animation from drowning, hanging, by lightning, or any other cause whatever. It also operates as a speedy emetic, and should therefore be used in all cases of the accidental or criminal introduction of poisonous substances into the stomach. It may likewise be employed to facilitate the operation of an emetic of the more common preparations of lobelia, for which purpose it may be administered in tea or table-spoonful doses.

The tinctures of which the Antispasmodic Tincture is composed, ought to be fully saturated; that is, made as strong as the different articles will make them.

ASTRINGENT TONIC COMPOUNDS.

COMPOUNDS of this class may be multiplied to almost any extent desirable. No class of medicines, perhaps, is more abundant than astringents, and few ought to be more generally used. There are, however, some states of the system in which they ought to be administered with a sparing hand, or omitted altogether. In obstinate costiveness, and in burning fevers attended with great and constant dryness of the mouth, and more especially if this dryness is increased by the astringent remedies, this class of medicines ought either to be omitted or very sparingly used. In costive habits, reliance should be mainly placed on laxative bitter tonics; and in fevers, the moisture of the mouth must be restored by the use of cayenne pepper, spice-

wood, pennyroyal, and other warm teas, together with the frequent application of the vapor bath. After the natural secretions have restored moisture to the mouth, the astringent tonics may be employed, and are among the best remedies to change that peculiar state of the system which occurs during a fever, and substitute for it, one more congenial with health. Their free administration during recovery from any disease, and especially from fevers, have a most powerful tendency to prevent relapses; and hence the propriety of combining them with the bitter tonics. Indeed so great is their influence over the human system, that a strong decoction of these medicines alone will very frequently remove fevers and many other complaints in their incipient or first stages; whence the correctness of employing them so extensively in the diaphoretic powders, which are calculated for using on all ordinary occasions, of slight attacks, or first stages of disease.

The astringent tonics are also peculiarly adapted to the treatment of diarrhœa, dysentery, and all cases of looseness of the bowels. They are likewise the proper remedies for canker, ulcers, floodings, and hemorrhages of every description, for all relaxed states of the system, and profuse evacuations of almost every kind.

ASTRINGENT TONIC.

Take of, Birth-root,
Pleurisyroot,
Bayberry, (bark of the root,)
Hemlock, (the inner bark of the tree,) } equal parts.

All finely pulverized and well mixed. One ounce of this powder to be steeped in one and a half pints of water. *Dose*—half a tea-cupful, with from half to a whole tea-spoonful of cayenne in it, sweetened if most agreeable. A dose of this tea may be taken three times a day in ordinary cases, but in diarrhœa, dysentery, floodings, &c., the doses should be more frequent.

The most economical method of preparing this medicine, is to take what sifts or bolts out of such different articles as are pulverized very fine for making the diaphoretic powders; as there is always a certain portion of them which it is very difficult to grind, particularly of the hemlock and bayberry.

ANTI-MORBIFIC POWDER.

Under this name, Dr. J. T. Wells has furnished us with the following recipe; and as he appears to employ this compound for the same purposes that we use the astringent tonic, we introduce it under the same general head:

Take of,	African capsicum,	2 oz.
	Ginger root, (pared,)	8 oz.
	Bayberry, (bark of the root,)	10 oz.
	Pleurisy root,	10 oz.
	Hemlock bark,	10 oz.
	Sumach, (root, bark, or leaves,)	10 oz.
	Golden seal,	10 oz.

All finely pulverized, sifted, and mixed. Method of preparing for use, and dose, similar to that directed for the astringent tonic.

CHERRY CORDIAL.

Take of the bark of the roots of wild cherry tree, and poplar bark, equal parts, and make a strong tea, by moderate steeping. Strain off, and add to each gallon of the tea four pounds of sugar, (loaf sugar is the best,) four ounces of finely pulverized meats or kernels of peach stones, and two quarts of good brandy. *Dose*—half a wine glassful, several times a day.

This is a most valuable astringent tonic, useful in all cases of obstinate diarrhœa and dysentery. It also combines the properties of a bitter, but the astringent by far predominates, and is so powerful as to need using with care. This cordial is a grateful, and very valuable medicine.

BLACKBERRY SYRUP.

Take two pounds of the bark of the root, well cleansed or washed; add a suitable quantity of water, then boil two hours. Pour off the liquid; then add more water; and thus continue to boil and pour off, until all the strength is extracted; then strain and add all the boilings together. Simmer to two quarts; strain; then add four pounds of loaf sugar, and when cool, add half a pint of best French brandy.

Dose—a table-spoonful three times a day, fasting. If it does not arrest the disease after taking it a few days, gradually increase the dose, as the stomach can bear it.

Use.—This a very valuable syrup in bowel complaints, particularly the chronic form. It will effect a cure when every other means fails. It appears to possess specific virtues, different from every other vegetable.

A rob, or jelly, is made of the fruit, which is useful to mix with water, and drink.—[*American Practice.*]

SYRUP FOR THE DYSENTERY.

Rhubarb and wild cherry bark, a handful; sugar, four table-spoonfuls; simmer awhile, and add a little brandy.

Dose.—Give a table-spoonful every fifteen minutes, until the pain ceases.

The above is taken from a work entitled the "*Indian Phy-*

sician;" and is pronounced infallible in dysentery; having never failed in thirty years.

As there is so much similarity in all the compounds which can possibly be made by mixtures of the simple articles under the denomination of astringent tonics, we deem it unnecessary to add any more formulas under this head. We may observe, however, that a single article of the astringent class is as frequently used as any compound, and often deemed quite as good. In compounding for ordinary use, it is a good rule, in general, to combine those which are most drying or astringent with those which are more mild and do not obstruct the flow of the juices of the mouth.

BATHING DROPS, AND RUBEFACIENTS.

These are stimulating washes, for applying to painful parts, tumors, swellings, &c., and are very useful. They should generally be applied with much friction or rubbing.

DR. A. REED'S COMPOUND BATHING DROPS.

Take of,	Tincture of myrrh,	1 gall.
	Buds of balm of Gilead,	1 pint,
	Camphor,	2 oz.

Pulverize the buds and add them, with the camphor, to the tincture of myrrh; digest for ten days, and strain or filter Useful for bruises, pains in the back, rheumatism, &c.

DR. EVERETT'S BATHING DROPS.

Take of,	Myrrh.	1½ oz.
	Oil of hemlock,	1 oz.
	Cayenne,	1½ oz.
	Alcohol,	2 quarts.

TOSIER'S BATHING DROPS.

Take of,	Compound tincture of myrrh,	1 oz.
	Oil of hemlock,	½ oz.
	Oil of sassafras,	½ oz.

Mix. Oil of fir, or cedar, is also sometimes added.

TINCTURE OF CAYENNE.

Take of pulverized cayenne, four ounces, digest for eight days in a pint of alcohol placed in a hot sun heat, often shaking it; then strain or filter. As this quantity of alcohol does not extract all the properties of the cayenne, another portion may be added, and preserved for making a future quantity of the tincture, to saturate which a less amount of cayenne will be necessary.

BITTER TONIC COMPOUNDS.

The term *restorative* is often applied to medicines of this class, because they are commonly resorted to after the force of the disease has been overcome, for the purpose of assisting the solids in recovering a perfect, healthy, firm tone, whereby the living power is enabled to exercise a proper influence over them.

Bitter tonics are a valuable class of medicines, universally applicable in all cases of disease. It is found by experience, that combining with them a portion of some astringent tonic, increases their beneficial influence upon the system. The article most commonly used for this purpose is the bayberry, though almost any other astringent article would answer instead of it; particularly the dewberryroot, birth-root, dogwood bark, or even a small portion of the bark of white oak.

Capsicum and cloves are also added to these compounds to make them stimulating, thus combining in the same preparation the properties of both tonics and stimulants. The cloves also impart an agreeable flavor, on which account, more than any other, they are employed. When it is desirable to modify the stimulating properties of the bitters, a lesser quantity of cayenne may be added, or it may be omitted altogether.

BITTER TONIC.

Take of,	Poplar bark,	1 lb.
	Golden seal,	1 lb.
	Bayberry, (bark of the root,)	1 lb.
	Columbo root,	1 lb.
	Capsicum,	6 oz.
	Cloves,	6 oz.
	Loaf or lump sugar,	4 lbs. 12. oz.—

being a quantity equal to all the other articles. All to be finely pulverized, sifted, and well mixed. *Dose*—one tea spoonful in either hot or cold water; or the powders may be taken into the mouth, moistened with the saliva and swallowed, or washed down with cold water. One ounce of these bitters added to a quart of wine, dose, a wine glassful three times a day, is an excellent preparation.

To make laxative bitters, add one pound, more or less, of the bitter-root, or of the black-root, to the foregoing compound, increasing in the same proportion, the quantity of capsicum, cloves, and sugar. The following compound may also be rendered laxative by the same means.

SPICE BITTERS.

Take of,	Poplar bark,	1 lb.
	Bayberry, (bark of the root,)	1 lb.
	Golden seal,	1 lb.
	Cayenne,	4 oz.
	Cloves,	4 oz.

Loaf or lump sugar in quantity equal to all the other articles. The whole finely pulverized, sifted and well mixed. *Dose*, &c., the same as the bitter tonic.

WINE BITTERS.

Take of,	Balmony,	8 oz.
	Bayberry,	8 oz.
	Cassia, (of the shops,)	8 oz.
	Golden seal,	12 oz.
	Anise seed,	4 oz.
	Cloves,	2 oz.
	Cayenne,	1 oz.
	Bitter root,	8 oz.
	Brown sugar,	3 lbs.

all pulverized and well mixed. One ounce to a quart of wine; dose a wine-glassful three times a day. This, we are informed is the celebrated wine bitters prepared and sold in such vast quantity by Dr. JOHN THOMSON, of Albany, New York. Very useful in dyspepsy.

TONIC POWDERS, (*for ague*).

Quinine,
Prussiate of Iron, (*Prussian Blue*), } equal parts.
Sanguinaria,

Pulverize and mix. *Dose*—When prescribed for ague or intermittent fever, the medicine is to be put up in powders of five grains each and six in number. Of these, three are to be given the first day—morning, noon, and at night; two the second day, in the morning and in the evening, and the remaining powder is to be given in the morning of the third day. The three first powders will arrest the disease, but still they must all be given; and in from four to six days, the same course must be repeated, that is, six of the powders must again be given in the same way as before. If this latter repetition of the medicine is neglected, the disease will sometimes return. The first course of the powders should always be preceded by an antibilous cathartic.—(*Kost's Practice*).

DR. EVERETT'S HOT BITTERS.

Take of,	Balmony leaves,	8 oz.
	Bitter root,	8 oz.
	Barberry bark,	2 oz.
	Prickly ash berries,	8 oz.
	Rhubarb,	2 oz.
	Caraway seeds,	1 lb.
	Cloves,	8 oz.
	African cayenne,	12 oz.

All finely pulverized, and well mixed. Put one ounce of this powder, and two ounces of brown sugar, into a quart of spirits, shake often for a few days, when it will be fit for use. *Dose*—two tea-spoonfuls in a gill of hot water sweetened. Removes a cold, promotes the appetite, quenches thirst, relieves cough, removes costiveness, and cures colic. For colic and costiveness, the dose must be increased to double the quantity.

TONIC CORDIAL.

Take of,	Poplar bark,	1 lb.
	Bayberry, (bark of the root,)	8 oz.
	Dogwood bark,	8 oz.

All made fine. Water, a sufficient quantity; boiled to two gallons; then strain off, and add of

	Sugar, (loaf is the best,)	7 lbs.
	Peach kernels, pulverized,	8 oz.
	French brandy,	1 gallon.

To be kept closely bottled. *Dose*—half a wine-glassful, three or four times a day. This is a very valuable tonic compound, partaking of the properties of both bitter and astringent tonics, the bitterness, however, rather predominating. It is a most excellent restorative; useful in all cases, particularly in diarrhœa and dysentery.

TONIC EXPECTORANT SYRUP.

This is made exactly as the tonic cordial, with the addition of four ounces of the fresh, or two ounces of the dry rattleroot, and two ounces of the spikenard, elecampane, or common hoarhound. This syrup is an excellent article for coughs, consumptions, and all complaints of the breast. *Dose*—half a wine-glassful, two or three times a day. It is best, however, to begin with one spoonful, and gradually increase the dose.

TONIC OR AGUE PILLS.

Take of,	African Cayenne, (best quality,)	1 drachm,
	Quinine,	1 drachm,
	Lupuline,	2 drachms

Boneset sufficient to form a mass suitable for making into

pills. Then roll into common sized pills. For ague, take one every half hour for five hours previous to the expected return of the chill. These are a very excellent pill. To have full advantage, however, the stomach ought to be well cleansed by an emetic, or the bowels by a cathartic, before taking the pills.

CANCER PLASTERS.

These are applications for the purpose of destroying, or removing, the morbid parts of all cancerous tumors, which it is absolutely necessary to do, by some means, before the ulcer can be healed. This can only be done, by the knife, powerful escharotics, or such substances as produce an increased activity of the vessels of the ulcerated part, and thus promote the absorption or a separation of the morbid part. The following plasters are supposed to act upon the latter principle.

CANCER PLASTER.

Take of, Red clover blossoms, 4 lbs.
Roots, or roots and tops, of narrow dock, 1 lb.

Or any larger quantity in the same proportion, boil in water until the strength is out, then separate the clover and dock from the liquor, carefully pressing out all the juice, and return it again into the kettle, and continue the boiling with the utmost care to prevent burning, until reduced to the consistence of a salve or plaster.

To avoid all hazard of burning, put the liquid, when boiled down pretty thick, into an earthen pan or other suitable vessel, which must then be placed in a kettle of water over the fire and boiled until the liquid is reduced to a proper consistence. In this way all extracts ought to be made, and there will then be no kind of danger of burning them.

SORREL PLASTER OR SALVE.

Take the common sheep sorrel, any quantity, bruise, and press out the juice, place it on plates in the sun, until dried away to a proper consistence for a plaster. This may be applied to the cancer, spread on paper or a piece of bladder made soft, and must occasionally be renewed. If it prove too painful, it may be left off at night, and reapplied in the morning, or the salve may be modified by mixing some milder article with it, as in the following.

CANCER BALSAM.

Take of, Sorrel salve, } Of each equal quantities. Mix.
Balsam of fir, } Applied as the former.
Salt butter, }

DR. S. THOMSON'S CANCER PLASTER.

Take of the heads of red clover sufficient to fill a brass kettle, and boil them in soft water for one hour; then remove these from the kettle pressing the liquor out from them, and fill the kettle again with fresh heads, which must be boiled in like manner in the same liquor, adding as much more water as may be necessary After boiling these about an hour, the liquor must be strained off and the clover heads pressed as before to get it all out. Then return it into the kettle and boil or simmer down to the consistence of thick tar. Very great care must be taken in boiling it down to prevent its burning; as by burning, not only the burnt part is destroyed, but the remainder is in some measure deprived of its medical properties.

When used it should be spread upon a piece of bladder, suet skin, thin cloth, or strong paper.

Other formulas for preparing cancer plasters, may be found under the head "*Cancer.*"

CATHARTICS.

This class of medicines, although by far too generally used, (or rather, those of this class which have been most frequently employed, are of too dangerous a character to be used at all,) are nevertheless valuable medicinal agents. They may be administered in most cases of fever, diarrhœa, dysentery, severe headache, bilious colic, worms, &c.

VEGETABLE CATHARTIC PILLS.

Take of,	Mandrake root,	6 oz.
	Black root,	4 oz.
	Blood root,	4 oz.
	Aloes,	4 oz.
	Anise seeds,	4 oz.
	Cayenne,	½ oz.

All finely pulverized, sifted and well mixed. To form into pills, make a thick mucilage of gum Arabic, peach tree gum, or even slippery elm bark, by dissolving in water, or instead of this take melasses and moisten the powders just so as to make them adhere together. Then form them into pills about the size of a pea, and roll them in fine slippery elm, bayberry, or flour; lay them in a dry place exposed to the air to dry, after which they may be put into boxes, and have a little fine bayberry or elm mingled with them to prevent their adhering together. *Dose*—from three to six, taken, in ordinary cases, at bed time; or two-thirds may be taken at night, and the remainder in the morning

[DR. BUNNELL'S ANTI-BILIOUS PILLS.

Take of,	Mandrake root,	8 oz.
	Gamboge,	4 oz.
	Blood root,	4 oz.
	Lobelia seeds,	2 oz

All finely pulverized, sifted, and well mixed; the powder moistened with molasses to a proper consistence for making into pills. In other respects managed as the foregoing. *Dose*—from two to five.

These pills are useful in diarrhea, dysentery, rheumatism, jaundice, female obstructions, &c. For chronic complaints enough should be taken to operate as a brisk purge, and then about two a day, and if necessary, again repeat the purge.

ANTI-BILIOUS CATHARTIC PILLS.

Take of	Podophyllin, (or Alcoholic Ext. Mandrake,)	1 oz.
	Powdered Sanguinaria,	1 oz.
	Aloes,	2 oz

Soft extract of Boneset, quantity sufficient to form into pill mass. Make up into small sized pills. *Dose*—one to two.

This formula is from "Kost's Practice," and is, perhaps, the best pill for general use in practice, and families, that has ever been known. The pills will operate without producing pain, nausea, or debility. In many cases they give rise, in their operation, to an exhilarating sensation, and altogether an agreeable feeling. They are of eminent use in fevers and all biliary derangements.

ALTERATIVE AND LAXATIVE SYRUP.

The following formula is from Kost's Practice, and has been in extensive use by the Reformed profession for several years, giving great satisfaction:

Take of,	Honduras Sarsaparilla,	3 pounds	In coarse powder.
	Narrow-leafed Dock root,	3 "	
	Dandelion root,	2 "	
	Black Alder bark,	2 "	
	Guiac Shavings,	2 "	
	Burdock Seeds or root,	2 "	
	Mandrake root,	2 "	
	Stillingia root,	3 "	
	Whisky,	6 gallons.	

Boil slowly for one hour and press out the fluid; boil down to three gallons and add ten pounds of sugar, and when dissolved, strain and put up for use. *Dose*—from a tea-spoonful to a table-spoonful three times a day. Useful in scrofulous, syphilitic, and mercurial diseases.

In the treatment of all chronic diseases, this syrup will form a proper constitutional or general remedy; especially in tubercular diseases, and in diseases of the skin.]

ANTI-BILIOUS POWDER, COMMON PURGATIVE OR PHYSIC.

Take of,	Jalap,	1 lb.
	Alexandria senna,	2 lb.
	Peppermint plant,	1 lb.

Let these articles be separately pulverized; then mix them together, and pass through a fine sieve. *Dose*—A tea-spoonful, (about a drachm.) It should be put into a tea-cup, with a lump of loaf sugar, and a gill of boiling water added; and given to the patient when cool, fasting, or on an empty stomach.

The above is highly recommended by Dr. Beach, in the "*American Practice*," who says it is "the best general purgative that is now known." "It may be given to every age and sex;" and "is useful in all diseases where physic is required."

DR. HULL'S BILIOUS PHYSIC.

Take eight ounces of aloes; one ounce, each, of mace, myrrh, cinnamon, cloves, saffron, and ginger; four ounces of the dried leaves of the garden sunflower, or of the wild sunflower. Pulverize the articles separately, and mix them thoroughly. *Dose*—a tea-spoonful.

The efficacy of this celebrated physic in the cure of bilious colic, is well known. "This," says Dr. Elisha Smith, "is the first *genuine* recipe of it ever published."

DR. JACKSON'S PURGATIVE FOR IMMEDIATE OPERATION.

Take of,	Castor oil,	1 table-spoonful.
	Tincture of myrrh,	1 do. do.
	Butternut syrup,	1 do. do.
	Cayenne,	1 tea-spoonful.

Mix all together and give at a dose; and it will operate, as we are assured by Dr. Jackson, in a very short time.

CHOLERA MIXTURES.

These preparations are considered highly valuable in the first stages of cholera to check the diarrhœa, and may likewise be advantageously employed in any other stage of the complaint. They will also be found highly valuable in all bowel complaints, such as diarrhœa, dysentery, &c., as well as in most cases of slight indisposition.

CHOLERA SYRUP.

Take of, Lady's Slipper,	8 oz.
Bayberry,	8 oz.
Golden Seal,	4 oz.
African cayenne, (best,)	1 oz.

Pulverize, and boil together the above ingredients (until their strength is extracted,) in a sufficient quantity of water to make one gallon of the decoction; then strain and add

Best 4th proof West India rum,	1 gallon.
Good sugar house melasses,	1 do.
Tincture of myrrh,	1 do.

Mix well and bottle for use. *Dose*—one table-spoonful, three or four times a day; or oftener, as circumstances may require.

HIXSON'S CHOLERA MIXTURE.

Take of, African cayenne,	1 oz.
Xanthoxylon,	1 oz.
Race ginger,	2 oz.
Golden Seal,	1 oz.
Lady's Slipper,	1 oz.
Hemlock bark,	1 oz.
Bayberry,	1 oz.

Put these, (after being pulverized,) into a bag, and steep or boil them in one gallon of water, until you have from two to three quarts of strong tea, to which add of

Orleans melasses,	1 gallon,
Good 4th proof rum,	½ do.
Tincture of myrrh,	3 pints.

To be used in the same manner as the cholera syrup.

COLIC DROPS.

[Take of, Papaverine,	1 drachm.
Prickly ash berries,	2 oz.
Cinnamon,	2 oz.
Ginger root, pared,	2 oz.
Allspice,	2 oz.
Oil of Lavender,	4 drachms.
Alcohol,	1½ pints.

The solid articles to be pulverized, and digested in the alcohol, in a hot sun heat, for ten days, often shaking it, then strained or filtered. *Dose*—one tea-spoonful, on sugar. Very useful in colic, and pains in the stomach and bowels.]

DIAPHORETICS AND SUDORIFICS.

The only difference between diaphoretics and sudorifics is, that sudorifics promote perspiration in a more powerful manner than diaphoretics; a distinction, however, which we think it unnecessary to make.

The different compounds arranged under this head may be used indiscriminately on all occasions, especially in cases of slight indisposition, and preparatory to and during the operation of vapor bathing or steaming, for the purpose of promoting perspiration, and sustaining the living power during this process. They may also be administered after a process of the vapor bath and the operation of an emetic, not only to promote the discharge of perspirable matter, but to stimulate and strengthen the living power, and to give firmness and tone to the muscular fibers. In some cases of fever and of other violent or obstinate attacks of disease, the diaphoretic compounds may be made more stimulating by the addition of a larger proportion of cayenne.

It will be perceived that the different compounds which will follow, embrace a variety of articles belonging to the class of *astringents*, some one or more of which can almost always be had with but little trouble in every neighborhood; but in case they cannot be procured, almost any other article of the *astrin gent* medicines which have been treated of in the *materia medica*, may be substituted; such as birth-root, dewberry, or high blackberry root, white pond-lily root, &c. It will also be proper to remark, that we have endeavored, in accomplishing this work, to avoid any *infringement* upon Dr. THOMSON's *patent* or *copyrights*. Our intention has alone been the *improvement of Medical Botany*, in general. We deem this notice the more necessary, as it will be perceived, by a perusal of the APPENDIX, containing a number of cases of disease which have actually occurred, that in their treatment, many of the names given by Dr. THOMSON to his remedies, have been made use of; though in numerous instances, the article administered was a compound quite *different* from *his* medicine bearing the *same* name. We will also further remark, that any of our *diaphoretic powders* may be employed in all cases where his *composition powders* might be considered useful, or have been adverted to, and are, at the same time, believed to be much better.

We hope that these observations will not be considered as originating from any disrespect to Dr. THOMSON; we think those who have perused our work thus far, will have become satisfied that we have done ample justice to his character as a medical reformer.

DIAPHORETIC OR SWEATING POWDER.

Take of,	Butterfly root,	1 lb.
	Bayberry, bark of the root,	1 lb.
	Sassafras, bark of the root,	4 oz.
	Colic root,	4 oz.
	Ginger,	1 lb.
	Cloves,	2 oz.
	Cayenne,	2 oz.

All finely pulverized, and sifted through a fine sieve and well mixed. *Dose*—for an adult, one tea-spoonful in hot water, sweetened if most agreeable. For children the dose must be proportionably less; and to make it more agreeable, cream or milk may be added as well as sugar.

The following prescription is very often used, being more simple but not so valuable as the foregoing:—

Take of,	Bayberry,	2 lbs.
	Ginger,	1 lb.
	Cayenne,	2 oz.
	Cloves,	2 oz.

Prepared and used in the same manner as the foregoing. This is the preparation most commonly alluded to under the name of Composition Powders in the Appendix.

DR. J. T. WELLS' FORMULA.

Take of,	Xanthoxylon,	1 drachm.
	Ginger,	3 do.
	Valerian root,	3 do.
	Blue Cohush,	3 do.
	Black root,	5 do.
	Golden Seal,	5 do.
	Pleurisy root,	10 do.

All to be finely pulverized, sifted, and thoroughly mixed. *Dose*—a large tea-spoonful; or one ounce of the powder to a pint of boiling water, and after pouring off, may have another pint added, taking one gill of this tea, and to each dose adding a tea-spoonful of the anodyne drops.

DR. J. EVERETT'S FORMULA.

Take of,	Bayberry,	3 lbs.
	Ginger,	2 lbs.
	Caraway seeds,	2 lbs.
	Cloves,	8 oz.
	Sassafras, (bark of the root,)	4 oz.
	Cayenne,	4 oz.

All finely pulverized, sifted, and well mixed. *Dose*—one tea-spoonful.

DR. ELIAS SMITH'S FORMULA.

Take of,	Bayberry,	1 lb.
	Hemlock bark,	8 oz.
	Witch-hazel leaves,	4 oz.
	Ginger,	8 oz.
	Cayenne,	4 oz.
	Cloves,	2 oz.

All finely pulverized, sifted, and well mixed. *Dose*—one tea-spoonful.

ANTI-DYSENTERIC POWDERS.

The following is one of the compounds communicated by Dr. J. T. WELLS, under the above name, and considered by him as an invaluable article in the treatment of dysentery. We arrange it under the head of *diaphoretics*, instead of *astringent tonics*, because it embraces several aromatic articles which are valuable diaphoretics; and no doubt these powders may be advantageously employed to promote perspiration at the same time that they are useful as a remedy in dysentery, as all the diaphoretic compounds are.

Take of,	African Cayenne,	3 oz.
	Ginger root, (pared,)	3 oz.
	Bayberry, (bark of the root,)	7 oz.
	Pleurisy (Butterfly) root,	7 oz.
	Sumach leaves,	7 oz.
	Witch-hazel leaves,	7 oz.
	Red Raspberry leaves,	7 oz.
	Golden Seal,	7 oz.
	Valerian root,	3 oz.
	Anise seeds,	3 oz.

All made fine, sifted, and thoroughly mixed. *Dose*—a heaping tea-spoonful, in a gill of boiling water, drank as hot as can be borne. Or if the patient cannot readily take it in substance, one ounce of the powder may be steeped in a pint of boiling water, taken in doses of a gill, and when the liquor is used off, fill up again, and use as before.

ANODYNE POWDERS.

Under this head, Dr. WELLS has the following recipe:—

Take of,	Prickly Ash berries,	5 oz.
	Ginger root, (pared,)	5 oz.
	Sumach leaves,	10 oz.
	[Kost's Papaverine,	1 oz.]
	Red Raspberry leaves,	10 oz.
	Valerian root,	10 oz.
	Blue Cohush,	10 oz.

All finely pulverized, sifted, and well mixed.

"These powders are good for all menstrual derangements in the female system, for bearing-down pains, and affections of the kidneys, bladder, or womb; and especially during pregnancy and in labor, they are the best corrector, prompter and alleviator, I know of."

"*Directions for using.*—Make a strong decoction of the powders, in the proportion of half an ounce to a pint of boiling water, simmered slowly in a tin vessel, for ten or fifteen minutes; which, after settling, and using off the decoction, will bear filling up with boiling water, stirring, simmering, settling, and using off a second time. *Dose*—take a spoonful of this decoction as warm as can conveniently be drank, (sweetened, if most agreeable,) and either add from ten to fifteen of the anodyne drops (herein before mentioned,) to each dose, or the drops may be taken during the intervals between the doses of the decoction. Doses to be repeated once in from fifteen to sixty minutes, according to the state and condition of the patient."

[The improvement added to this preparation makes it a most invaluable medicine as a general anodyne. It is of incalculable benefit in obstetrical practice, as it will regulate the pains and labor, and will relieve after-pains without interfering with the lochial discharge.]

WELLS' DIAPHORETIC DROPS.

Take of,	Myrrh,	6 oz.
	Cayenne pepper,	6 drachms.
	Alcohol,	1½ pints.

The solid articles to be pulverized, and digested in the alcohol, in a hot sun heat for ten days, often shaking it, then strained or filtered. *Dose*—from one to three tea-spoonfuls, at discretion. Good to relieve pain and promote perspiration.

DIURETICS.

This class of medicines produce an increased discharge of urine, and are valuable in the treatment of dropsy.

DIURETIC BEER.

Take of,	Elderberry juice,	2 lbs
	Pure honey,	8 oz.
	Yeast,	2 oz.

Let it ferment or work clear, then add of

	Tincture of juniper berries,	2 oz.
	Essence of wintergreen,	2 oz.

Mix, and it is fit for use.

DIURETIC CORDIAL.

Take of,	Water melon seeds,	1 lb.
	Featherfew,	1 lb.
	Yellow parilla root,	1 lb.
	Burdock root,	1 lb.
	Horse radish root,	1 lb.
	Golden seal,	8 oz.
	Parsley root,	8 oz.
	Agrimony,	8 oz.

All bruised and boiled in five gallons of water down to four, then strain and add twelve pounds of good sugar and two gallons of brandy. *Dose*—half a wine-glassful once or twice a day.

ASPARAGUS INFUSION.

Steep the roots of asparagus in cold water, after being well bruised, or split into shreds, and let the patient drink of the water often through the course of the day. It will increase the discharge of urine in a short time, and relieve strangury. Simple as it may appear, it is an effectual remedy.—[*John Shaw.*]

HYDROGOGUE TINCTURE.

Take of,	Bark of sweet elder,	1 lb.
	Good wine,	1 gallon.

Let it simmer an hour; strain and bottle. *Dose*—A wine-glassful, three or four times a day.

Use.—This tincture is usefully administered in dropsical affections, particularly in abdominal dropsy, or ascites. It has cured many without any other ingredient.—[*American Practice.*]

DIURETIC DECOCTION.

Take of,	Queen of the meadow, (roots,)	2 oz.
	Milk weed, do.	2 oz.
	Juniper berries,	2 oz.
	Dwarf elder, (bark,)	2 oz.
	Spearmint, (herb,)	2 oz.
	Wild carrot seed,	2 oz.

Put all into a mortar and bruise. Make a strong decoction. *Dose*—Half a pint, to be taken often through the day.

Use.—This decoction is very useful in gravel, dropsy, &c. It is strongly diuretic.—[*Ib.*]

EMETICS.

The most simple form in which an emetic can be administered is in powder For this purpose the pulverized leaves and pods

of the *lobelia inflata* answer an excellent purpose. The pulverized seeds are more powerful in their effects upon the system than the leaves and pods, and are generally more violent in their operation. They are, however, most commonly preferred, especially in urgent or severe cases, their effects being usually more beneficial. *Dose*—from half to a whole tea-spoonful, or more, with the addition of half a tea-spoonful of cayenne, in two or three table-spoonfuls of warm water or tea, once in fifteen minutes, until it operates.

The tincture of the leaves, or leaves and pods, is probably the mildest form in which the lobelia can be given, and is the preferable mode of administering it to children, and to delicate irritable adults.

TINCTURE OF LOBELIA HERB.

Take of the lobelia, fresh gathered, any quantity, bruise in a mortar, and put into an earthen or tin vessel, pressing it down close and firm ; then add of proof spirits, sufficient to cover the herb. Stop the vessel close, and let it stand a day or two, and then strain and press out the liquor from the herb, and to each quart of this tincture, add one ounce of essence of sassafras, and bottle it for use. *Dose*—as an emetic, from one to ten tea-spoonfuls.

This tincture is valuable, not only as an emetic, but also as an expectorant, and external application to wounds, bruises, inflammations, ulcers, eruptions of the skin, and poisons of every description.

TINCTURE OF LOBELIA SEEDS.

Take of lobelia seeds, pulverized, four ounces, digest for eight days in a pint of alcohol, placed in a hot sun heat, often shaking it; then strain or filter. Treat the dregs with an additional quantity of alcohol to obtain all the strength, and preserve it for future use. This tincture is one of the ingredients in the *antispasmodic tincture*, and is likewise an excellent emetic, for which it is given in repeated small doses until it operates.

DR. EVERETT'S ASTHMATIC TINCTURE.

Take of the tincture of lobelia, made from the dry herb, eight quarts; liquorice paste, half a pound dissolved in warm water and added to the tincture. This is said by Dr. EVERETT, to be excellent for the asthma.

DR. EVERETT'S EMETIC COMPOUND.

This is made by mixing the asthmatic tincture with the tincture of blood root which is prepared as follows:—

Take of, Blood root, bruised	4 oz.
Hot water,	1 pint.

Pour the water on the pulverized roots, digest for two days; and add a pint of proof spirits. Then

Take of, Asthmatic tincture,	4 gills,
Blood root tincture,	1 gill.

Mix. Of this mixture Dr. EVERETT states that he gives from one to five or six ounces as an emetic, which operates much easier for both patient and attendant, than the lobelia does alone. For stubborn cases of adults, he usually adds a little of the pulverized seeds of lobelia to give it more energy or activity.

ESCHAROTICS OR CAUSTICS.

THESE terms include all the articles which are usually employed to corrode, or destroy, both the sound and unsound parts of the body. But as we disapprove of the application of caustics to any but *diseased* parts, and to these but seldom, we shall give only a few of the milder vegetable ones here.

VEGETABLE CAUSTIC.

Make a strong lye of hickory, or oak, ashes; put it into an iron kettle, and evaporate till dry; pulverize, and preserve it in *closed* vessels.

Use.—This caustic is highly useful in the treatment of fistulas; also, in indolent ulcers of every character. It removes fungous flesh without exciting any inflammation, and acts but little except on spongy or soft flesh. It is useful in cancers, and in every case where a caustic is required.—[*American Practice.*]

SOOT.

Is also said to be an excellent escharotic, to remove fungous or proud flesh, from wounds and ulcers; and may be substituted for burnt alum, being much better.

Any of the following articles may likewise be used for the same purposes:

Mandrake root. thoroughly dried, and reduced to a fine powder, may be sprinkled on the part affected once in two or three days, if necessary.

The *yolk of an egg*, with a sufficient quantity of fine *salt* worked into it to make it of the consistence of salve, may be applied.

The raspings or scrapings of *horns*, are said to be useful in some cases.

ESSENCES AND AROMATIC CORDIALS.

ESSENCES

Are made by dissolving any of the aromatic oils in alcohol, in the proportion of about two ounces of the oil to a pint of alcohol.

ESSENCE OF ANISE.

Take of,	Anise oil,	2 oz.
	Alcohol,	1 pint.

Mix, and shake well together.

AROMATIC CORDIALS.

These are pleasant drinks, often very grateful to the sick; any kind of which may be made by observing the following proportions:

Take of,	Loaf sugar,	2 oz.
	Essence of peppermint,	4 oz.
	Gin,	1 pint.
	Pure water,	1 quart.

Dissolve the sugar in the water; then add the essence to the gin, when the whole may be mixed, and well shaken together.

EXPECTORANTS.

The object of expectorants is to loosen, and promote the ejection of mucus, and other fluids, from the throat and lungs A variety of compounds are employed for this purpose, from amongst which we select the following:

EXPECTORANT POWDER.

Take of,	Skunk cabbage root,	4 oz.
	Unicorn root,	2 oz.
	Lobelia seeds,	1 oz.
	Cayenne,	1 drachm.

All finely pulverized, sifted and well mixed. *Dose*—from half to a whole tea-spoonful, in honey or melasses, or they may be formed into pills, and taken at bed time.

DR. WELLS' COUGH DROPS.

Take of,	Tincture of Lobelia,	1 pint.
	Anodyne drops,	2 pints.
	Wells' Anti-spasmodic drops,	1 pint.

Mix. *Dose*—half to a whole tea-spoonful, repeated at discretion.

DR. EVERETT'S EXPECTORANT SYRUP.

Take of,	Hoarhound, dry,	1 lb.
	Caraway seeds,	1 lb.
	Sage, dry,	8 oz.
	Liquorice root, sweet,	8 oz.
	Colt's foot,* roots and tops,	8 oz.
	Cayenne pepper,	2 oz.

Water, a sufficient quantity to boil for two or three hours, and leave, when strained, two gallons. Then add seven pounds of good brown sugar, boil and skim off the froth or scum; when cool add one gallon French Brandy, and bottle for use.

Dose—for a child of three or four years old, one tea-spoonful, adding the same quantity of water; and for grown persons, two or three tea-spoonfuls without water, taken several times a day, if the cough is severe.

ONION SYRUP.

Take any quantity of onions, and roast them in the fire; peel off the outside, press the juice all out, and sweeten with honey, melasses, or sugar. If prepared in much quantity, a little spirit must be added to preserve it. This is an excellent article for colds, coughs, croup, and all complaints of the lungs.

Dose—from one tea-spoonful to a table-spoonful, according to age, &c.

DR. WELLS' VEGETABLE EXPECTORANT SYRUP.

Take of,	Onions, fresh from the garden,	16 lb.
	Spignet root, fresh dug,	8 lb.
	Hoarhound,	4 lb.
	Lobelia,	2 lb.
	Pleurisy root,	2 lb.
	Elecampane root,	2 lb.
	Skunk Cabbage root,	2 lb.
	Water,	5 gallons.

Boil in an iron vessel down to two gallons; strain and simmer over coals down to one gallon; then add two pounds of honey, one pint of vinegar, and one pint of gin, and simmer down to two quarts.

Dose—one table-spoonful every fifteen minutes, till relief is obtained. This, says Dr. WELLS, is the best thing I know of to relieve distressed, difficult, or laborious breathing, &c.

HONEY SYRUP.

Take a handful each, of hoarhound, spignard (or spignet) roots, elecampane roots, and garden beets, boil in a sufficient

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* *Tussilago farfara*, a plant abounding in the Eastern and Middle States.

quantity of water to extract the virtues of the articles; then strain, and when cool add honey enough to make a good syrup Take in small doses several times a day. Useful for consumptions, coughs, &c.—[*John Shaw.*]

PULMONARY BALSAM.

Take of,	Spikenard root,	1½ lb.
	Hoarhound tops,	do.
	Elecampane root,	do.
	Comfrey root,	do.

Add a suitable quantity of water.

Boil, and pour off the infusion repeatedly, until the strength is all extracted; then strain and reduce the whole of the liquid down to about twelve porter bottles (or six quarts;) then add of white sugar twelve pounds, and good honey six pounds; clarify it with the whites of eggs. Let it stand twenty-four hours, in order that it may settle; add one quart of spirits, and finally bottle it for use

Dose—a wine glass full, three or four times a day.

Use.—This preparation is highly useful in the treatment of pulmonary affections, and coughs of long standing.—[*American Practice.*]

EYE WATERS.

Although we have condemned the use of minerals in every form and under all circumstances, whether internally or externally applied, yet the following eye water has so often manifested its extraordinary power and superior efficacy over most other kinds in use, we have believed it to be our duty to give it a place in this work.

EGG EYE WATER.

Take of white vitriol, a lump about the size of a pea; loaf sugar, twice the quantity; together with three cloves, all finely pulverized and well mixed. Then have a hen's egg roasted or boiled very hard, peel off the shell, cut through the middle, take out the yolk, put the aforesaid powder into the hollow where the yolk was, place the two halves of the egg together again, wrap it in a strong cloth, and wring it hard, having something to catch the fluid in. This process, if dexterously done, will yield about a table-spoonful of eye water; but if done carelessly, or if the egg be wrapped in too much cloth, there will be none obtained. This may be applied to the eye at pleasure, by wetting the end of the finger with the eye water and touching the corner of the eye, or one drop may be dropped into the eye.

STIMULATING TONIC EYE WATER.

Take of, Tincture of lobelia, } Equal parts.
Decoction of golden seal, } Mix.
To be used in the same manner as the former.

CHRONIC EYE DROPS.

Take of,	Lobelia seeds,	1 oz.
	African cayenne,	1 oz.
	Myrrh,	1 oz.
	Valerian,	1 oz.
	Camphor,	½ oz.
	Alcohol,	1 pint.

Let the solid articles be pulverized and infused in the alcohol for ten days in a hot sun heat, often shaking it; then filter and bottle for use.

Directions for using.—"Mix one tea-spoonful of the drops with three of new milk, and apply to the eyes for three days; then mix one tea-spoonful of the drops with two of milk, and apply this three days; then mix equal quantities of the drops and milk, and apply till cured."—[*Dr. Wells.*]

A number of other recipes for the preparations of this class, may be found under the head "*Inflammation of the Eyes.*"

BIRTHROOT EYE WATER.

Take two ounces of birthroot, steep in a sufficient quantity of water down to a pint, strain or filter, and add one-fourth of an ounce of burnt alum pulverized, when it may be bottled for use. Wash the eyes once or twice a day.

INJECTIONS OR CLYSTERS.

This mode of administering medicine is both ancient and useful. Injections are resorted to for the double purpose of producing an evacuation of the contents of the rectum, and of applying medicine to a part of the system which is very susceptible of its influence, and thus produce an impression upon it to a greater extent, and in a more powerful manner, than can be done by introducing medicine into the stomach alone.

Injections are highly necessary in cases where food or medicine cannot be swallowed, whether the inability arises from a diseased state of the œsophagus, as in sore throat, &c., or from spasm, as in hydrophobia. Where the object is to afford nourishment to the system, they should be composed of rich broths or soups, in which case they ought to be retained for a considerable time, so that the absorbents may take up the nutritious particles. In this manner patients have been sustained for several

months, when otherwise they must very soon have perished by starvation. When the object is to introduce medicine into the system, the same articles which it would be proper to give by the mouth may be administered by injection. In this manner vomiting may be produced in a most thorough manner by adding lobelia, either in decoction, tincture, or the seeds, to a small quantity of warm water or tea, and administering it by injection, minding to have it retained as long as possible. This method of vomiting patients is highly advantageous in many cases, and may be resorted to, particularly when the stomach is too irritable to retain medicine until it can affect the system.

Where injections are employed merely for the purpose of evacuating the contents of the rectum, in other words to procure a stool, it matters but little, in general, what they are made of. Warm water with a little lard in it, or warm pennyroyal or catnip tea, either of them answers a good purpose. It is a rare thing, however, that injections are needed to procure a passage from the bowels unless some disease be present; wherefore it may be almost always advisable to prepare them of something more stimulating than warm water. But in cases of very obstinate costiveness where it becomes necessary to administer a great number of injections in order to evacuate the contents of the bowels, it may then be proper to omit the cayenne, excepting one occasionally. The repetition of ten, fifteen, twenty, or even forty injections, all charged with a portion of cayenne pepper, would be too irritating to the sensitive parts about the rectum, and therefore ought only to be put into a few of them. The same remarks will also in part apply to the employment of lobelia in the injections. Although it is in general a very valuable addition to them, yet where they are administered with no other view than to remove costiveness, the lobelia ought to be omitted. Independent of its tendency to invert the peristaltic motion, the quantity which would be administered in so many injections would produce sickness at the stomach and vomiting.

As a general rule, injections may always be administered at the time of taking a course of medicine, and more especially if the bowels are disordered, either by diarrhœa, dysentery, costiveness, colic, inflammation, piles, &c. For common use they are made as follows:—

Take of, Astringent tonic, pennyroyal, catnip, or other hot tea, } 1 gill.
Lobelia, (leaves or seed,) pulverized, half to a whole tea-spoonful.
Cayenne pepper, one-eighth to half a tea-spoonful.

Mix these articles together and pour them hot into a pint syringe, having first unscrewed the cap, taken out the piston, and applied the fore finger to the end of the pipe; then pour

in cold water or cold tea until the liquid in the syringe is about blood warm, when the piston is to be returned into the syringe, the cap screwed on again, and the contents thrown into the intestines. This should be done with a due regard to decency; and those who know nothing about its performance only what report has said, should have explained to them the manner in which it is performed. They ought to be informed that no exposure is necessarily connected with it, and that each sex is competent to administer to its own wants in these respects. The usual mode of administering injections is to place the syringe, after being filled as has been directed, in the bed, when the patient may introduce the pipe, the attendant then throws up the liquid and withdraws the syringe without any exposure whatever.

It should be remembered, that after the liquor for the injection is poured into the syringe and the piston applied to it, the pipe of the syringe must be elevated so that the handle is perpendicularly downward, when the finger must be withdrawn that the air may escape and the piston be more readily forced in. Whilst in this position the air ought to be all forced out, which will be known by the liquid being pressed through the pipe of the syringe. This is essential that no air may be thrown into the intestines of the patient.

For diarrhœa, dysentery, &c. the injections should be wholly composed of a strong tea of the astringent tonic, or of some article of the astringent class, with the addition of a tea-spoonful or more of the tincture of myrrh, or the same quantity of the anodyne drops; and where they are necessarily often repeated, the cayenne may be occasionally omitted.

In obstinate cases of costiveness, they ought to be made of a tea of butternut bark, or of some other laxative article, sometimes adding a little cayenne, and repeated until the obstruction is removed.

LAXATIVE CLYSTER.

Take of milk and water, each six ounces; sweet oil or fresh butter, and brown sugar, each two ounces; mix them. If two table-spoonfuls of common salt be added to this, it will be the *purging* clyster.—[*Elisha Smith's Botanic Physician.*]

VINEGAR CLYSTER.

This is made by mixing three ounces of vinegar with five of water gruel. This is peculiarly proper in inflammatory and putrid disorders, especially in the latter.—[*Ib.*]

NERVINE COMPOUNDS.

But very little has hitherto been done to improve the nervine medicines by compounding those of different qualities; which is to be accounted for in the fact, that this class of medicines embraces, so far as known, a much fewer number of simple articles than most other classes do. These medicines are highly useful in the healing art; their mode of action being that of giving tone to the nervous system, and hence, might, with propriety, be styled *nervine tonics*.

Nervines ought to be used in almost all cases of disease, especially if symptoms of nervous irritation be perceivable. The principal articles of this class, which we recommend, are the asafetida, the ginseng, and the lady's slipper.

NERVINE POWDER.

Take of, Lady's Slipper,	4 oz.
Ginseng,	2 oz.

And two nutmegs; all finely pulverized and well mixed. *Dose*—one tea-spoonful; or one ounce may be steeped in a pint of hot water, of which three or four table-spoonfuls, or more, may be taken at a dose, as often as circumstances may require.

NERVINE TINCTURE.

A valuable tincture is made by infusing four ounces of the above powder in a pint of alcohol or brandy, placed in a hot sun heat, often shaking, for ten days; when it may be poured off, strained, or filtered, and add of the Essence of Anise, one ounce. *Dose*—from one tea-spoonful to a table-spoonful.

SIMPLE TINCTURE OF VALERIAN.

Take of, Valerian root,	4 oz.
Alcohol,	1 pint.

The root to be pulverized, and digested in the alcohol, in a hot sun heat, for ten days, shaken every day, then strained or filtered. *Dose*—from one tea-spoonful to a table-spoonful, repeated at discretion. This is a valuable preparation for all nervous symptoms.

WELLS' COMPOUND TINCTURE OF VALERIAN.

Take of, Valerian root,	7 oz.
Liquorice root,	5 oz.
Oil of anise,	1 oz.
Gum camphor,	1 drachm,
Alcohol,	1½ pints.

The solid articles to be pulverized, and digested in a hot sun heat for ten days, shaken every day, then strained or filtered.

Dose—from one to three tea-spoonfuls, every fifteen minutes, until relief is obtained. Useful as a nervine, and to ease pain; and far preferable to paregoric, for children.

OINTMENTS, AND LINIMENTS.

Ointments differ from salves in being of a softer consistence: both are applied externally—salves most commonly to ulcers and ointments to bad humors, and other eruptions of the skin Liniments are somewhat thinner in their consistence than ointments, and are employed in frictions or embrocations on the skin.

WELLS' SCROFULOUS OINTMENT.

Take of,	Tobacco, (best quality,)	1 oz.
	White ash moss,	4 oz.
	Soot,	4 oz.
	Hog's lard,	4 oz.
	Tar,	4 oz.
	Anti-spasmodic drops,	2 oz.

Boil the tobacco, moss, and soot, in two gallons of water, down to one gallon; strain off, and boil down to one quart; then add the lard and tar, and simmer over a fire of coals, down to a pint and a half, and add the anti-spasmodic tincture, and stir till cool. This ointment is applied to scrofulous ulcers, scald head, itch, and all diseases of the skin.

NERVE OINTMENT.

Take of,	Mayweed flowers,	2 oz.
	Smartweed,	1 oz.
	Bitter archangel,	1 oz.
	Bittersweet, (bark of the root,)	3 oz.
	Wormwood,	2 oz.
	Cayenne pepper,	¼ oz.

Bruise the herbs and bark, and simmer all the ingredients in a sufficient quantity of bear's grease, or any other soft animal oil, over a slow fire, five or six hours—then strain the liquid, and add to it one and a half ounces of spirits of turpentine to each pound of liquid. It should be bottled close from the air.

This ointment is to be used in cases of bruises, sprains, swellings, tumors, &c., by rubbing it frequently on the affected part, and binding it up with flannel, to keep it from the air.

DR. S. THOMSON'S NERVE OINTMENT.

Take of the bark of the root of bittersweet, two parts, of wormwood and chamomile, each equal, one part, when green, or if dry moisten it with hot water. Put these into any kind of

soft animal oil and simmer them over a slow fire for twelve hours, then strain, and add one ounce of the spirits of turpentine to each pound of ointment. To be used for a sprain, bruise, swelling, or for corns.

DISCUTIENT OINTMENT.

Take a handful of the flowers of mayweed, bruised, and about an equal quantity of lard, put into an earthen vessel and set in the sun for several days. This is said to be a useful application for hard swellings, lumps, or wens on the neck, or other parts of the body.

GREEN OINTMENT.

Take of tanzy, wormwood, hoarhound, catnip, and hops, of each an equal quantity. Bruise them and put them into a kettle, cover over with spirits and lard, and let it stand two weeks; then simmer awhile and strain. Add one pound of common [white] turpentine, to every ten pounds of the ointment. *Use.*—This ointment is very cooling, resolvent, relaxing, and emollient. It is very useful in sprains, contusions, swellings, dislocations, contracted sinews, &c.—[*American Practice.*]

RELAXING OINTMENT.

Take equal parts of plantain leaves and root, bittersweet bark, and spignard root, boil out the strength, strain, and make it into an ointment with hog's lard. This is a valuable ointment. It softens and relieves a caked and inflamed breast, in a remarkable manner.—[*Elisha Smith's Bot. Phys.*]

STRAMONIUM OINTMENT.

Take of fresh leaves of stramonium, (often called henbane, jimson, &c.,) bruised, five pounds; lard, fourteen pounds. Let them simmer together over a gentle fire, till the leaves become crisp and dry. Then press out the lard, return it into the vessel when cleansed, and add to every pound of the lard, two ounces of beeswax. Set the whole on the fire; when the wax has melted, remove the vessel, and let it rest, while the contents gradually cool, that the impurities may subside. This ointment has been found to afford relief in external inflammations, and piles. It is also highly beneficial in burns, and to allay the swelling of a cow's udder.—[*Ib.*]

OINTMENT FOR SCALDS OR BURNS.

Take of, Spirits of Turpentine,	1 oz.
Olive oil or lard,	2 oz.

Mix. Apply this ointment to a scald or burn, and it takes out the fire or removes the inflammation.

LINIMENT FOR BURNS.

Take equal parts of sweet oil, of fresh drawn linseed oil, and limewater; shake them well together, so as to form a liniment. This is found to be an exceedingly proper application for recent scalds or burns.—[*Botanic Physician.*]

VOLATILE LINIMENT.

Take of sweet oil an ounce, spirits of hartshorn half an ounce; shake them together. It is said that in the inflammatory quinsy, a piece of flannel moistened with this liniment, and applied to the throat, to be renewed every four or five hours, is one of the most efficacious remedies, and seldom fails to carry off the complaint.—[*Ib.*]

POULTICES.

These are soft, pulpy, or mucilaginous compounds, for external application to tumors or swellings, ulcers, and inflamed parts. They are designed either to disperse tumors, promote suppuration, remove inflammation, or produce a discharge of healthy pus or matter from ulcers. Poultices ought to be renewed once or twice in twenty-four hours.

COMMON ELM POULTICE.

Take a strong tea of sassafras bark, or blackberry roots, thicken with equal parts of dry bread or crackers, and slippery elm bark, all made fine, to which may be added a little ginger; and if to be applied to a bad ulcer, mix a little cayenne with it, or sprinkle it on the poultice after it is spread.

If the sassafras or blackberry cannot be readily procured, the bark of the dogwood, (*Cornus florida,*) alder or winter berry, or bayberry, or the roots of the pond-lily, or birth root may be used, and are perhaps equally as good.

This poultice is the one generally referred to in this work under the name of "*common* poultices," and is very good in all cases. It may be applied cold, especially to reduce inflammation, when there is much pain, &c., and should be occasionally wetted with cold water, or some one of the cold teas of which the poultice is directed to be made. We may also remark that for want of any of the aforesaid articles for preparing the tea, sweet milk, or water, may be used.

The elm bark alone, stirred into warm milk and water, until of a proper consistence, makes an excellent poultice, highly recommended by Dr. Beach.

SUMACH POULTICE.

Take of the bark of the roots of the common sumach, any quantity; bruise it well, and boil in sweet milk, catnip tea, or water, for twenty minutes; then thicken with corn meal or crackers to a proper consistence for a poultice. This is a highly valuable poultice for all kinds of foul ulcers, and especially those which affect the bones.

YEAST AND CHARCOAL POULTICE.

Take of yeast, a sufficient quantity, and thicken it to the proper consistence with charcoal and slippery elm bark finely pulverized. This is highly useful applied to ulcers in a gangrenous or mortified condition.

SASSAFRAS POULTICE.

Take the bark of sassafras, (root the best,) remove the ross or other useless parts, bruise it well and boil in sweet milk or water, when it may be thickened to a proper consistence with meal, slippery elm bark, or flaxseed. This is also a valuable application for mortified ulcers.

CARROT POULTICE.

Take of,	Boiled carrots, bruised,	1 lb.
	Flour,	1 oz.
	Butter,	½ oz.

Mix them with as much warm water as to form a pulp. This will be found a valuable application to ulcerated sores and swellings, scrofulous sores of the irritable kind, and many other inveterate ulcers.—[*American Practice.*]

ALKALINE POULTICE.

Take of lye, rather weak, warm it, and stir in of slippery elm bark sufficient to form a poultice. This poultice is useful in inflammation of the breast, and other parts, in felons, white swellings, lockjaw, wounds, fistulas, &c.—[*Ib.*]

DISCUTIENT POULTICE.

Make a very strong tea of white oak bark, and thicken with corn meal to the consistence of a poultice; apply it as hot as can be borne, and change it every two hours.—[*E. Stedman.*]

SALVES.

Modern medical writers have advanced the idea that the application of salves, &c., to ulcers, produces no direct beneficial effect upon them; or, in other words, that salves contain nothing

in their nature or preparation, which, when applied to an ulcerated surface, disposes it to heal. The usefulness of those valuable applications, it is contended, depends entirely upon their power of shielding the ulcer from the air.

However popular this theory may be amongst medical men, we see no rational ground upon which it can rest. If one application can be made to an ulcer which will irritate and inflame it, we see no good reason why another may not be made that will soothe and dispose the injured vessels to assume a healthy action, and thus incline the sore to heal. It is well known that in general as well as local diseases of the system, medicines taken internally will change a diseased action to a healthy one; and why may not external applications do the same? It is also as well known that the application of rubefacients, that is, the external application of stimulants, where the surface is sound, produces a beneficial effect by transforming a diseased into a healthy action; and it appears equally as rational to suppose that proper applications to ulcerated parts might do the same. Much more might be said on this subject, but we are compelled to forbear, both for want of room and time.

DR. WELLS' HEALING SALVE.

Take of,	Turpentine,	1 lb.
	Beeswax,	1 lb.
	Salt butter,	1 lb.
	Balsam of fir,	1 lb.
	Tincture of myrrh,	1 gill.

Melt and simmer all these articles together over a fire of coals for three hours, in an iron vessel; then strain and cool.

DR. THOMSON'S SALVE.

Take of,	Beeswax,	1 lb.
	Salt butter,	1 lb.
	Carolina or white turpentine,	1½ lb.
	Balsam of fir,	12 oz.

Melt and mix well together; then strain off and cool, for use.

SUMACH SALVE.

Take of the bark of the root of the common sumach, bruised, any quantity; boil until the strength is extracted, strain off the liquor; add for each pound of the bark, a few spoonfuls of lard or butter, and mutton tallow enough to give it a proper consistence, then simmer on coals until the water is all evaporated, when it may be again strained and put by for use.

GREEN SALVE.

Take of,	Turpentine,	½ lb.
	Bayberry tallow,	½ lb.

Dissolve together, and form into a salve; add sweet oil if necessary.

This salve is designed for scrofulous ulcers.—[*American Practice.*]

YELLOW SALVE.

Take one bushel of the roots of the baptisia tinctoria, [wild indigo,] boil till the strength is out, then strain, boil, and skim; add ten pounds of fresh butter, three pounds of beeswax, and one and a half pounds of mutton tallow; then boil the water out, and strain till clear.

This salve is used by Dr. BONE, for all kinds of ulcers. It is cleansing, detergent, discutient, &c.—[*Ib.*]

BUTLER'S HEALING SALVE, AND PLASTER.

Take of,	Rosin,	1 lb.
	Beeswax,	1 lb.
	Mutton tallow,	2 oz.
	Gum myrrh,	2 oz.
	Gum camphor,	1 oz.
	Tincture of myrrh,	1 oz.

Melt the rosin, beeswax, and tallow, then add the myrrh and camphor finely pulverized, and when all are melted strain through a fine cloth, return it into the kettle and add the tincture of myrrh. When all is well incorporated, pour the mass into water, and work it in the hands like wax.

Useful as a strengthening plaster, and as a salve for ulcers of every description, having been employed, as we are credibly informed, with the most astonishing success.

FELON SALVE.

Take of,	Rock, or any other table salt,	1 oz.
	Hard soap,	1 oz.
	Spirits of turpentine,	½ oz.

The salt must be rolled in a cabbage leaf, or wet paper, and roasted in hot embers, for twenty or thirty minutes; then pulverize it, mix with the soap previously shaved down, and add the spirits of turpentine, which will make a soft salve or poultice. This must be applied to the affected part, and renewed as often as it becomes hard and dry; and if applied in time, that is, before matter is formed, it will prevent its formation, by three or four hours application. If the salve be not applied until matter is formed, it will still stop its progress, but the matter must be let out, when the ulcer may be healed by the same means that would be used in any other case of like kind.

STYPTICS.

These are astringent substances applied to wounds or other bleeding surfaces, to stop the flow of blood. They are often very useful, but cannot be relied on when a large artery is wounded, though they ought to be resorted to when the means of taking up and tying the bleeding vessel are not at hand.

The following are considered among the best articles of this class :—

Dried beef, cut thin, dried, and pulverized ; or it may be burnt to a coal, and pulverized.

Sassafras leaves chewed fine and applied, is said to be better than any thing else.

Mandrake root is also highly recommended by some.

Burnt bone, pulverized, is, by many, considered a valuable styptic.

A strong tea of hickory bark, (that kind termed pignut) is highly recommended by Dr. Hough, and others.

Soot, applied to a fresh cut or bruise, is said to be very efficacious, in stopping the flow of blood.

VOLATILE SALTS.

Take crude sal-ammoniac, one ounce; pearlash, two ounces; pound each by itself, mix them well together, and keep it close stopped in a bottle for use. By moistening it with spirit, or essence, of any kind, will increase the strength. This applied to the nose, is good for faintness and to remove pain in the head. &c.—[*Dr. S. Thompson.*]

MISCELLANEOUS MEDICAL RECIPES.

RHEUMATIC LIQUID.

Take of,	Rattle root, (if green, 1 oz. if dry,)	½ oz.
	Gum guiacum,	½ oz.
	Juice of poke berries,	1½ gills,
	French brandy,	1 qt.

Mix. Shake it frequently for two or three days, when it will be fit for use. Drink of this as often as can be borne without producing intoxication, until a cure is effected.

The above recipe, which we believe valuable, was communicated by Dr. Alford Butters, who also informs that one teaspoonful of the *saturated* tincture of the rattle root, which is often used in rheumatic affections, is a common dose, and as much as most persons can bear.

In the original recipe obligingly furnished us by Dr. Butters, one ounce of *sulphur* was added to the compound; but as we

are unwilling to recommend that article, and believing the preparation equally useful without it, we have left it out. Those who are disposed to use it, however, can add it if they choose.

RHEUMATIC DECOCTION.

Take of,	Virginia snake root,	1 oz.
	White pine bark,	2 oz.
	Burdock seeds,	2 oz.
	Prickly ash bark,	2 oz.

Pulverize all together, and add half a gallon of water; boil o three pints. *Dose*—Half a pint, two or three times a day. This forms an excellent decoction in chronic rheumatism.—[*American Practice.*]

FOR PAINS FROM COLD OR RHEUMATISM.

Take a large handful of smart weed, bruise it and add as much sharp vinegar as it will absorb; warm it in a pot, or pan, and lay it on the part affected as a fomentation, or poultice, and renew it frequently. If it should prove too painful, as it sometimes will when applied to the tender skin, mix it with corn mush or bran. The tea made of it, I am told, is very good to take, by the stomach, for colic pains.—[*J. Shaw.*]

LUSK'S RHEUMATIC DROPS.

Take of,	Mandrake root,	½ oz.
	Black cohush,	½ oz.
	Pipsisawa,	2 drachms,
	Prickly ash bark,	2 do.

Infuse in a quart of wine. *Dose*—from one to four tea-spoonfuls, three or four times a day. Useful in chronic rheumatism ɔd gout.

POULTICE FOR SORE THROAT.

Take of mayweed, or the flowers, a suitable quantity, bruise to a soft pulp, and boil for a short time in a small quantity of water; then stir in corn meal until of a suitable consistence for a poultice, spread on thick cloth and apply to the neck, renewing when it becomes dry. This is recommended as being highly useful for the sore throat of scarlet fever and for all swellings and inflammations.

FOR THE CURE OF BALDNESS, OR TO PREVENT THE LOSS OF HAIR.

Fill a bottle with the pulverized herb of lobelia, and then pour in as much as it will contain of equal parts of brandy or whisky and sweet oil. It will be fit for use in a few days. Bathe the head once a day with this liquid, and it will prevent the loss of hair; also said to have restored it when lost.

CURE FOR CANCER.

Take the leaves of the common poke weed, bruise and press out the juice, and dry on a pewter dish in the sun to a proper consistence for a plaster or salve. Spread this on cloth or leather about one eighth of an inch thick and apply to the cancerous ulcer. If the sore is very large, a thin piece of muslin may be first laid on it to prevent too much pain, and then the plaster over the muslin.

After twenty-four hours, the plaster must be removed, when it will be found that the cancer is covered with matter, which must be cleaned off both from the plaster and sore : this may be done by washing with soap suds ; and the plaster applied again.

When the cancerous tumor is eradicated by the repeated application of these plasters, the ulcer may be healed with the following salve :—Take equal parts of beeswax, mutton suet, and spirits of turpentine, melted together. The beeswax and suet should be first melted, when the spirits of turpentine may be added, well mixed and suffered to cool.

One case has been reported, in which this remedy is said to have cured a cancer inside the mouth, by chafing the cheek on the outside until sore, and then applying the plaster. It is also said that one individual cured nine cases with it in one year.

VALUABLE COMPOUND FOR SWELLED BREASTS.

Beat or rub camphor in a mortar with a little alcohol, and to a tea-spoonful of this add a table-spoonful of sweet oil. Usefu for any kind of swelling, pain, bruise, rheumatism, &c.

FOR WOMEN'S SWOLLEN, INFLAMED, OR SORE BREASTS.

Take soft soap and make a strong suds, and with a flannel cloth well saturated with the suds, wash and rub the breasts, downward, with some degree of violence, once an hour; after which, each time, bathe the breast with pole-cat oil and camphor, and keep it covered with a flannel. Pursue this course until a cure is effected.—[*Dr. Daniel Butler.*]

ANOTHER, FOR THE SAME.

Take of hard soap and common salt, each, two ounces ; of new milk, half a pint ; after shaving the soap fine, put the above ingredients in a vessel and simmer or boil them slowly over the fire, (being careful not to burn,) and when hot, stir in a spoonful of corn meal, and keep it simmering until of a proper consistence to spread on a cloth. The whole quantity should be used for one poultice, and should cover the whole breast. After being spread, the surface of the poultice should be covered over with pole-cat oil, or any other soft grease, and applied to the breast as hot as

can be borne. A new poultice, similar to the above, should be applied once in three hours, until relief is obtained. The above is considered infallible.—[*Ibid.*]

TO CURE WENS.

Take the yolks of eggs, beat up and add as much fine salt as will dissolve, and apply a plaster to the wen every twelve hours. It cures without pain or any other inconvenience.

FOR INFLUENZA.

Take equal parts of good vinegar and water, and to a tea-cupful of this mixture add one tea-spoonful of best African cayenne; sweeten with honey or sugar. *Dose*—one table-spoonful, which will allay the cough instantly. A dose taken at bed time will generally enable the patient to rest well all night; if, however, the cough becomes troublesome at any time before morning, another spoonful will allay it.—[*John Shaw.*]

FOR WHOOPING COUGH.

Equal parts of sweet oil, honey and vinegar, simmered together, given in tea-spoonful, or larger doses.—[*Ibid.*]

TO CURE A COUGH.

Take equal parts of the loose coarse moss which grows on white oak, white maple, and white ash trees, make a strong tea, sweeten, and drink freely.—[*Jacob Dowell, Esq.*]

FOR CONTRACTED JOINTS.

A most valuable experienced remedy for lameness proceeding from a fixed contraction of the parts affected; from the pen of a late English surgeon.

Take the yolk of a new laid egg, and let it be beaten with a spoon to the greatest thinness: then by spoonfuls add three ounces of pure water, agitating the mixture continually that the egg and water may be well incorporated. The liquor may be applied cold, or only milk warm, to the parts contracted, by a gentle friction for a few minutes three or four times a day. This remedy has been repeatedly tried by different practitioners, and with happy success.—[*J. Shaw.*]

FOR COSTIVENESS.

The foregoing prescription brings to my recollection the same medical preparation for removing habitual costiveness, that dreadful nursery of every complaint. I was many years ago troubled with it, and have often tried this remedy, and also have recommended it to others who, as well as myself, have proved its superior efficacy.

Begin with one new laid hen's egg, (raw;) add it to three times its bulk of cold water; let it be beaten for thirty minutes to the finest consistence. Take it in the morning on an empty stomach, and once or twice in the course of the day afterwards; continue for eight or ten days, increasing the quantity from one to three at a time, if the stomach will relish them; and they will gradually and pleasantly remove costiveness and strengthen the system. I am also of opinion that it is of considerable benefit to the lungs.

Dr. Moore has mentioned in his Medical Lectures, an astonishing and desperate case of habitual costiveness, in an English surgeon stationed at Gibraltar, who had taken medicine for the removal of it until the bowels became so torpid, that they almost ceased to act, and hope had nearly vanished. The eggs and water was prescribed for him by a Spanish sergeant of the army, and report says, made a perfect cure.—[*Ibid.*]

FOR THE GRAVEL.

Let the patient drink a gill of red onion juice, and a pint of horse-mint tea, twice a day, morning and evening, (but not together.) The effect will be perceivable within three days. Reported to me by a man who says it will dissolve the stone.

The foregoing was communicated by a slave, to a Baptist minister of Virginia, who was cured by it, and afterwards bought the slave and set him free.—[*Ibid.*]

FOR THE DROPSY.

The following medicine has saved many lives:—Take one pint of bruised mustard seed, two handfuls of bruised horse radish root, eight ounces of lignum vitæ chips, and four ounces of bruised Indian hemp root: put all the ingredients into seven quarts of sound cider, and let it simmer over hot ashes until it is reduced to four quarts: strain the decoction, and let the patient take a wine-glassful, four times a day, for a few days, increasing the dose to a tea-cupful, three or four times a day, according to its effects: after which let the patient use the tonic medicines.

This prescription, says Dr. Henry, has cured a remarkable case of the dropsy, in a week's time, which had baffled the skill of some eminent physicians.

SYCAMORE BUDS.

The buds of the common sycamore or button wood, is a new article in the materia medica, and appear from their sensible properties to be possessed of great power. Their taste is warm, very pungent, and slightly nauseous, producing a copious discharge of saliva, and a very durable impression on the mouth.

Dr. W. H. Anderson, of Warren county, O., seems to have

been the discoverer of the virtues of this article, and communicated it not long since to us. The most usual mode of preparation is in tincture, which is made by digesting one ounce of the pulverized buds in a pint of alcohol, often shaking it, for a week. *Dose*—for an adult, from one to two tea-spoonfuls; for children, less.

Dr. ANDERSON recommends this article as being a good remedy for cramp, bowel complaints, pain in the breast, flatulency, &c. He also thinks it will be found a valuable remedy for suppression of urine, as the bark of the tree is known to be.

We may add, that we think this tincture promises to become a valuable article of medicine.

TO CURE CRAMP.

Drink plentifully of a strong tea of the blue cohosh root.—[*Jacob Dowell, Esq.*]

FOR POLYPUS OF THE NOSE.

Take of blood root, and bark of the bayberry root, equal parts, pulverize fine, and use as a snuff freely, several times a day.

CLEANSING BEER.

Take equal parts of burdock, yellow parilla, and spignard roots, as much as can be boiled in six quarts of water; boil it down to two quarts, strain it off, and when a little cooled, add a pint of melasses or half a pound of sugar, with yeast enough to work or ferment it. As soon as the fermentation commences, begin to drink, and continue drinking freely until it is all drank; and thus continue, making it fresh and drinking every day, until health is restored. This is a good article for purifying the blood, and may be used in all cases of vitiated humors.—[*E. Stedman.*]

FOR CURING A CUT, BRUISE, ETC.

Apply the moist surface of the inside coating (or skin) of the shell of a raw egg; it will adhere of itself, leave no scar, and heal without pain.—[*Mechanic's Magazine.*]

FOR SCALD HEAD.

Take equal quantities of black pepper, (pulverized) and soot, and stew in salt butter. With this anoint the head daily until cured; washing the part before each application, with warm soap suds, and afterwards with strong tea of bayberry.

FOR A DISCHARGE OF SYNOVIA, OR JOINT-WATER.

Injured joints sometimes discharge a fluid, called joint-water. which essentially weakens the part. It is said to be stopped.

and the joint cured, by applying a poultice made of sarsaparilla root, boiled in water until the strength is extracted, and mixed with wheat bran, or corn meal, to the proper consistence.

FEMALE STRENGTHENING SYRUP.

Take one-fourth of a pound of comfrey root, dried; two ounces of elecampane root; and one ounce of hoarhound. Boil them in three quarts of water down to three pints; strain, and add, while warm, half an ounce of bethroot, pulverized; a pint of brandy, and a pound of loaf sugar.

Dose—from half to two thirds of a wine-glassful, three or four times a day. This is used in female weaknesses, bearing down of the womb, fluor albus, debility and relaxation of the genital organs, barrenness, &c.—[*Elisha Smith's Bot. Physician.*]

CHILDREN'S CORDIAL.

Take two ounces, each, of pink blows, smellage root, and pleurisy root, boil in two quarts of water down to one quart; strain, and add one quart of fourth proof brandy, and one pound of sugar.

Dose—for an infant, a tea-spoonful, repeating if necessary. For the colics, fits, green stools, &c., of children, this is an excellent remedy.—[*Ibid.*]

FOR THE PILES.

Take one gill of sugar house melasses; one ounce of fresh butter; mix them well over a slow fire, and drink, just before lying down, or going to bed, at night. In addition to this, the following external application should be made. Burn two common sized new corks to ashes, and mix the same with a sufficient quantity of lard to make it of the proper consistence; rub the anus, or fundament, twice a day with this ointment, and a cure will soon be effected.

WEIGHTS AND MEASURES.

WEIGHTS.

20 Grains, or gr., make	1 scruple, scru., or ℈
3 Scruples,	1 drachm, dr., or ʒ
8 Drachms,	1 ounce, oz., or ʒ

A large tea-spoonful of the powder of roots, barks or vegetables, will weigh about twenty grains or one scruple, less or more, as the article may be more ponderous, or light and bulky

WEIGHT OF FLUIDS.

A tea-spoonful contains about one fluid drachm.

A dessert-spoonful contains about three fluid drachms.

A table-spoonful contains about five fluid drachms.
A wine-glassful contains about two fluid ounces.
A tea-cupful contains about four fluid ounces.
A pint contains about one pound.

FLUID MEASURE.

4 Gills, make	1 pint, pt.
2 Pints,	1 quart, qt.
4 Quarts,	1 gallon, gall.

Those who wish to be very nice and exact about the quantities in administering or compounding medicines, may purchase at the apothecary shops a graduated glass for measuring fluids, and small scales for weighing solids.

COURSE OF MEDICINE.

This includes the application of the vapor bath or steaming, to promote perspiration; the administration of an emetic to cleanse the stomach; injections to relieve or evacuate the bowels; a second application of the vapor bath; the final conclusion of the process by the cold affusion, or washing, with cold water, and occasionally a cathartic to cleanse the intestines.

The use of vapor or steam is of very remote origin, having been used by perhaps nearly all the nations of ancient times; and is still resorted to by some of the rude, as well as more polished nations, of the present day.

In Russia, as has been shown in the first volume, the vapor bath is very extensively used, and also more or less in other nations of the European continent. The Indians of America have also been in the habit, from time immemorial, of employing the vapor bath, to assist in curing their maladies, and continue the practice to the present time.

METHOD OF STEAMING.

In all chronic complaints, that is, those which are of long standing, such as dropsy, consumption, liver complaint, rheumatism, &c., the patient should take, four or five times a day, a dose of the diaphoretic powder or bitter tonic, or in case of costiveness, of the laxative bitters, for two, three, or four days previous to the application of the steam or vapor bath. And in case of diarrhœa, dysentery, colic, cholera morbus, milk sickness, obstinate constipation of the bowels, suspended animation, &c., an injection should also be administered as soon as it can be prepared, and if necessary, repeated before the process of steaming is commenced. [For the method of preparing and administering injections, see under the head of *Injections.*] But if the disease be a recent attack, preparations should be immediately made to apply the vapor bath.

Various methods have been devised for applying the vapor or steam bath; but the following may be used in all cases; and as the means are to be had in every family, it is most usually adopted:

Have a good fire kindled, into which five or six stones or bricks must be thrown, and a tea kettle of water put over to heat

As soon as the water boils, take a tea-spoonful of the diaphoretic or sweating powders and add to it the fourth of a tea-cupful of hot water, which may be sweetened if most agreeable, and administered to the patient. Two or three doses similar to this must, in general, be given to the patient before applying the steam, and if the disease be a bad case of fever, or attended with much pain, one-fourth or one-half of a tea-spoonful of cayenne pepper should be added to each dose of the diaphoretic powder.

To prepare the steam bath nothing more is necessary, if the patient is able to stand during the process, than a small iron vessel, (a *deep* one is best,) and a thick blanket, coverlet or quilt. With the blanket held loosely around him, he should strip off all his clothes, or at least all but his shirt, when he must be more closely wrapped in the blanket. The iron vessel being now placed near the patient with one of the hot bricks or stones in it, hot water is poured from the tea-kettle into the vessel until the stone is about half immersed, which quantity is sufficient to produce a lively steam. The blanket is now drawn over and around the kettle, and the hot vapor ascends, being confined by the blanket, around the body of the patient. When the stone becomes so cool as not to produce a lively steam, it must be carefully turned over on the other side, and when this has become cool also, it must be taken out, and a hot one from the fire put in its place. This likewise, when too cool to produce a lively steam, must be removed, and thus continue changing the stones until a profuse perspiration is produced, which will usually be in from ten to twenty minutes. If the steam be too hot, the blanket must be opened to allow the cool air to enter. Should there be any difficulty in producing a sweat, the patient ought to take another dose or two, of from half to a whole tea-spoonful of cayenne, in warm water, sweetened if most agreeable, whilst over the steam. If he becomes fatigued with standing he may sit down occasionally, and by laying something across the steam vessel, may place his feet over it or near its edges and thus have the benefit of it to his feet.

In cold weather he should have a warm board to stand on; and when the first stone which is put into the steam vessel becomes cool, it should be wrapped in a damp cloth and placed in the bed at the foot; and the next one near the middle, to warm the bed, to promote sweating when the patient goes into it.

It often happens, during the process of steaming, that the patient becomes feeble and faint. In such cases, as well as at all other times, let him, if he craves it, drink cold water, and dash a little into his face or bosom, or pour it on his head or back, which, if properly attended to, will generally afford relief, but if it does not, then put him into bed.

In the absence of the diaphoretic powders, the cayenne pep-

per, common red pepper, black pepper, ginger or pennyroyal, mint, balm, or any other warm aromatic teas, may be used instead of it, or in cases of emergency, hot water may be substituted if nothing else can be obtained. Emergencies of this kind, however, can rarely occur, unless it might be sometimes an accident, as drowning, severe bruises, &c.

If the patient be too weak to stand over the steam, he may be placed in a chair, wrapped in a very thin blanket, or he may be either entirely naked or have his shirt on, first putting a hot stone, as before directed, into a *shallow* vessel under the chair, when a thick blanket must be thrown around the patient and chair, and hot water poured into the vessel, and managed in every other respect, as directed for steaming when the patient is able to stand over the steam.

For steaming small children, let a blanket or something of that kind be spread on a chair so that it shall reach, in front of the chair, to the floor; then let some person who can best manage the child be seated in the chair, with the child in his arms. A deep iron vessel containing a moderate sized stone must now be placed before the person and nearly between his feet; pour in hot water sufficient to produce a lively steam, and then place a blanket or quilt around the child and person holding it, in such a way as to come over the steaming vessel, and down to the floor, and in every other manner so arranged as to confine the vapor and exclude the air. The person holding the child must be the judge of the proper temperature or heat of the steam, and the attendant will regulate it by raising the blanket when too hot, or changing the stones when too cool.

The quantity of medicine must be governed by the judgment of the individual administering; remembering often during the process, to give the child drink, and in other respects managing in the same manner as with a grown person.

We may also observe, that some practitioners omit steaming until after giving the emetic, by which the patient only receives one process of the vapor bath instead of two. We think, however, that the steaming before the emetic, prepares the patient better for its exhibition, making its operation more easy and more thorough.

The steaming may be also very advantageously employed at other times than when taking an emetic. It should always, however, be immediately followed by the cold bath; and in this manner may be profitably resorted to daily, in fevers, rheumatism, and various other complaints. In the same way it may also be very usefully employed as a preventive of sickness, at any and all times; whether after exposures, or at times when an attack of disease is actually threatened. And if each family had some convenient method of applying the vapor bath, and would resort to

it once a week, especially in the warm or sickly part of the season, or when an epidemic was prevailing, there is no doubt that a great deal of sickness might be prevented.

ADMINISTERING AN EMETIC.

After steaming the patient, place him in bed, and, if necessary, administer an injection, observing the utmost care to avoid exposure to cold air, when an emetic must be given.

For an emetic, the pulverized leaves and pods, or the seeds, or tincture, of the lobelia, may be administered. The seeds are commonly preferred, as being most active and powerful. The quantity necessary to produce full vomiting will vary for different individuals, and even for the same individual at different times. These observations apply with equal force to all the preparations of the lobelia.

In ordinary cases, we may commence by giving from half to a whole tea-spoonful of the pulverized seeds in a table-spoonful or two of warm water or warm tea of any kind, to which should be added a few drops of the essence of sassafras, from one-eighth to a whole tea-spoonful of cayenne, and the same quantity of the nervine powder, or its tincture. This may be washed down with pennyroyal, may-weed, or boneset tea, or chicken broth, gruel, milk porridge, or water. Two more doses, similar to this, but increasing the quantity of the pulverized lobelia seeds at each dose, should be administered at intervals of fifteen minutes, until three tea-spoonfuls are taken, unless sufficient vomiting is sooner produced. In some instances, however, the quantity here prescribed for an emetic will not be sufficient, in which case more, of course, must be administered, the quantity of which must be regulated by the judgement of those who administer; but enough should be given to cleanse the stomach thoroughly. Experience will teach, however, better than any general rules can do, the quantity necessary to operate sufficiently on different patients. The first and second doses ought to be so small as not to produce vomiting, if they can be so regulated, but always endeavor at the third dose, to give enough to answer the desired purpose. Some practitioners, however, prefer giving enough at one dose, in which case they give from two to four tea-spoonfuls. We think this the most effectual in curing disease, but is most unpleasant and fatiguing to the patient.

If the essence of sassafras cannot be obtained, a tea of the bark of this tree may be substituted for it; or if neither can be procured, the emetic must nevertheless be given without either. The advantage of the sassafras appears to be that of modifying the action of the lobelia upon the nervous system, without impairing its virtues.

Whilst taking the emetic, and during its operation, the patient

ought to drink freely of warm water, pennyroyal, or some other tea, which has a tendency to promote vomiting as well as to make it more easy. It may be regarded as a general rule, that the more a person drinks, especially if vomiting be difficult to excite, or is laborious, the more readily and easily he will vomit.

The pulverized leaves and pods of the lobelia rank next to the seed for an emetic. They may be given in the same manner as the seeds, only the doses must be somewhat larger; or from three to six tea-spoonfuls of the powder may be infused in a tea-cupful of hot water, pennyroyal, catnip, or almost any other tea, for twenty or thirty minutes, closely covered; then strain off, divide into three unequal doses, adding the essence of sassafras, cayenne pepper, and nervine medicine as directed for the seeds; give the smallest dose first, the other two at intervals of fifteen or twenty minutes, and in other respects manage as directed in giving the seeds.

The tincture of the green herb is thought to be the mildest form in which the lobelia can be administered as an emetic, though there is probably but little difference between this and the infusion of the powder just treated of, either of which ought commonly to be preferred for children and delicate or irritable females.

If, however, no preparation of the lobelia is at hand, either of the following articles may be substituted, viz: Vervain, boneset, wild hoarhound of the South, or ipecacuanha (commonly called *ipecac*) of the shops.

It often happens that emetics do not operate freely, apparently in consequence of acidity or sourness of the stomach. When this appears to be the case, or at any time when an emetic is slow in its operation, the white lye, or pearlash water, may be given, which will generally produce vomiting.

When the patient has done vomiting, or as soon as the stomach will bear it, he should take some kind of nourishment, such as broth, soup, porridge, tea and toast, or any thing else which the appetite may crave, in reasonable quantity; and when sufficiently recovered from the effects of the emetic and fatigue of the vomiting, he should be again steamed in the manner heretofore described; and when perspiration has become profuse, the blanket, or whatever is around the patient, should be held loosely from him, and a quart, or more, of cold water poured instantaneously upon the head or shoulders so as to spread as nearly as possible over the whole surface of the body. The patient must then be wiped dry, and his necessary clothing put on, and go into bed, having the sheets or blankets, in which he lay whilst vomiting, taken off, and dry ones put in their place.

For patients who are very weak, or irritable, the coldness of the water may be taken off a little by the addition of some that

is warm; or if strong prejudice or objections exist in the mind of the patient against the pouring on of the water, wiping off with a cloth wet with cold water, vinegar, or spirits, may be adopted instead of that process.

ADMINISTERING CATHARTICS.

In all cases where it is thought advisable to administer a purgative medicine, it is best, in general, to give it so long previous to the steaming and emetic just described, as to allow its operation to be over before the steaming process is commenced. This course will sometimes be proper in bilious fevers, dysenteries, liver complaints, dropsies, jaundice, &c. For dropsical complaints, two of BUNNELL's pills may be taken every night, with bitter tonics and diuretics during the day, and the vapor bath and emetic once or twice a week, or oftener, according to circumstances. For jaundice, or liver complaints, take three pills every other night, the bitter tonic during the day, and the steaming and emetic once or twice a week. But in ordinary cases where cathartics are employed, and in bilious fevers, the black root is considered by many as more valuable than any other article. This may also be given at bed time, in the dose of one or two heaping tea-spoonfuls, and if it does not operate by morning, half as much more may be administered.

During the operation of a purge, and especially if the patient is weak or feeble, he ought to drink frequently of nourishing broth, soup, porridge, or gruel, to support the powers of life, and prevent that exhaustion which most cathartics are apt to produce. Care should also be taken to prevent exposure to the cold, as by this simple precaution, many of the evils arising from the use of purgatives might be avoided. If they continue their operation too long, or prove by their violence too exhausting, the patient should take a few doses of the tincture of myrrh, or of the cholera syrup.

In some cases of fever where the course of medicine is not commenced with a purge, it sometimes happens that after the fever is checked, the patient does not readily regain his strength but continues weak and feeble; in which cases the administration of a purgative produces a most salutary effect. We repeat, however, that purges should be cautiously administered in all cases where great debility prevails, and the utmost care ought always to be observed in all serious complaints to prevent their debilitating effects, by the use of nourishing broths and stimulating medicines, such as tincture of myrrh, diaphoretic powders, bitter tonic, &c.

REPETITION OF THE COURSE OF MEDICINE.

Although this has been, perhaps, sufficiently noticed in the treatment of the various diseases which we have herein before

described, yet as there are cases sometimes occurring of which no description will be found in our work, as well as others to which no name can or need be assigned, but which are to be treated on the same plan, we think it advisable to present some general rules for regulating this important part of the curative process.

Where a course of medicine has afforded perfect, or only very considerable relief in sudden attacks, we may very fairly presume in most instances, that with common prudence and the use of bitter tonics, diaphoretic powders, or cayenne pepper, the patient will soon regain his health without another course. Or if the violent symptoms are removed, and still, as sometimes happens, recovery is not so speedy as might be expected or wished, a cathartic will often be very serviceable, and accomplish all that might be necessary; remembering to follow it with the bitter tonic, &c.

It may be regarded as a general rule, in all cases of disease, whether acute or chronic, that when very important relief is obtained, whether by the first or any succeeding course of medicine, this process need not be again repeated so long as the bitter tonic, or whatever else may be thought best to give, keeps the patient improving in health and strength. But whenever we find that this is not the case, another course is immediately to be resorted to.

In acute diseases, especially fevers, and all cases which have a tendency to run their course in a short time, the courses of medicine ought to be repeated every day, or once in two or three days, according to the violence of the symptoms. In violent cases, the cayenne pepper should be frequently administered between the courses whilst the bitter tonic or diaphoretic powders may be less frequently given.

In chronic diseases, the same rule may also be observed, only that the courses of medicine need not be so often repeated, excepting sometimes in dropsy, or some other complaints which have become very virulent in their character, or threaten a speedy termination in death.

APPENDIX.

CONTAINING CASES OF CURES PERFORMED WITH BOTANIC MEDICINES.

THE following cases are given, not so much with a view of showing the value of Botanic Medicines, as to exhibit the diversified manner in which they may be used, and thus inspire confidence in those who are but little acquainted with them. These cures were chiefly performed with what are termed *Thomsonian* medicines; a name now employed, to a great extent, in a general sense, to distinguish *innocent* botanic remedies from those which are *poisonous*, either botanical or mineral; and if there be any thing honorable to Dr. THOMSON in thus distinguishing botanic medicine, we think him worthy of it, as he was the first individual who commenced the present revolution in medicine, and which will eventually change the whole poisonous practice; for which he is entitled to the lasting gratitude of the whole civilized world.

But it is obvious to those who are acquainted with Dr. THOMSON's system, as it is called, that it is too brief, as well as being otherwise imperfect; and loud and repeated calls have been made for a work more extensive, and at the same time embracing all the improvements and knowledge that has been accumulating since the publication of his books, which is the object of the present work.

☞ As some of Dr. THOMSON's medicines are named in the following Appendix, we will state, for the satisfaction of those who are unacquainted with his book, or may wish to know which of our medicines we would apply, in similar cases, instead of his, that where his third preparation is recommended, or has been employed, our anti-spasmodic tincture should be used, and is considered better; where his No. 6 is directed, we should use either the simple, or compound tincture of myrrh; instead of his composition, use our diaphoretic medicines; instead of his bitters, any of our bitter tonics; and instead of his No. 5, our tonic cordial.

CASES OF CURES.

CASE I.

In the spring of 1830, I was called to attend Ephraim Simmons, a man of advanced age and very infirm, having for several years previous to this time been afflicted with what was termed an asthmatic consumption.

I found that he had taken a very severe cold, which had seated upon his lungs, and produced the most violent pains in his breast, extending to his shoulder blades, shooting thence to his side, and back again to his lungs; with high fever and difficulty of breathing. I immediately proceeded to take him through a regular course of medicine which, for a short time, afforded some relief. The pain, however, gradually returned, and in five hours he was in as much pain as ever, notwithstanding he had been kept in a copious perspiration by the application of hot stones and the free administration of diaphoretic powders and cayenne.

At the end of five hours, I placed him in a chair over a lively steam for thirty minutes, by which the pain was again mitigated, when he was put in bed and the perspiration kept up as before.

After about six hours had elapsed, the pains had returned, when he was again steamed as before, with the same happy effect. Several injections had also been given during the time, to relieve his bowels.

After the lapse of about seven hours from the last steaming, the pains again recurred, but with less violence than formerly, when I repeated the steaming with the same good effect; keeping up the perspiration when in bed by the same means as at first; and now, in addition thereto, I gave bitters occasionally. These were composed of star or unicorn root, two parts, and golden seal and poplar bark, of each one part, with a small quantity of cayenne. I also ordered, every three hours, a teaspoonful of the antispasmodic tincture, to promote expectoration; with a free use of the lady's slipper to allay the nervous irritation.

At the end of about seven hours more, however, the pain had once more returned, but with still less violence, when I took him through another course of medicine; vomiting him with the antispasmodic tincture, and keeping up the perspiration as before. The pain now became less severe and recurred with less

frequency than it had previously done; after which I gave him a course of medicine every twenty-four hours for five days, steaming him about three times between the courses.

The pain having now become very much conquered, and expectoration free, two days were allowed to elapse before another course, of medicine was resorted to; and his pains continuing to subside, three days were allowed to pass away before the next course, after which he gradually recovered, and acquired better health in three weeks than he had enjoyed for a long time previous to this attack. MICAJAH DILLINGHAM.

CASE II.

Sometime in the early part of 1833, I was called upon to attend Nathan Fitz Randolph who had been out of health for about two weeks previous to my first visit; one week of which time he had been procuring and taking medicine from a neighboring physician, but had, from the very commencement of his indisposition, been growing worse.

His symptoms were, a violent fever of the remittent type, with bilious accumulation, great pain in the head, and inflammation of the lungs attended with much pain, oppression, and difficulty of breathing. Indeed, his case had the appearance of being one of the most formidable that I had ever encountered.

I commenced, however, and gave him a thorough course of medicine, which entirely relieved the pain in his head, and produced expectoration from the lungs with some relief in his breathing. After this I gave the diaphoretic powders and cayenne freely to promote perspiration and increase the vital force of the system.

In twenty-four hours, I gave him another course of medicine, which increased the expectoration, but produced no permanent abatement of fever. Diaphoretic powders and cayenne were directed every two hours, alternately with a free use of the nervine powders, and once in four hours, a dose of the tincture of lobelia. The usual means of applying hot stones wrapped in damp cloths were also employed, to promote perspiration in bed; but the fever being of the most inveterate character, but little advances apparently were made towards effecting a cure. A portion of Bunnell's pills were also given to remove the bilious matter from the stomach and intestines.

Forty-eight hours were now allowed to elapse before another course was administered, after which, finding the disease so obstinate, I repeated them every day until I had administered nine courses in all, the last of which appeared to remove the fever and leave him clear of the disease, but in a very debilitated con-

dition. He, however, gradually regained his strength, and now appears entirely free from any affection of the lungs which had previously been in an unhealthy condition for several years in consequence of the measles.

It will be proper to observe that after the fourth course of medicine, I directed the employment of wine and the spice bitters, in addition to the cayenne and diaphoretic powders; with castor oil to move the bowels. Injections were also occasionally administered for the same purpose. Between the courses of medicine, I sometimes applied the vapor bath in the following manner:—I took two wooden hoops from a barrel, one somewhat smaller in diameter than the other, and cut them in two at the middle. The largest of these was placed, when steaming, over the breast of the patient, and the smaller one near the feet. After cutting them in two, as stated, they were prepared for use, by setting them up at a suitable distance apart and nailing three narrow strips of thin board, one on the top, and one on each side; the top one somewhat the longest so that it extended over the small hoop and formed a projection beyond the foot of the bed. This frame was placed over the patient, and under the bed clothes, with a kettle of hot water and a red hot stone in it on a chair at the foot of the bed to produce a steam. To those acquainted with the common method of applying the vapor bath, nothing more will be necessary by way of explanation, as they will understand it better than it could be described.

I will only add, that by the aid of this simple construction, I have often succeeded in exciting perspiration on persons too weak to sit in a chair, when I could not produce it by the application of hot stones or bricks. MICAJAH DILLINGHAM.

CASE III.

I have thought it might be gratifying to the friends of the Improved System of Botanic medicine, as well as useful to the public, to forward the following statement for publication. It shows at once the power of some of the improved botanic agents, and their superiority over the remedies of the old school.

The subject of this statement, is the wife of WALLACE DANIEL, who for many years has been subject to fits, for the cure of which her husband assures me he has spent upwards of *one thousand dollars*, without his wife receiving any benefit. For the last two years her health has been very precarious and feeble; but she has not, during that time, had many fits, until since the birth of her last child, which is now seven or eight months. Within the last few days, her fits have been extremely violent. She was advised to call on me; and yesterday, accompanied by her hus-

band, she came to my house to consult with me herself, having had strong doubts as to the utility of the botanic practice.

About one hour after her arrival, she arose from her chair, in much agitation, exclaiming, "I have a fit now coming on me!" and, from extreme agony, shouted with great vehemence. And what was very singular, the pain commenced in the great toe of her left foot, from whence it extended over the whole body. Her manner was so terrific, that my family all fled from the house, whilst I immediately availed myself of some *anti-spasmodic drops*, by which time she had sunk to the floor in spasms. I poured a tea-spoonful of the drops into her mouth, and in less than one minute she raised her head from the floor, and, clapping her hands, exclaimed, "Thank God, Mr. Sheward! thank God, Mr. Sheward! Oh! what sudden relief!" She was then assisted from the floor, and went into bed.

I then gave her a portion of the diaphoretic powders, to which was added a little cayenne. After an interval of about one hour, the spasms returned again, with shouting and violent emotions. She wanted to get out of bed, but I prevailed upon her to compose herself. I then gave her a tea-spoonful of the anti-spasmodic drops; but this not affording immediate relief, I gave her, at the end of about three minutes, a table-spoonful more, which soon removed the spasms. About this time her husband came in, and she returned home with him, where she soon vomited pretty freely, by which she was relieved.

Last night I called to see her, and whilst in, she observed to me that she felt symptoms of another fit. In order to test the efficacy of the blue cohush, I gave her a tea-spoonful of the powdered root, in a half tea-cup of hot water sweetened. This nauseated her stomach and removed the symptoms, and she has had no return since. I do not, however, consider her as cured, but am disposed to persevere with a regular process of the medicine and vapor bath, until she is permanently relieved. Her husband observed to me, last evening, that I already had something to boast of, if I should even not succeed in effecting a cure, as I had done what none of the old school physicians had ever accomplished; I had checked the fits during the paroxysms.

JOHN SHEWARD.

Zanesville, 1st Month, 25th, 1834.

CASE IV.

Amos McNames, aged about forty-five, was severely attacked, in the spring of 1832, with inflammation of the lungs. His family proceeded immediately to administer a course of medicine from which he experienced slight relief. Very soon, however,

he became much worse; whereupon they sent for me. I found him in a high fever, attended with violent pain in the side, difficulty of breathing, and great anxiety. It being late at night when I arrived, instead of giving a course of medicine, I administered a dose of the anti-spasmodic tincture, which gave relief for a short time. A hot rock was also applied to his feet, and in a little time gave him a dose of cayenne.

In the course of two hours I gave another dose of the anti-spasmodic tincture, which was repeated at similar intervals during the night; and occasionally, during these intervals, gave a dose of either cayenne pepper or the diaphoretic powders, to promote perspiration. By morning he had become quite comfortable; and I left him, with directions to continue the same course through the day.

The following morning I saw him again, when I learned that he had continued comparatively easy during the day, but at evening became very much distressed, with difficulty of breathing, and great anxiety, in which condition he still remained when I arrived. All the previous symptoms were greatly aggravated, and many of his neighbors, who were attracted by the extreme severity of his case to see him, thought that he could not live twenty-four hours.

The family having made the necessary preparation before my arrival, I proceeded immediately to administer a course of medicine, first requesting the concourse of neighbors to withdraw from the room, excepting such as were necessary to assist in the process; for which purpose I retained two or three. The course of medicine, which included two steamings, occupied nearly the whole day, and relieved him of the most urgent symptoms very considerably. After the last steaming he was placed in bed, with hot rocks to his feet and sides, to keep up a pretty free perspiration. I prescribed the same treatment as the day before, to wit:—a tea-spoonful of the anti-spasmodic tincture every two hours, to promote expectoration and relieve his breathing, with a free use of cayenne and the diaphoretic powders, to stimulate and strengthen him. After he had recovered from the fatigue of the course of medicine, I also gave him a dose of mild physic, to empty his bowels.

On the following day I made him another visit and found him quite comfortable, and his wife being so well acquainted with the botanic practice, that I discontinued my visits, leaving him to the discretion of himself and family. He continued to mend rapidly, and just one week from the day I gave him the first course of medicine he was able to walk out of doors.

MICAJAH DILLINGHAM.

CASE V.

Communicated by Dr. R. D. Tisdale.

John Smith, a man of about twenty-five years of age, in the fall of 1823, emigrated to what has been called the St. Joseph's country, and the following spring was attacked with a violent fever. He was attended by the most respectable physician in the neighborhood, who in a few weeks, succeeded in changing the type of the fever to that of an intermittent or ague. His health, however, continued very bad the whole summer, and despairing of relief, in October he was removed, with much care, on a bed placed in a wagon, to the neighborhood where I reside. Here he again called in the aid of a physician in whom much confidence was placed, who resorted to the popular means of salivation with mercury, by which his mouth was so much affected that he was unable to take any nourishment but such as could be conveniently drank, and even this with the greatest difficulty. But the salivation had no influence on the ague, which still continued and produced much debility.

The digestive powers at length became so weak that every thing he ate produced violent pains like colic, and he so far lost his confidence in his physician, as to apply to a *water doctor*, who, it was said, cured every thing, and by whose prescriptions he evidently obtained some relief. After receiving his attention for two or three weeks, the colic pains continuing as frequent as ever, and still more severe, he discontinued the use of all medicine. If this course was not beneficial to him, it certainly was no disadvantage; for his health and strength very slowly improved, until he became able, with great difficulty, to walk about half a mile. This effort, however, proved too great for his strength, and he became worse, being soon taken with very severe pains in the bowels.

This occurred on the 29th of December, 1833, and as a last resort, he concluded to place himself under my care, and I was accordingly sent for. After an investigation of the case I was satisfied that the disease was a dyspepsia of a most inveterate character. I was, however, induced to believe that by a long course of proper treatment his health might be restored. Having premised this short and imperfect history of the case, I will proceed to detail the course of treatment which I pursued, and which proved successful in effecting a cure.

Among the symptoms not enumerated the patient had a difficulty of breathing, which was very much relieved by administering half a tea-spoonful of cayenne in melasses. This was the first medicine I gave him, it being in the evening; and during the night he took frequently of the diaphoretic powders and bitter

tonic, of each half a tea-spoonful at a time. In the morning I administered an emetic of lobelia, and prescribed cayenne three times a day—the morning dose to be taken in the white of an egg, beaten up with a table-spoonful of melasses, and the other at noon and night with melasses only. After pursuing this course a few days, charcoal was added to the morning dose, and the lax ative bitters and cathartic pills were administered in just sufficient quantity, at regular intervals, to move the bowels at least once in twelve hours. A strong stimulating wash of cayenne and vinegar was also used daily, to bathe the stomach and abdomen, to relax and excite the abdominal muscles. The internal remedies were continued daily, as before stated, excepting that the quantities were either increased or diminished, according to the symptoms; and also, during the cure, two emetics in addition to the one first mentioned, were administered.

It may likewise be worthy of remark, that he had no return of the colic or pain in the stomach and bowels after I administered the first dose of medicine, but continued gradually to mend until his health became pretty well restored. On the 25th day of February, 1834, he came to my house to settle the bill for my attendance upon him, as he thought he should need no more medicine. I however advised him to continue the use of the bitter tonic occasionally for fear of a relapse, which he attended to as directed. He has since been attending to his farming business, such as rolling and burning logs, building fence, ploughing, &c.

In conclusion, I also deem it worthy of remark, that I have had many cases of dyspepsia under my care, all of which have been cured in a reasonable time, when the patient conducted himself prudently, and mostly in much less time than the one just related. In cases of this kind I have always found that the rapidity of the cure very much depended upon the condition of the bowels, it being always necessary to procure an evacuation from them at least once in twelve hours. This must be done with *mild laxative medicines*, at the same time using the cayenne or the bitter tonic in quantities proportioned to the existing debility. Great attention should also be paid to the diet, taking food at regular periods and in proper quantities; and better, far better, to take too little than too much; for our medicine is nourishing itself. Not that I would convey the idea, however, that a person should take medicine when in good health, for this would be a great error; but that it is nourishing to the sick when judi ciously managed.

CASE VI.

Margaret Foglesong, of Lebanon, aged seven or eight years, was taken ill with a slight fever. A physician was called, who gave her a portion of calomel, to destroy the worms. After its operation, she being no better, her father came for me. I attended, and gave her composition tea; at the same time placing at her feet a warm stone wrapped in cloths saturated with water and vinegar. The next morning I found her free from fever, sitting up, and eating. I left medicine, with directions to give it, so as to keep her in a moderate perspiration. As her health was so rapidly improving, I told her parents that my further visits might be dispensed with, unless she should relapse. Shortly after I left the house, the child complained that the medicine smarted her mouth; which was tender from the effects of the calomel previously administered. Her mother now insisted on sending for another physician; which was accordingly done, although the child was apparently no worse. The physician came, and after commenting upon the awful effects of the steam medicine, (as he called it) and the good fortune of the child in being rescued from it so soon, commenced a course of *salivation*, and speedily reduced the patient to the brink of the grave.

The calomel, acting on the gums and inner surface of the cheeks, progressed in eating them away, until a number of the teeth dropped out; after several weeks time, mortification of the parts commenced, and soon made its appearance through the cheek by a black spot on the external surface, of the size of a six-cent piece. The attending physician then applied a blister to the cheek; and in a few hours the flesh to the whole size of the plaster, appeared black and dead, exhaling an extremely offensive smell. The severity of pain was so great, that she would tear her face with her nails, and scream from the anguish. It became necessary to confine her hands, to prevent injury.

In this situation the physician gave her up as *incurable;* and I was again sent for. I went, and informed her father that I thought there was but one chance in a hundred of rendering her any relief; but after much persuasion I consented to prescribe for her case. I directed a large poultice to be made of equal parts of white pond lily root, bayberry bark, hemlock bark, and the bark of slippery elm, all pulverized, and boiled in water, made strong with ginger, and thickened with crackers. I then washed the whole wound, both inside and out, with strong soap suds; after which I washed it with a very strong tea of sassafras, common dogwood bark, and No. 6, mixed together and used cold. The poultice above mentioned was then applied, and kept constantly moist with the above named wash; renew-

ing the poultice every six hours, and washing the wound with soap suds, &c., at each renewal; and frequently bathing the line between the living and dead flesh with a strong tincture of lobelia. During this process the patient drank frequently of a mixture of composition and No. 6; and kept in her mouth lint or rags, wet with the above wash and No. 6.

Pursuing this course with constant attention, in about twelve hours the disease was checked. In twenty-four hours a division was perceptible between the dead and living flesh; and in a few days the whole mass of the dead flesh, loosening from the jaw bones and living flesh, was detached by clipping some integuments round the edges; leaving the bone bare from near the middle of the upper lip as far back as the last double tooth, and thence to the lower edge of the under jaw bone, and following this, passed the middle of the chin, took off about three fourths of the under lip. All the flesh inclosed in this line, was removed in one mass. After this was removed, I continued the above washes, and dressed the wound with healing salve; and thus the entire cure was effected, with less disfiguration than could have been expected under such circumstances.

WILSON THOMPSON.

CASE VII.

John S. C. Schenk, of Franklin, Warren county, Ohio, had been confined to his bed for six or seven weeks, with an inflammation of the diaphragm, attended with violent fever, cough, and pain. His attending physicians became discouraged; a council was called upon his case, and the result of its deliberations was unfavorable. In this state of the case he applied to me. I found him unable to lie upon either side, or to be raised up in bed but with the most excruciating pain. I commenced with him by giving composition tea, with nerve powder, and No. 6, in common portions, and boneset tea; repeating the doses every two or three hours; at the same time, keeping a hot rock, wrapped in wet cloths, at his feet; and giving enough of the tincture of lobelia to act as an expectorant. This course was rigidly persevered in for about forty-eight hours; during which time repeated injections were given, composed of bayberry and hemlock barks, pond lily root, cayenne, umbil, No. 6, and the powdered herb of lobelia inflata; and the region of the pain was frequently bathed with a preparation of No. 6, and the oil of hemlock mixed. At the expiration of the above mentioned time, I added more cayenne to his composition tea, and repeated the dose every fifteen minutes, until the inward heat was well raised. I then (with the assistance of several men) placed him in a large arm chair, and applied the steam to his

body, at first very moderately, increasing it as he could bear it, until he was in a state of thorough perspiration, and the whole system became properly relaxed. He was then washed all over with a towel wet with a mixture of cold water and vinegar, made strong with spirits and salt; dressed, and put into a clean bed. By means of tin pipes, I then introduced steam into the foot of his bed, continuing it for three hours, so as to keep him in a gentle sweat; giving him, in the mean time, a portion of pulverized lobelia seeds (say two or three tea-spoonfuls) compounded with one tea-spoonful of cayenne, half as much umbil, and a tea-spoonful of No. 6, mixed in half a tea-cupful of composition tea. This operated as an emetic; after which, I resumed the same course pursued during the first forty-eight hours, and continued it for the same length of time; and then took him through another full course of medicine as above mentioned. Thus in about ninety-six hours the cure was effected, and by taking tonics and stimulants, such as cayenne, astringents, No. 6, composition, poplar bark, golden seal, and bitter root, he was soon restored to good health and strength.

[*Ib.*]

CASE VIII.

Mrs. Lytle, of Deerfield, Warren county, aged 64 years, fell from a horse, and was badly bruised in many parts of her body and limbs, particularly in her head; a part of which, from behind the ear, up over the top of the head, appeared to be mangled to a jelly, although the skin was but little broken. Dr. Montague examined her on the ground where the accident happened, before the injured parts became swelled, and said no bone was broken. He continued with her (as I was informed) through the night. She could neither see, hear, nor speak; and was entirely deprived of the use of her senses.

The next morning I was called to her, and found the doctor still with her. I inquired what he had done; he replied he could do nothing; he had tried to bleed her, but could not; he had also attempted to give her some ipecac; but could not get her to swallow any thing; and so he could do nothing. I found that she could not be induced to swallow even cold water when put into her mouth; and that I must entirely depend on injections for internal applications. I mixed No. 6 with about one eighth part of oil of hemlock, and bathed her head with it, and then with strong vinegar; using these alternately every thirty minutes. For injections, I used one tea-spoonful of composition powders, in a tea-cupful of hot water; and when sweetened and partially cooled, I added a portion of No. 6, one of nerve powder, and one of lobelia seeds. I administered such a prepa-

ration every thirty minutes, until it operated as an emetic; after which I left the lobelia out of the injections, except when I wished to puke her; but continued the injections frequently, in order to stimulate the bowels, and raise the inward heat. She soon began to take the warm medicine by the tea-spoonful at a time; this was repeated every few minutes. I prepared the hot medicine, by adding cayenne to composition powder; or with hemlock or bayberry bark, and pond lily root, all pulverized and steeped in hot water; and giving freely of No. 6 in these teas. After pursuing this course for about twenty-four hours, placing a hot stone, wrapped in cloths wet with vinegar, at her feet; occasionally bathing her head with cold water, and continuing the other bathings above mentioned, I concluded the vital, or inward heat, would bear the outward application of steam: which was accordingly applied by means of tin pipes, conveying it from a tea kettle of boiling water, into the foot of her bed, until she perspired freely; then replacing the hot stones to her feet as before, to keep up the perspiration. I then left her for the night.

At about 11 o'clock at night she was taken with fits, and the family became so much alarmed, (I being four or five miles off) that Dr. Cottle was sent for; he came, and said her case was incurable and had been from the first; for, he continued, the blood had settled on the brain, and was the cause of the fits. He left some oil of amber for bathing her head; and called again early in the morning, repeating the same opinion, adding that when the fits should cease she would die. I came and learned her situation, and found that my directions had been observed, and the amber oil still remained in the phial. I witnessed one of the fits, and ascertained that the convulsions were mostly confined to the side which was most seriously injured; and although she struggled violently yet her pulse was regular all the time, but rather fuller at the end of the spasm; her eye was natural, except the discoloration produced by the bruise. There were no indications of a pressure on the brain, such as stupor, snoring, heaviness, wildness of the eyes, &c. I informed her friends that I believed the fits to be the most favorable symptoms which I had seen. That, from the action of medicine and steam, nature was aroused from its torpid state, and being, as yet, unable to gain the full ascendency, produced the struggles or convulsions of the system; and all we had to do, was to reinforce nature as much as possible, and quiet the nerves, and keep the pores open.

I increased the doses of hot medicine, as well as the injections, adding umbil and lobelia seeds, or 3d preparation of No. 1, until she puked freely; and was soon confirmed in my first opinion; for I found the fits became weaker, and the circulation

better in the worst side, and more equalized through the whole system, and her extremities warmer.

It was near eleven o'clock at night before she vomited, as the lobelia was chiefly given by injections—but after its operation the fits ceased, having continued about twenty-four hours, and were believed to average one in every fifteen or twenty minutes, during that period. The latter part of the night she slept, and in the morning was perceivably better. About noon she spoke a word or two, which was the first attempt at speaking, or the first she was perceived to notice any thing since the time of the accident.

From this period she began gradually to recover both in body and mind, and finally became as well as other women of her age; but has no recollection of any thing which transpired from the time she first received the injury until the lapse of between one and two weeks. WILSON THOMPSON

CASE IX.

A young lady named Wadkins, living near Centerville, Montgomery county, was taken very ill with a sore throat. The physician who attended her could not decide whether she had the quinsy, or a cankered sore throat; but gave her an emetic, which produced spasms to an alarming degree; he then bled her, and drew a large blister on her neck under the jaws; and in this situation she lay some days, unable to eat or drink. I was called to see her, and found, upon examination, that her palate was down, (as it is generally termed,) and was much inflamed, the inflammation having also extended to the tonsils. I applied to the palate, by means of a spoon handle, a mixture of bayberry bark, cayenne, and salt, moistened with No. 6. In a few minutes from this time, she could swallow; I then gave her composition, No. 6, and umbil, inwardly; prepared in a gargle of capsicum, No. 3, and 6, for her throat; sweated her face frequently with a hot stone and vinegar; used freely of a tea made of *sinkfield;* and she was soon well.

A number of months after this period, she was afflicted with a small tumor on the middle joint of the little finger, which had a threatening appearance, but soon got well; and as it was disappearing (without suppuration, I think) she exposed herself one cold evening, with only thin gloves on her hands. Immediately on her return home she was seized with a violent and unremitting pain in the right hand, (on which the tumor had been.) As her mother was bathing it in warm water, the muscles began to contract; the thumb drew down firmly into the hollow or palm of the hand, and all the fingers were drawn down and clenched around it, until the nails were out of sight, (as the

ends of the fingers, passing over the thumb, turned round it and under it into the hollow of the hand.) All sense of feeling had left the hand and arm half way up to the elbow. The same physician who first attended her, when suffering by the sore throat, was again applied to. He said her complaint was the dead palsy and cramp; he bled her; blistered her arm at the place where sensation began; gave her cathartics, &c.; and forced open her hand by the muscular strength of his own—upon which she fainted—but her fingers remained stiff, and soon clenched as before. The doctor said he had never seen such a case; and as the blister on her arm appeared like mortifying, and he knew not what more to do, he left her. I was sent for, but being absent in Indiana, Dr. Anderson was called in, who pursued our common course of sweating, puking with lobelia, using nerve ointment, washing with alkali, &c., all to no purpose. Shortly after my return, I was called to see her; and was informed of what had been done, and that her hand had been clenched in this manner for three weeks. By close attention the pulse in the wrist was perceptible; there was small circulation in the hand, but no feeling. Whenever I attempted to raise one of her fingers, which was destitute of sensation, a faintness seized upon her heart, so that I was compelled to desist.

I commenced by making a strong tea of composition and capsicum; of this I gave about a half tea-cupful every fifteen minutes, adding umbil, and No. 6. I continued this course, placing the patient by the fire, with her body shielded from the cool air, until she began to sweat; I then placed her arm and hand over a tub containing a quantity of cold water, which was dipped up and poured upon it constantly for about thirty minutes. It was then wrapped in flannel, as the skin was extremely red. In about an hour I took off the flannel and found the veins much filled, and the skin soft and in a perspirable state. I then bathed it with No. 6 and the oil of hemlock, and kept up a constant friction for thirty or forty minutes, still using the bathing drops, and not neglecting the internal application of stimulants. It was then wrapt in flannels again. The next morning the same process was repeated, and the hand and arm began to sweat; in the afternoon, as I was rubbing and bathing her hand, the fore finger opened; soon after the middle finger loosened and opened; in a short time the little finger also opened; and she swooned away, although no force was used to relax their grasp; soon after she revived the remaining finger and thumb were loosed, and the whole hand appeared soft, and the muscles as elastic as usual. The first sensation was severe pain in the finger joints; it however lasted but a short time. This relief was effected in about twenty-four hours. I then left her, with directions how to proceed; and suppose her to be entirely well,

as six weeks have elapsed and I have heard nothing to the contrary. WILSON THOMPSON.

CASE X.

In the summer of 1832, about two months after I obtained the right of using the botanic remedies, I was called on to attend an elderly lady, laboring under what they termed 'galloping consumption;' and as she was given over by the doctors of the Old School, she was thought a fit subject for a botanic practitioner. I was informed on my arrival at the house, by the family and neighbors, that she had discharged a gallon and a half of blood from the lungs, in the course of the last forty-eight hours previous to my seeing her. I was very averse to undertake her case, as I had but recently commenced practice, and the New System was very severely persecuted in the same neighborhood. But on account of the old lady, and her four daughters who stood at the bed side overwhelmed with grief, begging me to make an effort to save their only friend, I commenced by giving a large tea-spoonful of best African cayenne, steeped in hot water and sweetened, to stop the hemorrhage, which had the desired effect. Then I commenced using the remedies usually recommended in such cases, excepting that for want of other expectorants, I used thorough-wort, blue vervain, and wake-robin; and by a rigid perseverance for two months, I had the satisfaction of seeing the woman again restored to comfortable health. If it should be necessary, I could obtain the certificates of the woman, her husband, four daughters, and a number of her neighbors, who all thought it little less than a resurrection from the dead. Since that time I have had three hundred patients with the various diseases incident to a southern climate, and have lost but six, nearly all of whom were altogether hopeless when I first saw them. EDM. BRIDGES.

CASE XI.

Nancy Shartle was attacked on the 23d of July last, by what her attending physicians called cholera morbus; but which, in my opinion, was the sick stomach, (sometimes called milk sickness.) She was under the care of Drs. Smith and Clemmens, of Dayton; but appeared to be continually growing worse. On the evening of the 25th I was called to visit her; and was told that Dr. Clemmens had just left, and the patient was believed to be somewhat better, as she lay easier than heretofore. I therefore declined prescribing for her at the present time. The nurses

also informed me, that the physicians had changed their treatment from warm applications to those of cold; but that every thing they gave her was immediately puked up. At this time she complained of a burning pain at the stomach, with an almost continual retching or vomiting; especially when she took medicine or any kind of liquid.

In the morning I was again called to her, and informed that she had passed a very restless night, and was apparently much worse. I found her in a very weak state, still complaining much of a burning pain in her stomach, together with pain in her back. She was almost continually striving to vomit, but threw up very little at a time, of a very tough, ropy slime. She was also extremely costive.

In consequence of the treatment pursued by the other physi cians, as well as the critical state of her case, I proceeded cau tiously in administering my medicines. I commenced by giving a tea-spoonful of spice bitters, with the same quantity of umbil, mixed in warm water. This dose remained upon her stomach, and she fell asleep, which lasted an hour or more. Upon waking, she puked up one or two mouths full of tough, white slime. I then gave her another tea-spoonful of spice bitters, same quantity of umbil, same of No. 6, mixed in warm water. She fell asleep again and slept well. I prepared an injection composed of two tea-spoonfuls of umbil, and one of cayenne, steeped in a strong tea of hemlock bark; this I strained, and added one or two tea-spoonfuls of No. 6: upon her awakening this was administered by means of a pint syringe; which had a good effect. I then gave her a tea-spoonful of composition powder, about half the quantity of umbil, and a tea-spoonful of No. 6, in warm water sweetened; in fifteen or twenty minutes, I repeated a similar dose; in about the same length of time, I gave a spoonful of fine bayberry, a tea-spoonful of pulverized herb of lobelia, same quantity of No. 6, in warm water sweetened. I repeated this dose at intervals of twenty or thirty minutes, until it operated well as an emetic. During the operation, I gave her (as I always do in similar cases) cold water to drink; sometimes adding to it from six to ten drops of essence of pennyroyal; and occasionally giving a little African cayenne, bayberry and umbil, to keep the stomach warm, and assist the emetic. After the operation of the emetic, an injection, similar to the one above mentioned, (with the exception of one tea-spoonful of umbil) was administered; then gave, say, half a tea-spoonful of cayenne and same quantity of umbil.

She rested well the remaining part of the night. Early in the morning of the next day, I gave her, I think, about half a tea-spoonful of cayenne, as much of umbil, and one of No. 6; some time after gave a tea-spoonful of spice bitters in warm water.

The other medicines were all given in warm water sweetened. During the day I occasionally gave a dose of composition powder, adding half a tea-spoonful of umbil, and one of No. 6; or, cayenne, umbil, and No. 6. In the evening an injection was given as above; the patient was then placed over the steam, and composition, umbil, and No. 6, given; when sweated sufficiently, she was washed off with cold water, dried, dressed, and placed in bed. Another emetic was then given as above; when its operation was over, she took a dose of spice bitters; and rested well the remaining part of the night.

The next morning she seemed quite smart; I gave her a dose of hot medicine; in a short time after gave her a small dose of hot bitters, composed of equal parts of balmony, bitter root, and poplar bark, adding some cayenne. Upon leaving her I directed her to take about half a stem-glassful of a decoction of these bitters three times a day; also to take composition and No 6, the same number of times daily; at least, morning and night. On the Saturday following I called to see her, and found her perfectly recovered. DANIEL JORDAN.

N. B. None of the medicine I gave her, was thrown up from the stomach, except when under the operation of the emetics.

CASE XII.

Samuel Humbard, of Green county, Tennessee, was taken with a violent cramp colic, or spasmodic affection of the bowels. His family gave him many supposed remedies, without any good effect; and after his suffering two nights and a day, I was sent for, and found him in extreme agony. I gave him, at first, a tea-spoonful of No. 6; in four or five minutes I gave a tea-spoonful of the third preparation. This measurably relieved his pain, but his hands and feet immediately became cramped, accompanied with twinging or pricking pains. I then took a tea-spoonful of composition, same quantity of No. 6, and half as much umbil, and steeped them in half a tea-cupful of boiling water; when sufficiently cool, added a large tea-spoonful of the pulverized seeds of lobelia, and gave him. This dose was repeated twice, at proper intervals; within which time I also gave him an injection composed of composition and No. 6, of each a tea-spoonful, and half as much umbil. The emetic operated copiously, and he was much relieved. I then gave him a dose of composition, placed him over the steam until well sweated, gave more composition, washed him off with cold water, wiped him dry, and placed him in bed, with a hot stone at his feet, in the usual manner. During the night he was kept in a moderate perspiration, by taking two or three times, portions of composition

and bitters; and in the morning seemed quite well, except a feeling of soreness, caused by the excessive pain of his disease.

JESSE ELLIS.

CASE XIII

A child of Wesley Morrison, aged four or five years, was attacked with a violent cholera morbus. A physician (of the old school) was called in; and under his prescription it became worse, until next morning, when I was sent for. I found the patient much reduced; afflicted with excessive vomiting and purging; considerable fever; crying for water—which, as soon as drank, was thrown up again.

I prepared a tea of composition and No. 6, a tea-spoonful of each, half as much umbil, and all well steeped in a tea-cupful of hot water; when sufficiently cool, added nearly two tea-spoonfuls of strong tincture of lobelia. Of this preparation, I administered a part as an injection, and divided the remainder into three or four doses, which were given at intervals of eight or ten minutes. I then added more of the same medicines to the dregs in the tea-cup, and proceeded as before. This course soon checked the vomiting, so that the medicines were retained in the stomach. It finally vomited profusely; after which it was stripped of its clothing, placed in its father's lap, and after taking another portion of the above named tea, was steamed, washed off with vinegar, and placed in bed, when it immediately fell asleep. On waking, it took nourishment, and some bitters, and seemed entirely well.—[*Ib.*]

CASE XIV.

Isaiah Stewart, of Green county, Tennessee, inflicted a wound in his knee with an axe. He had been attended five or six weeks by a botanic physician, who had given him several botanic courses, using poultices, salves, &c. The wound would sometimes so nearly close up, as to prevent any discharge; it then would become extremely painful. Once every day he would prepare a piece of fat meat, (a little larger than a pipe stem, and about two inches in length) by tapering it to a point, and run it into the wound, and by moving the leg several times, it would discharge from the joint about a gill of water of a yellowish color, which, when cold, would coagulate to a jelly. On one side of the wound, proud or fungous flesh would accumulate, which rose above the sound flesh. This the doctor attempted to extirpate, by the use of burnt alum; but in this, as well as in other respects, he failed.

At the expiration of five or six weeks trial, he was brought to

me. I took him through one botanic course of medicine, and applied on the side of the joint *opposite to the wound*, a poultice of wild comfrey, renewing it every twelve hours. Each time after probing it as aforesaid, the wound was dressed with a plaster of healing salve, made as follows:

One pound beeswax, one pound salt butter, a half pound turpentine, and twelve ounces balsam of fir, well simmered together.

At the second dressing the discharge of joint water was reduced to half the usual quantity; at the third dressing it discharged none, and the pain ceased; but well concocted matter continued to be discharged until the wound was entirely healed; which was in about three weeks from the time I commenced. The part covered with fungous flesh would not, however, heal, until it was removed by a caustic application.

It is now about a year since the above cure was effected, and the patient still remains well, having the complete use of the joint, except that it is, at times, rather weaker than it was before the injury.

It may be well to remark, that the patient was formerly subject to dyspepsy; but by the above treatment and the use of bitters, made of quaking asp and barberry bark, boiled together, and drank freely, he has entirely recovered of it.—[*Ib.*]

CASE XV.

Betsey Morgan had a stroke of palsy, which deprived her of the use of one half of her body, except the hand and foot, which could be moved a little. In the course of eight days she was bled in that arm twice; after which she entirely lost the use of both it and the hand, and appeared every way worse.

At this stage I was sent for, and commenced by bathing and rubbing the whole of the afflicted part with a flannel cloth saturated with No. 6. I then placed a warm rock to her feet, and another to her side, and gave her a dose composed of bayberry and hemlock bark, half a tea-spoonful of each, one tea-spoonful of cayenne, and half as much umbil, all pulverized, and mixed in hot water; given when moderately cool. In fifteen minutes the same dose was repeated, with the addition of a large tea-spoonful of powdered lobelia seeds. At intervals of fifteen minutes, the same doses were twice repeated. At the expiration of twenty minutes after the exhibition of the last dose she began to vomit, and soon complained of a burning, or sharp, prickly sensation in the palsied parts, accompanied with great restlessness, free perspiration, tossing about her sound limbs, &c. Shortly after, she was perceived using her palsied limbs;

in a few moments she was enabled to use them as freely as the others. After the emetic had operated profusely, she was greatly relieved and remained quiet. She now took nourishment, and a portion of bitters made of quaking asp and bitter root pulverised, a tea-spoonful of each, steeped in warm water. After a considerable time had elapsed, I gave her a tea-spoonful of African cayenne, half the quantity of umbil, in half a tea-cupful of strong tea, made of equal parts of the bark of bayberry and hemlock; and placed hot rocks wrapped in wet cloths, &c. one at her feet and two on each side. At intervals of ten minutes, I twice repeated the same dose as last above mentioned, and she perspired freely through the night; during which she took, at three several times, a dose made by putting a tea-spoonful of composition and as much No. 6, into half a tea-cupful of hot water. After sweating freely for some time, she was wiped over the whole body with cloths wet in cold vinegar.

In the course of the next day she was much troubled with cramps and spasmodic affections in all her limbs and other parts of her body, for many minutes at a time; and they would sometimes continue half an hour. She was kept in a moderate perspiration by using the composition and bitters, as above mentioned. In the evening gave her another sweat and thus continued for a few days until she was well.—[*Ib.*]

CASE XVI.

John Castle, of Green county, Tennessee, over 70 years of age, a hard working man, of a strong constitution, had been generally healthy until the winter of 1829, when, by treading mortar with his bare feet, he took very ill, with a violent cough, and consumption of the lungs, which made rapid progress. He coughed violently, and expectorated much frothy mucus; during the course of two months, he would several times in each day, expectorate large quantities of the most loathsome and fœtid matter. He sent for several physicians (of the old school) who declared him incurable, and declined doing any thing for him; he finally applied to me. I found him unable to walk without assistance—could sit up but little of the time—and in the situation above described. He strove to induce me to believe that he was better than he really was, that I might be encouraged to do something for him. During the space of two weeks, I took him through five thorough botanic courses of medicine, mostly, at first, every other day, and in the intervening days gave composition and bitters several times a day; early in each morning I also gave him a tea-spoonful of tincture of lobelia, which would

nauseate, and sometimes vomit, enabling him to expectorate freely; and every evening gave half a tea-spoonful of Thomson's cough powders; and thus continued, until he entirely recovered his health; which required four or five weeks.—[*Ib.*]

CASE XVII.

Susannah Dillion, aged about 40 years, was delivered of a child about five years ago. Not long after this event, (probably in consequence of female obstruction) she was taken with pain, and hardness in her left side, and frequent head-ache. This pain was shortly followed by a cough; her strength gradually declined, and her flesh wasted away. In this situation she had passed nearly five years when I was called to her. I found her extremely debilitated, afflicted with an excessive cough, and unable to lie in bed for fear of suffocation from the redundancy of matter which she was almost constantly expectorating. I commenced (and continued for two months,) by giving her a course of medicine every other day; generally steaming first, then giving an injection, and afterwards an emetic. Also, giving each morning a dose of tincture of lobelia, and in the evening, cough powder—and during the day, composition and bitters. During the two succeeding months, I took her through two courses a week, giving the same medicines as before. After which, one course a week, for several weeks, with the medicines aforesaid. By this treatment she was restored to sound health.—[*Ib.*]

CASE XVIII.

Lewis Redwine, of Cawater county, Georgia, strained himself by working in a saw mill; and taking cold, it settled in one of his testicles. It swelled until it was not less than three inches in diameter, and four or five inches in length; the cord by which it was suspended was as large as a corn cob; the skin was somewhat loose, but the testicle and cord were apparently as hard as wood. There was no pain in the former, and only a little twinging in the latter. They had been increasing in size for two years; and he had applied means prescribed by water doctors, without any good effect.

I took him through several full courses of botanic medicine: frequently bathing the parts affected with No. 6; and applying to them a poultice of cracker, ginger, and slippery elm bark, one night; and the next night, a poultice made with vinegar and clay out of the back of a chimney; and so on alternately. At first its size was increased; but he soon discovered that it was

turning to a dropsy in the parts. It was then lanced, and the water discharged; and the testicle and cord were soon reduced to their proper size, and are now sound. He made use of bitters composed of umbil, unicorn root and cayenne, during the time of the poultice applications, &c.

The physicians (of the old school) declared his disease to be fungous flesh, which would increase until it should finally destroy him; and therefore declined any assistance.

JOHN V. LATTNER

CASE XIX.

L—— W——, of Habersham county, Georgia, aged about 18 years, was delivered of a child. The second day after its birth, in consequence of her taking cold, the usual evacuations which succeed child birth, suddenly and entirely ceased. She immediately commenced swelling, which continued until she was much larger than before the birth of the child. Two physicians (of the old school) were in attendance. The commencement of the swelling was attended with great pain in her back, abdomen, &c. An abscess of a very large size, formed in the latter about two inches below the navel, which was lanced about three inches in depth; and she thinks, in a few days, it discharged more than four quarts of matter. Previous to this time she had lost the use of herself from the hips downwards, but could now walk a little. Another abscess was formed in the navel, and several others near the one first mentioned; and two of them were discharging matter when I was first called to her—this was six months after the birth of her child. In addition to the above history of her case (which was given by herself and husband) they informed me, that a few weeks previous to my seeing her, she was suddenly attacked with excruciating pain just under the ribs on the right side, and it moved slowly downward to an opening in one of the abscesses; and the wound being examined, she discovered the end of a worm, which she drew out, and found it about eight inches in length.

I commenced by giving a large tea-spoonful of composition, half as much cayenne, and the same quantity of umbil, mixed in a tea-cupful of hot water sweetened; and at intervals of from five to ten minutes, the same dose was repeated, until ten were given. During this time, also, an injection made of two tea-spoonfuls of composition in half a pint of boiling water, was given. In about twenty minutes another injection, composed of one tea-spoonful of composition, same quantity of powdered seeds of lobelia, half as much cayenne, and same of umbil, mixed in one gill of warm water, was given. By this

time two hours had elapsed, and perspiration was perceivable. She was now placed over the steam for about twenty minutes, giving her composition and cayenne, in warm water, several times during the operation. Cold water was also given her to drink whenever it was desired, and a little sprinkled or thrown on her face when troubled with short breathing or faintness, which may be generally known by the fulness of the arterial action in the sides of the neck. The following compound steeped one hour in half a pint of warm water, was given in small quantities, (say a mouthful) at a time, viz:—Three tea-spoonfuls of powdered seeds of lobelia; two do. of cayenne; two do. of umbil; three do. of tincture of lobelia; and same quantity of No. 6. These doses, after being well shaken up, were repeated at intervals of five minutes, until she vomited freely; at the same time occasionally giving her warm penny-royal tea. After the operation of the emetic, I gave her a tea-spoonful of cayenne in warm water sweetened, and steamed her again for the space of ten minutes. About two quarts of cold water was then poured upon her head, so as to run down over the whole body, placing her at the same time over a lively steam; she was then wiped dry and put into a clean bed, after dressing in her night clothes.

The next day I took her through another course of medicine; at an interval of two days, another; at the same interval another; in two weeks, another. She also took in doses of a wine-glassful, three times a day, upon an empty stomach, the following preparation of bitters: One table-spoonful of umbil, same quantity of unicorn root, and as much cayenne, all pulverized and steeped in one pint of boiling water, adding one pint of proof spirit; to be kept closely stopped in a tight vessel, and shook together before using. Thomson's No. 5, was also taken in doses of a wine-glassful, just before eating. Pills, made of equal parts of cayenne, ginger, and bayberry, were likewise used, in portions of ten each day for a month. Besides the above, the following mixture was prepared, viz: cayenne, seeds of lobelia, ginger, unicorn root, Virginia snake root, and umbil, of each a table-spoonful, finely pulverized; to all which add one pint of honey. A tea-spoonful of this mixture was taken, on going to bed at night, for one month, to assist in promoting the menstrual evacuations.

The abdomen, when I first commenced with the patient, was hard from side to side. This was gradually removed by the above process.

The apertures and sores in the abdomen, were frequently bathed with No. 6; and some of the liquid was also injected into the apertures by means of a syringe.

A few courses of medicine were given afterwards. Her

strength and flesh increased rapidly, and her monthly courses returned as usual. She now enjoys better health, as she says, than ever before.—[*Ib.*]

CASE XX.

S—— W——, of Anderson district, South Carolina, a single woman, aged 22 years, took cold about five years ago, which measurably suppressed the menstrual discharge; which gradually decreased for three years, when it entirely ceased to flow; and has so remained for two years. Her health rapidly declined; she was afflicted with violent pains in the small of the back and lower part of the abdomen, and hips; her right thigh became considerably smaller than usual, and the knee much larger. During three months she scarcely lay one night in bed. In twenty months from the entire cessation of the menses, she could not walk without crutches. Hard lumps and knotty tumors appeared on her neck, and other parts; one of them, on the left side of the neck, was as large as her two fists.

I took her through two courses of medicine, (similar to those mentioned in the case of L—— W——,) in the two first days. On the third day, I gave her a fuller course, differing from the above, by composing the injection as follows:—One tea-spoonful of lobelia, one do. of umbil, in one gill of warm water, and given immediately after she was placed in bed, at the close of steaming. An emetic prepared as in the former case, was then administered.

She has now, (April 20, 1831,) been under my treatment seventeen days; has had two more courses of medicine; in the intervals takes bitters composed of quaking asp, golden seal and bitter root, steeped in warm water, three times a day; Thomson's No. 5 just before meals; and pills of cayenne and ginger, ten each day. Her appetite is restored; her pains have entirely ceased; her thigh and knee have become nearly of their usual size; the tumors on her neck, &c., have nearly disappeared; sleeps and rests comfortably at night; walks better, &c. Whenever she feels an occasional pain in her back, &c., it is soon removed by a warm injection, and by placing a warm stone at her feet and back. After a few more courses, and taking small quantities of the honey preparation, mentioned in the preceding case, she will, no doubt, be entirely recovered.—[*Ib.*]

CASE XXI.

Mrs. L——, a widow, under thirty years of age, has been for a number of years, (say from six to ten,) very severely afflicted

with a complication of disorders, contracted from severe cold, taken at a *critical* period, after having undergone a course of sulphur for the itch. She had been under the hands of five of the most skillful doctors (of the old school) the country affords. who have, each in his turn, failed to afford her any relief; and she was pronounced incurable, being, as they said, in the last stages of a confirmed consumption, hectic fever, &c.

From motives of benevolence, and at the earnest entreaties of herself and friends, I was induced to try the botanic system, more from the knowledge that it could do no harm, than under any reasonable hope of effecting a radical cure; she having already exhausted the skill of five learned doctors, and taken immense quantities of the most deleterious medicines. I commenced, however, with a *full course* of the medicine; after which I gave, three times a day, a tea-spoonful of Thomson's cough powder mixed in very strong hoarhound syrup; steaming every night.

This remedy operates powerfully on the lungs and glands. I make use of as much of the lobelia in the cough powder, as the stomach will possibly bear without puking. I also gave, at the same time, a strong tea of the lady's fern, as the common drink. This treatment was pursued with vigor for six or eight days, when symptoms appeared indicative of the efforts of nature to effect the usual discharge, &c., such as the most excruciating pains in the loins and belly, and on the insides of the thighs, &c. I then gave another full course of medicine, and administered injections into the region of the uterus every half hour, giving her a strong tea of cayenne to drink. The injections were composed of one large tea-spoonful of powdered seeds of lobelia, and five large tea-spoonfuls of strong tea of cayenne, mixed with twelve ounces of strong canker tea. This quantity should be injected at four operations, of the above intervals.

It is to be understood that her disorders all have their origin from this cause of obstruction, which not one of the five doctors could remove. This treatment, however, effected it; and she discharged from the uterus, at one effort, (her mother, who is an old midwife, thinks,) at least a pint of the most offensive matter. The discharge continues the usual time, and has assumed a healthy appearance. The injections in the vagina, as above mentioned, were given by means of a common syringe, and made as forcibly as possible, to reach the interior of the uterus.

The account of the above case was furnished us by JOHN H. HARRISON, Esq. of South Carolina.

CASE XXII.

A female about sixteen years of age took cold, by standing in water at the time of her monthly evacuation; which caused an

obstruction of the menses for two years. She was troubled with much pain and stiffness in her hips, and ancles; the latter of which were much swelled.

She was taken through forty or fifty courses of medicine; at first, one every other day, and at longer intervals; then one a week, and at length, one in two weeks; giving bitters of poplar bark and cayenne, in water, with a small portion of spirits.

Once in each day, during the whole time, the following preparation was injected into the vagina, viz:—a tea of raspberry leaves, with a little of the tincture of lobelia. Her general health soon improved, and the pains and stiffness gradually left her; bu the menstrual obstruction still remained, until, when pains, &c., seemed to indicate that nature was struggling to remove it, small quantities, (say a tea-spoonful at a dose,) of the pulverized tops and roots of the female fern were given, which removed the obstruction, and restored her to sound health.

[Communicated by JOHN M'PHERSON.]

CASE XXIII.

A man had his jaw dislocated, which remained in that situation for eighteen hours, when I attended him. I immediately gave the patient a preparation composed of a tea-spoonful of umbil, half as much African cayenne, in half a tea-cupful of warm water. At an interval of ten or fifteen minutes the same dose was repeated; the patient being wrapped in a blanket and placed by the fire, to promote perspiration. Several thicknesses of cloths were then saturated in warm water and placed around the jaws, and fastened on the top of the head. Water as warm as could be well borne, was then poured upon the cloths for about twenty minutes, in order to relax the muscles; a person standing behind the patient, then locked his hands around the patient's face and head, drawing the latter against his breast, whilst I put both my thumbs in the mouth on the jaw, and the fingers under it, and gently pressed it down until sufficiently low, when it was pressed back, and went in its proper place quite easy, with little or no pain.

[Communicated by Dr. STERLING, of Spartanburgh District, South Carolina.]

CASE XXIV.

A man working in the rain, bare headed, took cold, and lost his speech and hearing, and remained in that situation twenty-three hours; when I was called to him, I found his pulse did not exceed twenty beats in a minute. I despaired of effecting a cure,

but gave him two heavy doses of cayenne, and placed him in bed; he soon fell asleep, when his pulse rose and became fuller; in about two hours, I awoke him and gave him two tea-spoonfuls of No. 6. He afterwards slept deeply until morning, when he awoke in tolerable health; but had no recollection of having seen me, or of taking medicine He has since remained healthy

[Communicated by Dr. Hugh Quin, of North Carolina.]

CASE XXV.

I, Thomas Ellis, of Fayette county, Ky., do certify, that I was subject to an affection of the breast and head for eight years, accompanied frequently with palpitation of the heart. I was also troubled with a violent throbbing and palpitation at the pit of the stomach, attended by a dead, heavy pain in the part; and from the region of which, frequent flashes of heat extended all over the body.

During the first six years there were frequent jumping pains darting through my head, particularly the crown of it, accompanied by the most disagreeable feelings, of every conceivable kind. I was under the care of Dr. Coswell five years; and then under Dr. Alberta nearly three years—(both physicians of the old school.) During this time, twice a day, for eighteen days, he gave me portions of calomel; and afterwards fifty or sixty grains at once. My head in some degree became relieved; but the palpitations of the heart and violent throbbings, frequently returned, and I was reduced to a mere skeleton, and looked as yellow as a hickory leaf when faded. My sides, at times would be very hot and sweat, whilst every other part would be cold and dry. At other times my feet and legs would be very cold, and yet they would sweat, whilst every other part was hot and dry. The doctors said my liver was affected; and all agreed I could not be cured.

Thus after suffering under their treatment nearly eight years, I employed Dr. Davis, (called a Steam Doctor;) who took me through four courses of medicine in two weeks; then at intervals of a week, took me through two more courses; then half a course, omitting the emetic. In the intermediate days, between the courses of medicine, I took spice bitters, composition, and No. 6, of each a tea-spoonful, three times a day.

In five or six weeks I was restored to general good health, which I have enjoyed mostly since, it being now about three years. THOMAS ELLIS.

CASE XXVI.

On the first of January, 1831, a mad dog came upon the premises of Joshua Clark, of Columbia, Hamilton county, Ohio, about seven miles from Cincinnati, after passing through the neighborhood; and was known to bite nine animals, viz:—Five dogs, a cat, one cow, and two horses; all of which went mad; some within about thirty days, and the last, a year old colt, belonging to Joshua Clark, about the middle of June. Joshua Clark received a wound on the hand, on the first day of February, by the tooth of a mad horse, which belonged to himself, while endeavoring to drench it with medicine. The creature died the next day. He suspected no danger from the wound, as it was soon healed up.

But some time in May he had some strange feelings, when on the water, being a fisherman by occupation. By the advice of some of his friends, he called on Dr. S. Tibbets, of Cincinnati, who gave him some of the third preparation of Thomson, which relieved him for that time. But several times in the month of June, he was seized suddenly with fits of trembling and a strange sensation of fear, when the wind blew so as to cause the boat to rock on the waves; and he sometimes queried with himself, whether it was possible he could be afraid of the water; and that, at times, when no thought of hydrophobia occurred to his mind. He felt also, as if the rays of light, reflected from the waves when the sun was setting, sent through him sensations of peculiar horror, and he was sometimes obliged to go on shore and remain awhile to gain composure.

These symptoms rather increased on the whole till the 10th day of July, when he felt much more indisposed than at any time before, and was rapidly growing worse. Being at Cincinnati that day, he went up home in a skiff, and undertook to row; but soon found himself unable to endure the exertion or the sight of the water. He then lay down, was covered up, and rowed home by his companions. He retired to bed, but spent a dreadful night; a painful twitching of the muscles of the limbs, and lancinating pains darting from the hand which had been wounded up to the breast, and throat; the glands of which had now become very sore and swollen.

He sometimes fell asleep, but was suddenly awaked by such frightful dreams as seemed to fill his soul with inexpressible horror. And all these symptoms were growing worse constantly. In the morning his family were terrified at his condition; and all his friends concluded he had now got the hydrophobia, and thought it best that he should go immediately to Cincinnati, to obtain medical aid. Accordingly he started on horseback, but very soon found that he could not endure the

motion of the horse. He was then laid down in a skiff, and covered up and taken down by his friends within about two miles of town, where passing a steamboat, which was ascending the river, it produced such agitation of the water he could no longer endure the motion of the boat. He was then landed and went up the bank, and was about going into a blacksmith's shop occupied by his brother-in-law; but when he came before the door, and caught the rays of light from the fire, he suddenly started back in great distress; and it was not in his power to enter while the fire was in blast. He then came on foot, attended by his friends, to the house of Mr. Steel, his brother-in-law, in Cincinnati.

His symptoms had now become so bad that all were nearly despairing of help; they supposed the botanic medicine, which he had taken some weeks before, had failed. Colonel M'Farland went to Professor Morehead, and related the case; who gave it as his decided opinion, that it was a clear and confirmed case of hydrophobia, and nothing could be done for him; and he did not think it worth while to go and see him, as there was no known remedy for the disease.

Isaiah Clark, brother of the patient, went to Professor Cobb and related the case to him; he expressed the same opinion in every respect as Dr. Morehead.

Dr. Tibbets was then sent for, who came, and commenced giving him the third preparation; which soon had the effect to allay in a good measure the excessive irritation of the nervous system; but such was the difficulty he labored under in swallowing, that administration by injections was chiefly relied on. The medicine operated freely, and he emitted from his stomach a great quantity of very tough and viscid mucus, which might be raised on a stick two feet, without separating from that which remained in the vessel; and much that passed from his bowels was of a similar consistency.

After puking, his stomach settled, and he was steamed. The perspiration was copious and free. He was washed off, and felt much more composed for a short time, and slept about an hour; when he began to be disturbed again by frightful dreams, and all the nervous and spasmodic affections which he had previously felt. The same medicine was given again as before with the same effect. Steaming, again, was followed by a short and quiet sleep; but the spasmodic twitching of the muscles of the legs and arms, was all the time visible to the spectators when they were uncovered.

About twenty-four hours had been consumed in the two courses, and before I saw the patient, I being out of the city. When I saw him first, he seemed composed in mind, but felt all the former symptoms returning; he was thirsty, and desired water

but could not take a swallow without violent shudderings of the whole system, and painful sensations; but none of these unequivocal symptoms of the disease were as strong this day as they were the first, before he took medicine; but he seemed to grow worse every moment till medicine was given again. And the same course was pursued for eight days in succession; in which time he passed through sixteen courses. His intervals of repose were now so much longer, that one course in twenty-four hours seemed sufficient; and the treatment was pursued at this rate for eight days more. He then passed a day and night taking small doses of medicine, which seemed to keep the disease in check without producing vomiting. In a few days more he went home, but continued to take medicine whenever he felt symptoms of the disease returning; taking a full course occasionally when smaller doses did not prove sufficient. Thus the dreadful malady seemed to wear off very slowly.

About the first of September he began to grow so impatient and discouraged that he went to a German doctor, who boasted confidently of superior skill in curing hydrophobia. After taking his medicine for a few days, he fancied himself much better; but on taking a slight cold the old symptoms began to return, and his new medicine had lost its effect. He sent for his German doctor, but he could do no more. He was obliged, therefore, to resort again to the third preparation, which was still true to its trust, immediately giving relief. And until I last heard from him, which was sometime in December, the evidences of a radical cure grew stronger.

I will remark, as I learned from Dr. Tibbets, that the pulse when he first saw him, was very rapid, small, and irregular, and recognized with difficulty on account of the strong vibratory action of the tendons. Two hours after, when he was under the full influence of medicine, the pulse became full and strong, and numbered about forty in a minute; and this singularity was observable every day; after his intervals of repose, when the morbid symptoms were increasing, the pulse grew rapid, feeble, and irregular, until medicine was given sufficient to check the progress of the disease; and when under the influence of medicine, and the morbid symptoms were least observable, it was full and strong, and numbered from forty to fifty in a minute.

I will now notice several arguments, which have been made use of by the enemies of the Botanic System, to destroy the influence of this extraordinary cure.

Dr. Drake, who had not expressed his opinion on the case until he had seen the result of ten days treatment, felt himself at liberty to differ from those who had decided without this advantage; and assigned, as one reason for his opinion, the idea that the herbivorous animals cannot communicate the disease.

He was then asked if Josiah Morehead, who died of hydrophobia under his own care, about two months before, had the hydrophobia. He replied in the affirmative; and added, the case of Morehead being under his own eye, he knew it to be a clear and unequivocal case; and differed not in symptoms, character, progress, and termination, from hydrophobia. He was then reminded, that Morehead imbibed the disease by handling the hide of a cow that died mad; or rather, by rendering out the tallow of the same cow, he burnt his hand, which caused a bad sore that remained till he died; and this appeared to be the seat of infection; and it was never known that he had been exposed any other way. The Doctor replied it was not known how Morehead imbibed the disease, but it was a certainty that he had it. So we would say in the case of Clark; if it were demonstrated that the herbivorous animals cannot communicate the disease, we do not know how he imbibed the disease, unless it were by the circumstance that his own dog while raving under the influence of the disease, jumped and snapped at him, at the same time blowing a full blast of breath and saliva, in his face, through a crack of his pen; which caused him to feel a strong sense of nausea at the stomach, and produced some blister-like eruptions on his face. But we cannot allow Dr. Drake any credit for arguments in this case, which he counted of no weight in the others where they were equally applicable. Another argument assigned by the doctor was, that this case did not progress and terminate like hydrophobia; and there was no case recorded in any history, in which the progress of the disease had been stayed like this. But we cannot give him much credit for this argument, unless he will produce a record of some case to his purpose under his mode of treatment. We think it rather unreasonable that we cannot be permitted to prove that we can cure hydrophobia; except we first prove the disease to be *genuine*, by the fact of its terminating in *death*. There is a very wide difference between our system and that of the mineral doctors in this respect; our chance of success would be materially diminished after death; while theirs would remain just as good after death as before. But if death is to be the only criterion of the disease, we will venture to say that a genuine case of hydrophobia shall never occur, where our system is applied before the utter prostration of the vital powers, and is followed up with proper attention and perseverance.

Dr. Cobb, without knowing that Mr. Clark was under the botanic treatment, expressed an opinion with much confidence that it was a case of hydrophobia, when a gentleman informed him what treatment the case was under, and asked him what he would think should the patient recover. He replied, that he should be convinced that all who thought it to be hydropho-

bia were deceived. Thus we see the ground they take would render it impossible, even for Omnipotent Power, to prove a cure.

WM. RIPLEY.

P. S. That it may be clearly understood what, and how much, is comprehended in this account, as a course of medicine, I will here state it more explicitly. Whenever the returning symptoms of the disease became evident, a small dose of third-preparation was given, which always gave some partial relief, but of short continuance; then a larger dose was given, and soon repeated; next more was given by injection, and so on, when the operation was over, then steaming and washing finished the course.

The medicine was not given with a very sparing hand; the composition tea and valerian were used freely; and I judge from four to six ounces undiluted third-preparation were used in every twenty-four hours during the first eight days.

CASE XXVII.

This may certify to all whom it may concern, that on the 10th of February last, I was taken very sick with the bilious fever, as I supposed; which was attended with such excruciating pains in my back and head that I was at times delirious; and after suffering for three days in this situation I applied to Dr. Wilson* (a botanic physician) who carried me through a regular course of his medicine, which relieved me very much from the pains I endured; and on the following day the surface of my body was completely covered with the small pox. But by the use of hot bitters and other stimulating medicines which were administered, I was, in the course of four or five days, able to be about my business, and have enjoyed good health ever since.

JAMES CUNNING.

CINCINNATI, June 17th, 1831.

CASE XXVIII.

The history of the following case of John Pegg, who is a resident of Randolph county, Indiana, was given to me by himself; and to the best of my recollection is as follows:

About fifteen years ago he discovered a small hard tumor about the size of half a pea, in the right arm-pit, which, on examination appeared to be firmly attached to the main tendon of

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* The reader will find Dr. Wilsor's general mode of treating small pox particularly detailed at page 171.

the arm. In a short time after he first discovered it, it became somewhat painful; its growth was regular, though not rapid, and as the tumor increased in size the pain became more severe.

In about seven years after its first appearance, it was grown so large as to completely fill the arm-pit, and force the shoulder as much above a natural position as it would bear; it also extended back and attached itself to the shoulder-blade, and protruded forward considerably on the breast-bone. During this interval he made many applications to it, but none of them appeared to check its growth.

He then came to the determination to suffer a removal of the affected part; and accordingly put himself into the hands of one of the most skillful surgeons in his knowledge, who performed the operation on him; in doing which, he took off a part of the shoulder-blade.

The part amputated weighed one and one-fourth pounds, and on examination it appeared that the center of the tumor, about the size of a hen's egg, was hard and brittle, and when the knife was forced into it, it broke or cracked before the edge of the instrument.

About three months after the amputation was performed it began to grow again, increasing with much greater rapidity than it did before the removal of the tumor. He went back to the surgeon, who directed the application of a plaster of cantharides large enough to cover the affected part; and when it had become completely blistered, to remove the blister and dress it with an ointment made by putting the cantharides into oil, until it was nearly strong enough to blister; and as soon as it healed he was to apply the plaster again, and then dress with the same ointment. During the application of those external remedies, he was to take Fowler's solution of arsenic, in as large portions as would be considered safe.

He pursued this course till he had blistered it seven or eight times, and then sent an account of his situation to the surgeon, who returned him information that his case was a hopeless one, and that probably he would not survive a year. He then applied to other physicians and had their judgments relative to his case; and also attended a Medical Board and was under examination the greater part of one day; it was their united opinion that his case was a hopeless one and could not be cured. He then consulted about fifty of the most celebrated physicians, of the old school, that were in the circle of his acquaintance, and it was their unanimous opinion that he could not be cured. They generally agreed in pronouncing it a cancer, or cancerous tumor, though a few of them rather favored the idea that it was a scrofulous or scorbutic affection.

During this period he was making use of such external appli-

cations as were from time to time recommended to him by the physicians, but none of them appeared to arrest the progress of the disease. After he quit following these prescriptions, he was strongly urged to make a full trial of Swaim's Panacea, which he accordingly commenced and took twelve bottles; but it proved of no advantage to him.

He then, (as is common in such desperate cases,) as his last resort, concluded to try the effect of Botanic Medicine, and accordingly put himself under my care, in the fifth month, 1827. The tumor by this time had again completely filled the arm-pit, extended considerably on the shoulder-blade, and also protruded forward on the breast-bone. The part of the tumor that extended forward on the breast, I think was nearly as large as a man's two fists, and appeared to be as hard as a block of wood. The part in the arm-pit, had projected out so far that the skin had become dead, and was removed, presenting a bare surface as large as a French crown, from which exuded a small portion of excoriating matter. There was a great diminution of vitality in the arm and hand, which were invariably covered with a cold clammy sweat, so as frequently to stick to the fingers on being touched. The whole nervous system appeared to be much disordered, and when he was asleep, the whole body was in one universal tremor.

I commenced with giving him a tea of Dr. Thomson's composition powders, and half a tea-spoonful of the nerve powder, three times a day, for two days: also, I made an external application to the tumor, of the slippery elm bark poultice, covering the poultice with good ginger, finely pulverized, and before I placed the poultice on the part, I put a small portion of best cayenne over the surface of the tumor.

This poultice I renewed morning and evening, and whenever I removed it, the parts were well washed with strong soap-suds made of shaving soap. I also bathed the parts of the tumor, that were not covered with the poultice with No. 6, adding one-fourth part of spirits of turpentine, night and morning.

On the third day after I commenced, I took him through a regular course of medicine; which I began by giving him a dose of composition and nervine powder. I then placed him over the steam, and kept him there about fifteen minutes still raising the internal heat as the warmth of the steam increased, by giving composition, cayenne pepper, and penny-royal. I then put him in bed, placed a hot stone at his feet, and gave him a tea-spoonful of the emetic powder in composition, which was repeated every fifteen minutes, increasing each dose half a tea-spoonful till it operated. I also gave pennyroyal tea during the operation; and after I had given the third portion of the emetic, gave him some milk porridge. After the emetic had

operated, I let him remain in bed until recovered from the fatigue of vomiting, still keeping the hot stone to the feet, and giving the composition or cayenne pepper.

After awaking from a nap of sleep, gave him half a tea-spoonful of spice bitters; then something to eat, and in about ten or fifteen minutes took him up, placed him over the steam, and steamed him pretty highly for about fifteen or twenty minutes. Towards the latter part of the time, while he was over the steam, threw some vinegar on the stone, and then washed him off with cold water, with about half a pint of good vinegar, added thereto. This part of the operation was varied in after courses, as in probably more than half of them he was showered. This was performed after I thought he had been long enough over the steam, by first washing his face with cold water; then taking about one gallon and a half of cold water, and half a pint of vinegar, and pouring it on the back of the neck and shoulders so as to run all over the body; he was then wiped dry and dressed; and commonly sat up the most of the day after he had been taken through an operation. I repeated the course of medicine, above described, every other day for one week, still making the same external applications as above described. I then took him through a course of medicine every third day, steaming and showering him occasionally between the courses, which were continued for two weeks.

After the first operation, on dressing the tumor, I discovered that it discharged much more than formerly; and steaming without a regular course produced the same effect more or less. About the end of the second week there appeared a disposition in the ulcer to heal, and I applied pearl-ash to it, after washing it, and then added the poultice above described. In three weeks the tumor was perceptibly less; at which time he went home. I furnished him with medicine and directions; he also obtaining a right to use them himself.

He still made the same external application for three months, when he came again to my residence. He informed me that he had been frequently applied to by the sick for relief, and he had attended upon them with good success; consequently his own case became much neglected, and he had been two weeks at a time without a course of medicine. By this time I think the tumor was reduced one fourth in size and the ulcer disposed to heal under the application of the pearlash. I then advised the cancer plaster made of clover heads, which was continued for five or six weeks after his return home, at which time I visited him and found that it was inclined to heal under the application of the plaster. I put butternut bark to it, which blistered it: after which it was dressed with the elm, ginger, and cayenne. The butternut bark was applied several times in the course of six or

eight months whenever it was disposed to heal. During this time he had frequent calls to attend on the sick, and his own case was much neglected, not taking a course of medicine oftener than once in six or eight weeks.

The tumor, however, became reduced to half its former size, and was more and more neglected, when I recommended the application of the sorrel salve, which reduced the tumor faster than any thing which had preceded it. It was late in the fall, when he could procure but little of the sorrel, and his stock of salve before spring, became exhausted. For some time he had not gone through a course of medicine oftener than once in three or four months. His practice still increasing, his attention to himself decreasing in the same proportion.

During the course of this winter he attended to the practice, paying some little attention to himself. By spring when I saw him again, the tumor was about three-fourths gone; that season he procured more of the sorrel salve, and completed his cure; being two years and a half from his first commencement with me.

When the tumor first began to decrease, it gradually receded from the extremities towards the center or seat in the arm-pit, and it continued to decrease in this way, and by keeping a discharge of matter from the seat in the arm-pit, the solid or hard part was carried off by suppuration.

I visited him about twelve months after his cure was completed, when he told me that he believed the cause was entirely removed; though he observed, that he at all times felt an uneasy sensation attending the parts that had been affected; but it was his decided opinion, that those uneasy sensations were entirely caused by the removal of a part of the shoulder-blade, as aforesaid, and not from any effects of the tumor.

My own opinion relative to the case is, that if he had been carried through a regular course of medicine, as often as would have been advantageous to him, and applied the sorrel salve at the commencement, that his cure might probably have been effected in less than one year. DANIEL KINDLEY.

CASE XXIX.

The history of the following case of Jacob Bowser, who is a resident of Warren county, Ohio, was given to me by himself, and to the best of my recollection, is as follows:—

About twelve years ago, (1820,) he was taken with the cramp in the breast so severely that his life was despaired of. The physician who attended him administered medicine, with which he was not acquainted, but which he has since had an opportunity of learning the effects of; for it did not remove the cause,

but much impaired his vital powers. He continued to apply to, and take medicine from, a number of different physicians, for the space of seven years; during which time his physician's bills for medicine and attendance amounted to $400, and the cause of his complaint was still not removed. He applied to me for assistance in the winter of 1827, and in stating his case, observed, that he still had frequent returns of the cramp. It would begin in his feet, generally in the night, and proceed up his legs into his body if he did not get up and stir himself about, (and that frequently would fail to prevent its rising to the body,) and whenever it got into the body it always appeared like taking life, the pains were so excruciating. The sinews of his legs were drawn into knots, and he had but little feeling in his legs or feet. One of his great toes had been entirely without feeling, and appeared to have been dead for three years; having turned towards the little toe, crossing the one next to it and lying on the top of the second one, entirely stiff. He also complained of a continual singing in his head, so that sometimes he could scarcely hear, and was at all times much affected by it and the headache.

I gave him composition powders for the first day, and on the second I carried him through a regular course of medicine, (such as I have already described in JOHN PEGG's treatment, excepting that I always showered him with about one and a half gallons of water, and half a pint of vinegar.) I repeated the course of medicine every other day, till I had carried him through three operations, giving him composition powders every night, and half a tea-spoonful of spice bitters three times a day before meals.

In going through the second operation, whilst over the steam, he observed that he felt a severe pain in his toe, that he supposed had been dead, which continued probably for half an hour, and the next day he could move it a little. He remarked on getting up that morning, that he had *lost his almanac*, for he had slept well, and thought it had been cloudy through the night. On going out he observed that it was clear and a very heavy frost on the ground. He said that he had not experienced so good a night's rest in several years when it had been frosty—that he always suffered most in frosty weather, and that it was very seldom when it frosted at night that he could remain in bed later than one or two o'clock, but was obliged to be up the residue of the night, in great distress from the cramp and singing in the head.

After I had given him the third course his toe came to its natural feeling, returned to its former position, and he had the use of it nearly as well as the other. The head-ache and singing in the head were also removed, and he felt entirely relieved from every symptom of his complaint.

I furnished him with some medicine to take home, and accompanied him to one of the neighbors' houses. As we traveled

along, he frequently expressed his astonishment at the difference there was in his feelings in the course of one week, (that being the time he was under my care.) To use his own phrase, he said he felt like a dancing master—he was so active that he felt like jumping over all the old logs in the woods. On parting with him, I told him I was fearful that he would, when he got home, expose himself and bring the complaint on again. He said if he ever felt it returning, he would come immediately for assistance. He has not returned, neither have I seen him since, though I have heard from him at different times. He still remained well whenever I heard from him; following his trade of bricklayer and stone mason.—[*Ib.*]

CASE XXX.

J—— W——, aged upwards of 70 years, had been subject from infancy to frequent returns of a debilitating diarrhea or looseness of the bowels, which resisted every means that were employed for its cure, and had many times reduced him to the verge of the grave. He was obliged to be very careful and circumspect about his diet, being under the necessity of denying himself the use of many articles of food that others indulge in with impunity. The most skillful physicians of the old school had been employed in his case, and much money expended, but all to no purpose; the looseness, in spite of all his care, would often return, and as he advanced in age it became more frequent and obstinate.

Finally he had an attack of intermittent fever, when he applied to a Botanic physician who administered one course of medicine, which completely removed the fever; and his appetite and strength were restored by the use of bitters. But the most extraordinary circumstance was, that his predisposition to diarrhea seemed to be removed, and he found himself in a situation to indulge in any kind of food that his appetite craved, which he had not been able to do for years. About two years, however, after the above course of medicine, it being Christmas, he indulged himself in eating to excess, of cakes fried in lard, which produced a return of his old complaint; but which he immediately checked by drinking a decoction of the pods of red pepper.

It is only necessary to add, that no other medicines were used in the above case, than the diaphoretic or sweating powders, cayenne pepper, hemlock bark, and the lobelia as an emetic, with the common bitters.

CASE XXXI.

N—— D——, a girl, aged about ten years, fell backward from the great beam of a barn, upon the bare floor, by which she was much bruised. A botanic physician was called, who took her through a regular course of medicine. After this she took of the diaphoretic powders and cayenne for a few days, when she was perfectly restored to health and strength.

CASE XXXII.

At the raising of a log house in Marion county, a person was very seriously injured by the accidental falling of a log; but no bones were broken. A Botanic physician, who had formerly been in the habit of letting blood, was immediately sent for, and on his arrival was requested by the individual to bleed him, as was customary in all such cases. To this, however, he objected, observing that he could relieve him in a much better way, without inducing the debility which always followed blood-letting.

The wounded man assenting to this proposition, a dose of the diaphoretic powders was immediately administered, and as soon as possible, water and stones were heated, and he was placed over a lively steam, when more of the powders or cayenne pepper was administered. And although when the steam bath was first applied, he was suffering the most excruciating pain, with great restlessness and anxiety, it was but a short time until he became easy and tranquil. After a thorough steaming he was placed in bed, continued taking the medicine, and in three or four days was able to attend to his business.—[*Communicated by Isaac Bunker.*]

CASE XXXIII.

Mrs. Reinhardt, of Lincolnton, North Carolina, was afflicted with liver complaint; having a fixed pain in the region of the stomach, from which she had not experienced one moment's relief for many years; often times suffering the most excruciating torture for several hours; to relieve which she frequently took from one to two hundred drops of laudanum.

The taking of such quantities of this powerful sedative produced the most serious difficulty, causing a constipation of the bowels, which required the most active cathartics to remove. She was obliged to take physic every day, by which means large quantities of mucus, of a yellowish and singular appearance,

were discharged. Calomel, or Croton oil, were chiefly used to move her bowels; whilst she took no more food than would be sufficient for a sucking child, apparently for the want of room to receive it into the stomach. She was also much bloated, and when standing on her feet, her arms hung dangling and powerless at her sides.

In this dreadful situation, I was called on to attend her, and however hopeless the prospect appeared, I undertook the case.

In the first place I gave her stimulating medicines freely for several days, and then applied the vapor bath; but after steaming for more than an hour, was obliged to desist with producing but a very little moisture of the skin. Still continuing the stimulating medicines, I allowed her to pass over one day, and then applied the vapor bath again, as I was determined to excite an action in the skin before giving an emetic; being fully satisfied that some dangerous local affection existed in the stomach. The second attempt at steaming proved effectual; she became warm, and sweated freely. I then gave her an emetic, which produced violent commotions in the stomach for a while, but at length something appeared to give way, and she threw up about a quart of matter having the appearance of pus from an abscess, together with a hard white substance resembling the core of a boil, nearly as large as a hen's egg.

After the emetic had ceased to operate, I gave her a dose of composition, and to my astonishment found it produced an effect apparently as severe as melted lead. This satisfied me that an abscess had actually been formed and was broken, which rendered it impossible for her to take cayenne or any other warming medicine; and to recover without it I knew she could not.

I had just commenced practice in that section of country, and felt myself in a critical situation, as I strongly suspected the woman would die. I however commenced giving stimulating medicines as well as food by injection, and her husband and myself remained at her bedside day and night; and within five days, upwards of forty injections were administered. During the same time I gave her regularly a tea of golden seal and ginseng, in small quantities at a time.

At length she began to mend, having had no return of the pains in her stomach, and is now able to attend to her household concerns, laboring every day; and has passed through more than *one hundred courses* of medicine with manifest advantage, and improvement of her health, to the astonishment of all her acquaintance. Her husband has purchased a right to use the medicine himself, and says he would not be deprived of it for any sum of money. ALEXANDER REED.

Attest,— JACOB REINHARDT,
Husband of the above named woman.

CASE XXXIV.

Mrs. Beeson, an aged widowed lady, was afflicted with the most violent hysteric fits I ever met with. She called upon me whilst I was attending upon a boy who had the epilepsy, and took a fit in my presence. Her extremities became cold, and trembling of the whole system ensued. Breathing was alternately suspended, and then laborious. I immediately administered a large table-spoonful of the third preparation of Dr. Thomson. I soon inquired of her what effect the medicine produced, and she said that it caused a warm sensation in her breast. I then gave her another spoonful; in ten minutes she appeared well and has not had a fit since.

This cure was performed at the house of Zachariah Hobbie, in Spartanburg District, South Carolina, in the presence of many witnesses.—[*Ib.*]

CASE XXXV.

Dr. Reed also reports a case of fever of a violent and stubborn character, in which he gave five courses of medicine; three of them in immediate succession, which consumed fifteen hours; and the other two within sixty hours from the commencement. The third course removed the fever, and the two last effected a complete and permanent cure. He says he mentions this circumstance to encourage others to promptness and perseverance in all bad cases of fever.

Dr. Reed also says he has encountered fevers of every form, in patients of every age, and in different climates, having practiced in the Western and very extensively in the Southern States, and never lost a patient whose only disease was fever. We know that his practice has been very extensive as well as eminently successful; and therefore take leave, though apparently out of place, to introduce a few of his remarks on fever, which we think entitled to the highest consideration.

He observes, that in violent attacks of fevers, in the South, no time ought to be lost. In cases of this kind he gives a strong tea of the diaphoretic powders and ginseng; places a hot brick or stone at the feet, and administers a stimulating injection. If the patient appears bilious, always administer an emetic before using the vapor bath, or the bile will be scattered through the system, which he thinks injurious. Vomiting, he says, ought not to be discontinued when five or six motions have been produced; ten or fifteen are not too many, and sometimes it may be advantageously carried to twice that number. In one case of bilious fever, says he, I continued the vomiting for eleven hours

In thirty-six hours the patient sat at the table and ate; and in forty-eight went on his journey.

I once, continues Dr. Reed, vomited a Mr. Piatt (brother to the late John H. Piatt, of Cincinnati,) all night, which completely broke up his fever, and effected a permanent cure. After a fever is checked, Dr. Reed thinks that pills made of cayenne and rhubarb are good to prevent a relapse. He directs two to be taken every hour until they move the bowels. Sponging the body with pepper tea, in bad cases of fever, he also highly recommends, during the operation of vomiting, a pint of the tea to a gallon of cold water.

CASE XXXVI.

A female who had long been in a weak situation, and had suffered much by pains in her stomach and other parts, by hysterical affections, and a complication of other disorders, having employed several doctors of the regular Medical Faculty, as well as Root doctors, who had exhausted their skill, to little or no useful purpose to the afflicted person, applied for the use of the Botanic Medicines.

She was taken through a course of medicine as follows:— A large tea-spoonful of the diaphoretic or sweating powders were administered in warm water sweetened. An injection of African pepper, tincture of myrrh, diaphoretic or sweating powders, and lady's slipper, each half a tea-spoonful, was administered in an infusion of equal parts of the bark of hemlock and bayberry root. Six stones of suitable size, (say five or six inches in diameter) were well heated, and she was thoroughly steamed, giving the tincture of myrrh and cayenne pepper. She was then placed in bed with a warm stone in a wet cloth covered with a dry one, to her feet, and being very costive another such injection was administered, and then a heaping tea-spoonful of pulverized seed of lobelia, very fine, was given in warm water with cayenne; in fifteen minutes the same quantity of lobelia; in seven minutes as much of the pepper and the same of lady's slipper, and these were given alternately; the same of lobelia, and next the pepper and lady's slipper, until eight doses of the pepper and lady's slipper, and as many of the lobelia had been given, and then at the same intervals of time six more such doses of the pulverized seed of the lobelia. Pennyroyal, also milk porridge and soup, were at different times given to cause the easier operation of the emetic; and after the fourteenth dose she threw off from the stomach two quarts of a substance which in color and appearance resembled sponge cut in small pieces.

She had previously been taken through three light courses one every other day, without much relief, and no appetite for food; but after this thorough fourth course, she was hungry. her food set well on her stomach, and was the next day so well, that she could pay some attention to her family affairs; and by taking spice bitters a few days, she regained her strength, and has ever since been very healthy, and become the mother of several children. DANIEL BUTLER.

Dr. BUTLER says he cured a cancer on a person's finger, by two plasters of the sorrel salve; and that a bad cancer on a woman's breast was also cured by two plasters only of this salve.

His brother-in-law, he also states, was relieved of a very bad bloody flux in four hours, by taking seven doses of red pepper, each consisting of three tea-spoonfuls, in a tea made strong with the leaves of red raspberry. It soon eased the pains, and cured him in twenty-four hours.

CASE XXXVII.

Alexander Gillespie, Esq. a highly respectable citizen of Marion county, Ohio, was cured of a severe sickness, by Dr. Daniel Butler, which a number of their neighbors, as well as themselves, who had previously witnessed the like in others, all concurred in calling a bad case of what is known in some parts of Kentucky and Ohio by the name of Milk Sickness, Trembling Disease, or Sick Stomach.

He was in the 53d year of his age, and was taken with a dead, heavy pain and weakness in the stomach, loss of appetite, indigestion, weakness of the nervous system, and costiveness. He was next taken with a violent heat at the stomach, and tremor over the whole system; violent and almost continual vomiting; and being now confined to his bed, he sent for Dr. Daniel Butler, who administered—first, a tea-spoonful of tincture of lobelia, which was repeated twice; when he vomited, and his stomach seemed a little settled. He next gave him an injection composed of cayenne, tincture of myrrh, sweating powder, and half a tea-spoonful of lady's slipper, in warm water sweetened; but his bowels were so cold and insensible that he did not feel it, and did not discharge it. He then steamed him well, in the manner stated in the female case in the preceding number; then put him in bed with a hot stone to his feet, and gave him a heaping tea-spoonful of the seed of lobelia, made very fine, which caused some pain in the stomach. In fifteen minutes gave two heaping tea-spoonfuls of lobelia and one of African pepper;

this caused considerable pain, and slight vomiting. After this, in fifteen minutes, another heaping tea-spoonful of lobelia, drinking at all times hemlock bark tea. Considerable vomiting ensued, which afforded temporary relief. He then gave an injection composed of half a pint of strong tea of the astringent tonic, containing a tea-spoonful of the sweating powders, the same of tincture of myrrh and cayenne pepper, and half do. of nervine.

This injection aroused the bowels, and produced a small discharge of hard dry fetid substance from the intestines, when he vomited again moderately. He now lay in a tolerably easy, but dull sleepy state for a while, taking every 15 or 20 minutes the diaphoretic or sweating powders, and tincture of myrrh, alternately through the day; but during the forenoon was taken with violent hickup, so that he could be heard for one hundred yards, which continued until afternoon, and was then stopped by putting his fore fingers in his ears and pressing them hard for some time. He was then taken through another full thorough course, giving in every case fully double the quantity of medicines usually necessary. Both the injections and emetic operated powerfully; he sweat abundantly, and the whole system was relieved, except that towards the conclusion or close of the operation of the emetic, he was again taken with violent hickup, which continued about two hours. Stopping the ears with the fingers was tried without any good effect. Then gave a tea-spoon one-third full of clear oil of pennyroyal, and two or three tea-spoonfuls of tincture of lobelia, at intervals of a few minutes, and several other things were all tried in vain, because, as is supposed, they were administered *cold*. Then put a tea-spoonful of the sweating powders in half a tea-cup of *boiling* water, and it was drank as hot as he could bear it. This immediately stopped the hickup. This course was commenced in the evening about seven o'clock, and the hickup was stopped about two o'clock in the morning, and by giving every thing warm for twelve hours, it returned no more, (the vials of tincture were put in hot water to keep it warm.) The vomiting continued moderately, at intervals, till say twelve o'clock, when by very hard straining, a dark, thick, brownish, yellow, sticky, jelly-looking substance was discharged, and immediately the vomiting ceased; he felt hungry, and ate dried beef, corn bread, and coffee, and felt much relieved every way; his strength improved fast, took sweating powder and tincture of myrrh, at intervals of an hour, more or less; drank the hemlock tea, took bitters of golden seal poplar bark, bitter root, and pepper, all pulverized, and pursuing this course was well in a few days.

He has from that time to the present, (nearly a year,) enjoyed good health, and been able to attend to more business than he had for many years previous

In testimony to the truth of the above, I cheerfully subscribe my hand. ALEXANDER GILLESPIE.

June 16, 1832.

[Communicated by Dr. DANIEL BUTLER.]

CASE XXXVIII.

The proprietor and author of this Medical work, on a journey to Cincinnati, was taken with a chill succeeded by a fever, which affected his head so much that his mental faculties were entirely deranged. His wife and two Botanic physicians being in com pany, and business of importance urging them forward, they in two hours, took him through a course of steaming, injections. emetic, and washing off in cold water, &c.—which entirely re lieved him from the fever and mental derangement; and after taking refreshment, they placed a bed in the carriage and tra veled that day, in all forty miles. The next day he felt com fortable, and traveled thirty miles; the day after lay by, and had a chill and heavy fever; on the next day traveled thirty miles comfortably; but the day after had a violent fever and took a thorough course of medicine which threw off the disorder en-tirely; and he came home well.

In a few days after, when riding out, he was overtaken by rain, got wet, and being out in the evening took a relapse which was followed by a severe fever, that required six full Bo tanic courses to remove. Two weeks after this, through much exposure and great fatigue in the heat of summer, a second re-lapse occurred, and was succeeded by a fever of greater violence and more dangerous character than the former one. It then took nine thorough Botanic courses, each of which would produce relief from all the disagreeable symptoms—using spiced bitters in the intervals; and so long as he continued in a profuse per-spiration he felt comfortable, but so soon as his skin became dry he was afflicted with pains in his limbs and other parts of his body, with feverish symptoms, and could find no relief, until by taking diaphoretic powders, or African, or red pepper, and the application of hot stones to his sides, feet and other parts, free perspiration was again restored.

He continued in this situation several days, becoming weaker, and could find no permanent relief, until by the use of warm stimulants and hot stones as aforesaid, a profuse perspiration was produced, and the pains mostly or entirely removed; then he was taken from the bed, and had a bucket of cold water poured instantly on his head, so as to run over his whole body, and wi-ping off quickly was again laid in bed greatly refreshed and strengthened; after which he enjoyed a longer exemption from

pain than usual. Thus he was encouraged to repeat this course whenever the pains and aches returned, by which means he was soon restored to perfect health and strength.

CASE XXXIX.

Whilst the author was in Greenville District, South Carolina, he was sent for by a person of the name of Payden, who by a fall through his saw-mill, dislocated his middle finger, where it joins the hand. The finger was turned with the fore part behind, and so swollen and sore that any attempt to move it produced excruciating pain. The diaphoretic or sweating powders were immediately given in warm water; and then several folds of cloth were slightly wrapped around the hand, and water as hot as he could bear was poured on it, for fifteen or twenty minutes, by which time he perspired freely. We then took the covering from the finger, and turned it gradually, to its proper place; in doing which, little or no pain was produced; cold water was then poured on it, and frequently repeated; and little distress or inconvenience followed.

The next day he paid us a visit, and said his finger was well; it soon became as strong as it was before

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CASE XL.

The proprietor and author of this work, was, in early life, of a healthy, vigorous constitution; but through great exposure to wet and cold, contracted a grievous dysentery or kind of bloody flux, which continued for eight years; during which time he never enjoyed one day of what might be called good health.

His bowels, the whole time, were in a relaxed state, and almost continually discharged blood and slime, or a jelly-like mucus, and generally both at the same time. The excrements or stools often assumed a dark appearance, were very fœtid, like approaching mortification; and he would be so much reduced that he was unable to keep out of bed.

He applied to and exhausted the skill of all the physicians of his acquaintance, and then devoted himself to reading medical books, with a view of following the profession as a business, if he should be restored to health; but all proved unavailing; except that he could by those means procure temporary relief.

The disease was so deeply seated, that it would in a few days, return with redoubled force, and in a short time reduce him very low. And he believes that the most rigid temperance, and a diligent and determined disposition to take bodily exercise in

full proportion to his strength, were the principal means of preserving his life so many years in this debilitated state. Towards the close of this period he conceived the idea that red pepper would be useful, and he commenced taking one pod, seeds and all, every day, and finally increased the quantity, until he took three large pods with the seeds three times a day; which seemed to strengthen and reanimate him, but failed to overcome the disease.

His native country, North Carolina, where he then resided, produced sweet potatoes in abundance, of which he was very fond; but they producing flatulency, and his bowels being always relaxed, he supposed he must refrain from them, as their windiness seemed insuperable. But observing the condition of small children, many of whom in that country during fall and winter live almost entirely on them; and noticing that their bowels were always in good order, he conceived the idea that to live almost or altogether on sweet potatoes, would be beneficial to himself; and as he then had no hope from any other earthly source, determined, let the event be what it might, to give them a thorough trial; he accordingly substituted them for bread, taking other food as usual. The first three days, the windiness which they produced, together with the relaxed state of his bowels, kept him getting up and down so often that his strength became much exhausted, and he could only with difficulty raise himself in bed. He however perceived that the liquid or thin state of the discharges, *very slowly* but gradually assumed a better consistence, and less disagreeable odor. He found too, that after the third day, the flatulence seemed to be less troublesome, that he had little or no pain, and he was thus encouraged to persevere in substituting the potatoes for bread.

In less than a month the lax ceased to be troublesome, and his stools were in every respect natural, except that the discharges of blood, &c., continued unabated. About this time he took *one* meal of bread instead of potatoes, and the lax immediately returned: but was stopped again by the use of potatoes. He however soon found, from repeated trials, that he could with impunity take one meal of bread each day; and pretty soon two meals each day, with one of potatoes, and enjoy good health, except the discharge of blood, which was reduced in quantity. After a while he could omit the potatoes a whole day, but he must resume their use once, or more, on the day following, or the lax would return.

His strength now became considerably restored, and the flow of blood entirely ceased; but there was still a discharge of slimy mucus. In a little time more, perhaps in twelve or fourteen weeks from the commencement of the use of the sweet potatoes, every unnatural discharge ceased; having taken no medicine of

any kind from the first commencement, relying solely on the sweet potatoes. He could now continue the use of bread without the potatoes, for three days—but no longer, as the lax would return—and the use of the potatoes must be partially resumed.

The winter was now far spent, and the crop of potatoes became exhausted; but by the use of a few Irish potatoes, the cure was perfected, his health established, and he has never since been much afflicted with a relaxed state of the bowels for many days at a time.

He will close this narrative of personal experience on himself, by relating another extraordinary circumstance of relief from a distressed state of the bowels, directly the reverse of that of which he has just been speaking; believing that he owes them both as a legacy to the world, and records them for the benefit of posterity. He also hopes that they may be the means of hastening that happy period, which he believes is approaching, and which it is his anxious wish to accelerate, when health will be preserved by temperance and proper diet, and the necessity of resorting to medicine or physicians be in a great measure removed.

The reader will have observed from the foregoing statement, that his bowels were, for eight years, in an extremely irritable and debilitated state; from which, although they recovered, yet were undoubtedly left in a disposition to be readily affected by slight causes. It may also be proper to observe, that on the sea coast of his native State, the inhabitants lived much on bread made of Indian corn, which is far better calculated to keep the bowels open and regular than any other kind of bread in use.

In 1799 he removed to the Western country, where the principal part of the bread used was made of finely bolted wheat flour. Without reflecting then, or for many years afterwards, on the consequences which might, (and he has no doubt did) result from using this kind of bread, he took no measures to prevent that state of the bowels which has since caused him so much pain. It was not long before costiveness ensued which soon became habitual, producing head-ache of the severest form, from which no relief could be procured except what was merely temporary, until the contents of the stomach and bowels were evacuated by puking and purging.

It now seems strange that for sixteen years he should not once have reflected on the circumstance of his never having more than one fit of the sick head-ache, until he removed from his native State, and adopted the use of wheat bread as aforesaid. This case occurred on a journey home from a visit, during which he had eaten no other bread for several weeks, than that made exclusively from wheat flour, which produced an obstinate state of costiveness.

After removing to the Western country, he, without due reflection, persisted in the use of this kind of bread, and about once a month would have a most distressing fit of sick headache, when emetics, tartar, calomel, jalap, rhubarb, &c. were resorted to for relief; and to guard against those fits, the frequent, and at last the daily use of rhubarb, Lee's pills, or some mild laxative, was resorted to; and his digestive powers, and the tone of his whole intestinal canal, became increasingly impaired. Consequently, larger doses were required; and the paroxysms of sickness and excruciating pain in the head became more frequent; and in the course of twelve or thirteen years he was so reduced that, in addition to large doses every day of rhubarb or some of the more active but mild kind of laxative medicines, it became, as he supposed, absolutely necessary to use calomel and jalap, as well as to let blood to get relief. In the course of from three to four years more, in addition to tolerably active laxatives every day, it required, about once in three weeks, twenty or thirty grains of calomel, from thirty to fifty grains of jalap, and three to four large table-spoonfuls of castor oil, at one dose, and then take a full pint of blood, to obtain so much relief as to be able to live two or three weeks more, by taking the milder laxatives as before. This was in 1816, sixteen years from the commencement and regular progress of the disease.

Every kind of diet and medicine which was supposed would produce permanent relief, had long since proved ineffectual; his flesh was much wasted, and his strength nearly exhausted; his feet and legs swelled up to his knees; and in all human probability a few weeks appeared likely to terminate his existence. In this situation he was again attacked with another excruciating and almost insupportable paroxysm of head-ache. He strove to be as composed as possible, and felt undetermined whether it was best to resort to the use of those drastic purges and copious bleedings again for relief, or as patiently as possible confide in Divine Providence, and take no more medicine with a view to arrest the progress of the disease.

In this solemn and painful condition, with a mind calm and resigned to his situation, it occurred to him that, the day before, he had seen one of his family, who had been to the grist mill, take a bag of wheat bran into a back building for the purpose of feeding cows. With this recollection his mind was forcibly impressed with the belief, that if he would eat enough of it, it would relieve him. He had never heard nor thought of any such thing, and was, at that time, incapable of reasoning much about it; but the impression continuing on his mind, he took of it three times, in say ten or fifteen minutes, to the amount of two or three handfuls, and it soon entirely relieved him, without letting blood or taking any other medicine. He soon

found that one large handful, morning, noon, and night, would preserve him in health, which, with some reduction in quantity, he has continued in the use of to the present time. It neutralizes acidity in the stomach, and acts mechanically on the whole intestinal canal, keeping it clean, and enabling it to perform its proper functions. It mixes with the food and prevents bread made of superfine flour, or any other kind of aliment, from constipating the bowels, preserving the body in health and vigor.

It is now seventeen years since he discovered the efficacy of bran. For nearly eleven years it required of clean well ground and closely bolted wheat bran, two ounces in the morning, as much at noon, and the same quantity at night. This would enable him to partake of bread made of fine flour, or any usual food, except acid fruits or preserves. If he indulged in these, an extra handful of bran became necessary. On journeys, and sometimes for want of proper care, he neglected it, but always suffered for it.

In 1826 he refrained from it so long that he had a severe attack of bilious fever, followed by two relapses; and was cured by the Steam or Botanic Practice as before stated. His constitution has been ever since so much renovated that he is generally able to enjoy good health, with the use of only one handful, or two ounces as aforesaid, in the morning, on an empty stomach. This quantity, and sometimes a little more, is, and probably will continue to be, necessary during life.—He sometimes for a change takes it in coffee or tea, rendered palatable by milk and sugar; but believes it best to take it in one hand, and a glass of water in the other, and practice soon will teach how to eat it with but little difficulty, by taking a little bran and then wash it down with water. Few who have tried it have required so much as he has, to preserve health; but one of his friends has required more. He has seldom found since the first time he ever used it, that it has relieved him so suddenly, after becoming unwell by the neglect of taking it—but the patient use of it overcomes the difficulty.

It having been our original intention, to publish the history and specific treatment by botanic remedies, of only a few of the worst cases of disease, we shall now close our list of them. Believing that enough have been presented to satisfy every rational and unprejudiced mind, that we have the best of all authority, (*actual experience*,) for recommending as we have done, the use of *vegetable* medicaments.

GLOSSARY.

OR EXPLANATION OF THE PRINCIPAL TECHNICAL TERMS USED IN THIS VOLUME.

Abdomen, The belly.
Abscess, A tumor containing pus, as a boil, or other swelling.
Acid, That which imparts to the taste a sharp or sour sensation.
Acrid, Sharp, pungent, corrosive, or heating.
Acute, Sharp; ending in a sharp point; when applied to disease, means one which is attended with violent symptoms, and comes speedily to a crisis.
Affusion, The act of pouring a liquid upon any other substance; as of pouring water upon a diseased body.
Alkali, A substance which is capable of uniting with acids and destroying their acidity; such as potash, &c.
Alternate, In botany, branches and leaves are said to be *alternate*, when they come out singly on opposite sides of the stem, but not opposite to each other, following in regular and gradual order, first on one side of the stem and then on the other.
Amenorrhea, An obstruction of the menses.
Annual, Yearly; every year; in botany applied to plants and roots which grow from the seed, arrive at perfection, and die, in the course of a year or season.
Anodyne, Any medicine which eases pain.
Anthelmintic, That which destroys or procures the evacuation of worms from the stomach and intestines.
Antidote, A preservative against, or a remedy for, disease, and particularly for poison.
Anti-bilious, That which opposes or removes the too great accumulation of bile.
Anti-dysenteric, That which prevents or removes the dysentery.
Anti-emetic, That which removes, or opposes vomiting.
Anti-morbific, That which prevents or removes disease.
Anti-septic, That which removes, or tends to prevent putrefaction.
Anti-spasmodic, That which removes or tends to prevent spasms.
Anti-syphilitic, That which removes or prevents the venereal disease.
Aromatic, Fragrant; a plant which yields a pleasant spicy smell, or a warm pungent taste.
Astringent, That which corrects looseness and debility, by rendering the solids denser and firmer, known by its puckering effect upon the mouth.
Axillary, (Belonging to the arm pit.) In botany the space or angle formed by a branch with the stem, or by a leaf with the stem or branch.
Axillary Glands Are situated in the arm-pit. [See *Gland.*]
Belching, The act of ejecting wind from the stomach, by the mouth.
Biennial, In botany, is applied to plants, which form their roots and leaves the first year, produce their fruit the second year, and then perish.
Biternate, Twice-ternate; applied to a peculiarly formed compound leaf.
Bract. A small leaf.

Bulbous, In botany, root of a round shape; as an onion, &c.
Bursa mucosa, A mucous bag, which secretes and contains a substance to lubricate tendons, muscles, and bones, in order to render their motions easy.
Calculi, Small gravel or stones, which form in the bladder and kidneys.
Calyx, A cup; the external covering of an unexpanded flower; generally green, or the same color with the leaves of the plant.
Capsule, A hollow vessel which contains the seeds of some plants.
Carbonic acid gas, Fixed air, compounded of carbon and oxygen.
Carminative, A medicine which tends to expel wind from the body.
Cartilage, A white elastic substance, which serves to facilitate the motions of the bones, and to connect them together—often called gristle.
Cathartic, That which produces purging of the intestines.
Catheter, A small tubular instrument, to introduce into the bladder, to draw off the water, when the natural discharge is impeded or suppressed.
Caudex, In botany the main head or body of a root.
Caustic, A burning application, that destroys the part to which it is applied.
Chancre, A venereal ulcer, or sore, caused by the direct application of the virus.
Choleric, Easily irritated.
Chronic, When applied to disease is one which is inveterate or of long continuance, and mostly without fever.
Colliquative, Any excessive and weakening discharge from the body; as colliquative sweats, &c.
Coma, *Comatose*, } A strong propensity to sleep.
Concrete, A collected mass, united in a solid form.
Connate, Growing from one base; united together at the base, as the leaves of *boneset*.
Constipation, *Costiveness*, } An obstruction, or preternatural slowness of evacuations from the bowels.
Constriction, A drawing together, or contraction, as from cold.
Contagious, Catching; that which may be communicated from one person to another by contact, or by a subtile excreted matter.
Cordate, Heart-shaped.
Corymb, A cluster of flowers at the top of a plant forming an even, flat, expanded surface.
Cranium, The skull; the assemblage of bones which enclose the brain.
Crepitus, A sharp, crackling sound.
Cutaneous, (From *cutis*, the skin,) belonging to the skin.
Cuticle, The outward skin.
Decoction, A tea made by boiling any substance in water; the process of steeping or boiling medicinal herbs, &c.
Decumbent, Declined, or bending down.
Delirium, An alienation of mind, or wandering of the senses, caused by the violence of fever.
Diaphoretic, That which, from being taken internally, promotes perspiration, or discharges by the skin.
Digest, To dissolve; in chimistry, to soften and prepare by heat; the action of a solvent on any substance; often applied to the infusing of any medicinal substance in spirits.

Discutient, An application which disperses a swelling or tumor, or any coagulated morbid matter.
Diuretic, That which, by its internal application, augments the flow of urine from the kidneys.
Duodenum, The first portion of the small intestines.
Efflorescence, In diseases, applied to a redness of the skin; in botany, applied to flowers.
Effluvia, Exhalations from diseased bodies or other substances, whether noxious or otherwise.
Electuary, Powders or other ingredients, mixed with melasses or honey.
Emetic, A medicine which provokes vomiting.
Emmenagogue, That which tends to promote menstrual discharges.
Epidemic, A contagious or other disease that attacks many people at the same season, and in the same place.
Erosion, The act of eating away.
Errhines, Medicines, which, when snuffed or taken into the nose, excite sneezing, and increase the secretion of mucus from this organ.
Eructation, The act of ejecting wind from the stomach through the mouth.
Eruptive, The bursting forth of humors, on the surface of the skin, in the form of pustules, &c., &c.
Escharotic, Caustic; corrosive; eating.
Excoriate, To gall, strip, or wear off the skin; to remove the skin by the action of acrid substances.
Excretive, Having the power of separating and ejecting fluid matter from the body.
Exotic, Foreign; not a native.
Expectorant, Medicines which increase the discharge of mucus from the lungs.
Fauces, The back part of the mouth.
Febrile, Pertaining to, or indicating fever.
Fibrous, Consisting of slender threads; the small slender roots of plants.
Filter, To strain through cloth, paper, or other porous substances.
Flaccid, Soft and weak; limber; lax; yielding to pressure for want of firmness.
Flatulency, Windiness in the stomach and intestines.
Flush, A transient redness and heat of the cheek or face.
Fomentation, A sort of partial bathing, by applying flannels dipped in hot water, or medicated decoctions, to any part.
Fontanelle, A vacancy in the cranium or skull of infants.
Formula, A prescription; a specified form.
Fundament, see "Rectum."
Fur, A coat of morbid matter collected on the tongue of a diseased person, especially in fevers.
Gargle, A medicated preparation for washing the mouth and throat.
Gas, A permanently elastic aeriform fluid.
Gland, In *anatomy*, means a distinct, soft body, destined for the secretion or alteration of some peculiar fluid.
Granulation, The act of forming into small grains.
Hectic, Habitual; denoting a slow, continual fever, marked by preternatural, though remitting heat, which accompanies the consumption, &c.
Hemiplegy, A palsy that affects one-half, or side, of the body.

Hemorrhages, Fluxes of blood, proceeding from the rupture of a blood-vessel, or some other cause.

Hemorrhoidal, Pertaining to the vessels which are the seat of the hemorrhoids or piles.

Hydragogue, A medicine that occasions the discharge of watery humors from the body.

Hydrogen, An aeriform fluid gas, of the lightest body known; and is consequently used for inflating balloons. It forms one of the elements of water, being about 15 parts to 100 of that liquid; and is fatal to animal life.

Hypochondriasis, The vapors: spleen; a disease which is attended by languor or debility, lowness of spirits or melancholy; the sufferer often apprehending great evil to himself, &c.

Hysterics, A disease of women, characterized by spasmodic affections of the nervous system, and often attended by hypochondriacal symptoms.

Indented, Notches cut into any thing making sharp points like teeth.

Infectious, That which taints or corrupts; having qualities which may communicate disease from one to another.

Infuse, To steep in liquor without boiling, for the purpose of extracting medicinal qualities.

Inguinal, Pertaining to the groin.

Inoculation, The act of communicating a disease to a person in health, by inserting contagious matter in his skin or flesh.

Inspiration, The act of drawing air into the lungs.

Inspissate, To thicken a fluid substance by evaporation, or drying.

Intermittent, Ceasing for intervals of time.

Jagged, Uneven; having notches or teeth.

Lanceolate, Oblong, and gradually tapering towards each end; shaped like a lancet.

Laxative, A medicine that relaxes the bowels; a gentle purgative.

Lethargy, Morbid drowsiness or sleepiness; a continued or profound sleep, from which a person can scarcely be awaked, and if waked remains stupid.

Linea Alba, A tendinous expansion, forming a straight line from the pit of the stomach to the navel, and from thence to the pubes.

Lithotomy, The operation of cutting for stone in the bladder.

Local, Belonging to a part and not to the whole.

Lupuline, The fine yellow powder of hops.

Lymph, A colorless fluid separated from the blood, and contained in small vessels called lymphatics.

Materia Medica, That branch of medical science which treats of the nature and properties of substances employed for the cure of diseases.

Membrane, A thin, flexible skin, serving to cover some part of the body.

Menstruum, All liquors are called *menstruums* which are used as dissolvents, or to extract the virtues of medicines, by infusion or decoction.

Morbid, Diseased, sickly.

Mucilage, A fluid of a shiny, ropy, and soft consistence.

Mucus, A slimy, ropy fluid, secreted by the mucous membrane.

Narcotic, A medicine which has the power of procuring sleep by stupefaction.

Nausea, An inclination to vomit, without effecting it; also, a disgust of food, approaching to vomiting.
Nervine, Any thing that affords relief from disorders of the nerves.
Nitrogen, An elementary, gaseous fluid, incapable of supporting animal life; composing about four-fifths of the atmospheric air.
Oblong, A figure or solid which is longer than it is broad.
Obtuse, When applied to pain, means *dull*; not being sharp or acute.
Oval, *Ovate*, } Of the shape of an egg; inclined to the shape of an egg.
Oxygen—*Oxygen gas* composes about one-fifth of the atmospheric air. It was formerly called vital air, because it appeared to be the only part which exercised any stimulant effect upon the living power.
Pancreas, A soft supple gland, situated in the lower part of the abdomen, which secretes a kind of saliva, and pours it into the duodenum.
Panicle, In botany, a species of inflorescence, in which the flowers or fruits are scattered on peduncles, variously subdivided, as in oats.
Parotid, The name of certain glands, below and before the ear.
Paroxysm, 1. An obvious increase of the symptoms of a disease which lasts a certain time and then declines. 2. A periodical attack or fit of a disease.
Pathognomonic, A term given to those symptoms which are peculiar to a disease, and without which the disease does not exist.
Pectoral, Pertaining to the breast.
Peduncle, In botany, the stem or stalk that supports the flower of a plant, and of course the fruit.
Pendulous, Hanging down; swinging, suspended.
Perennial, In botany, a plant or root which lives or continues more than two years.
Perspiration, Evacuation of the fluids of the body through the pores of the skin. The matter perspired, or sweat.
Petioles, The foot stalks of a leaf.
Phlegmonous, Appertaining to inflammatory tumors, such as boils, &c.
Pinnated, In botany, a pinnate leaf is a species of compound leaf wherein a simple stem has several small leaves attached to each side of it.
Plethoric, In medicine fullness of blood, &c.
Polypus, A tumor which is generally narrow where it originates, and then becomes wider, somewhat like a pear.
Prolapsus, A falling out, or falling down, of some part of the body.
Proximate, Nearest; next. A *proximate cause* is that which immediately precedes and produces any particular effect.
Pubescent, In botany, the state of being covered with either hair, down, bristles, beard, &c.
Pungent, Sharp; biting; pricking; stimulating.
Pupil, The round opening in the middle of the iris of the eye.
Purges, *Purgatives*, } Medicines which increase the intestinal discharges by stool.
Purulent, Having the appearance or qualities of pus.
Pus, Matter; a whitish, cream-like fluid, found in inflamed abscesses, or on the surface of sores.
Pustules, Small pimples, or eruptions on the skin, containing pus.
Putrescent, Becoming putrid; tending to putrefaction.
Quartan. Occurring every fourth day.

Quotidian, A fever whose paroxysms return every day.
Racemes, Growing in clusters; in botany, a species of inflorescence, consisting of a peduncle with short lateral branches, as garden currants, &c.
Radiating, Shooting or spreading out in the form of rays, as light, &c.
Radical, Pertaining to the root.
Rectum, The last portion of the large intestines terminating in the anus.
Refrigerating, Cooling; allaying heat of the body or blood.
Remittent, To abate in violence for a time, without intermission.
Resolution, The dispersing of a tumor, or inflammation, without suppuration.
Respiration, The act of breathing.
Resin, An inflammable substance, hard when cool, but soft and fluid when heated; flowing from certain kinds of trees, in a fluid state.
Rigidity, Stiffness; want of pliability; the quality of not being easily bent.
Rigor, A sense of chilliness, with shivering and contraction of the skin
Rubefacient, A substance which, when applied a certain time to the skin, induces a redness without blistering.
Sanguine, Abounding with blood; plethoric.
Scirrus, A hard tumor commonly situated in a glandular part, and often terminating in a cancer.
Scrotum, The skin which covers the testicles.
Secretion, The act of producing or separating from the blood substances different from the blood itself, &c., &c.
Sedentary, Accustomed to sit much, or to pass most of the time in a sitting posture.
Septic, Relating to putrefaction.
Serum, 1st. Whey; 2d. The fluid which separates from the blood when cold and at rest.
Slough, } Separating from the living flesh, as the dead part in
Sloughing, } mortification.
Solvent, Having the power of dissolving; the fluid in which any thing is dissolved.
Spasm, Cramp, convulsion.
Spasmodic, Pertaining to cramp or convulsion.
Sphacelus, Mortification of the flesh; gangrene.
Spleen, The milt; a spongy viscus, placed on the left side, between the eleventh and twelfth false ribs.
Stimulant, Medicines which excite the action or energy of the system
Stool, An evacuation from the bowels.
Strangury, A difficulty in voiding urine, attended with pain.
Styptic, A medicine which has the quality of stopping discharges of blood.
Sudorific, A medicine that produces sweat, or sensible perspiration.
Suppuration, The process by which pus or matter is deposited or formed in inflammatory tumors.
Sutures, The seams or joints which unite the bones of the skull.
Syncope, Fainting, or swooning.
Syphilis, The venereal disease.
Tenesmus, A continual and urgent desire to go to stool, without a discharge.

Tense, } Stretched; strained to stiffness; rigid.
Tension, }
Tent, A roll of lint placed in the opening of an ulcer.
Terminal, Growing at the end of a branch or stem; terminating.
Tertian, A disease whose paroxysms return every other day.
Thorax, The chest.
Tonic, A medicine that increases the strength or tone of the animal system.
Tonsil, A glandular body, situated on each side of the fauces, and opening into the cavity of the mouth by several excretory ducts.
Triennial, Continuing three years.
Tumor, A morbid swelling or enlargement of a particular part.
Turbid, Muddy, cloudy, dirty.
Typhoid, Resembling typhus; weak; low.
Ulcer, A morbid sore, which discharges pus, or matter.
Umbel, } Flowers resembling in their form, an umbrella, such
Umbelliferous, } as the parsnip, fennel, &c.
Ureter, A tube conveying the urine from the kidneys to the bladder.
Uterus, The womb.
Uvula, Commonly called the palate.
Vaccination, The act of inoculating persons with the cow pox.
Vermifuge, A substance that destroys or expels worms from animal bodies.
Vertigo, Dizziness; giddiness of the head.
Viscera—Plural of *viscus*.
Viscus, A name applied to the organs contained in the thorax or abdomen, as the lungs, liver, &c.
Viscid, Glutinous; sticky.
Volatile, Capable of wasting away suddenly from exposure to the air
Whorls, Flowers, or leaves, which surround the stem in a ring.

ENGLISH INDEX.

THE following Index contains the common or English names of the different articles. For the *Systematic, Technical,* or *Latin* names, reference must be had to the *Latin Index,* which immediately follows the present one.

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