REVIEWS.

ART. XV.—*A Treatise on Therapeutics, and Pharmacology or Materia Medica.* By GEORGE B. WOOD, M. D. Late President of The American Medical Association, &c. &c. &c. Two vols. pp. 840, 901. Philadelphia, J. B. Lippincott & Co. London, Trübner & Co. 1856.

No department of medicine has advanced more rapidly during the last fifteen or twenty years than Therapeutics. The explanation of this is evident. Physiology, pathology, animal chemistry, and kindred sciences have been rapidly progressing for the same period and longer. They are the natural predecessors of therapeutics. The latter can advance only when the former precede. Progress in therapeutics is the natural result of a more intimate acquaintance with the history and pathology of disease, and the physiology of the human system. Among those who have successfully cultivated this branch of science, Dr. Wood, of Philadelphia, has earned a foremost place. Few men upon this side of the Atlantic have obtained a wider reputation, or more justly earned the reputation they enjoy. It has been said that a man's greatest rival is himself. This remark is especially true of Dr. Wood. As a Lecturer upon *Materia Medica* and Therapeutics for thirty years, before one of the largest schools in this country, as the author of an elaborate *Treatise on the Theory and Practice of Medicine*, as one of the authors of the *United States Dispensatory* (a work of whose excellence it would be needless to speak), and as one of the attending physicians, for twenty years, of a large Metropolitan Hospital, he has won a reputation of no ordinary character. A man with such opportunities, and such facilities, and such a reputation, finds in himself his strongest competitor. To say that in the work, whose title we have placed above, he has fully equalled his reputation and justified the expectations of the medical community, is ample praise; and we rejoice that we can say this without qualification. We have been looking for the appearance of this work for some time, and now have the satisfaction of chronicling its publication. The reasons which led Dr. Wood to its preparation, are modestly stated by him in the preface, in the following language:—

"In preparing the present work for the press, the author claims to have been actuated, in part at least, by motives higher than those of personal credit, or pecuniary advantage. Though he pretends to no insensibility to these ordinary influences, he believes that he is obeying a call of duty in laying before the profession those results of his research, experience, and reflection upon the subject of therapeutics, which have heretofore been confined to the narrower limits of classes of medical students. His former lectures constitute the chief substance of the present treatise, though considerably extended, and much elaborated. Perhaps he may be laying himself open to a charge of overweening self-estimation, in supposing that he can add to the existing mass of knowledge, or improve existing views in this department of medicine, in a degree which may justify the publication of a book like the present; but he is unwilling to leave the world without giving some degree of permanency to what he has so long taught, and consoles himself with the consideration that, should the work prove of less value to the profession than he ventures to hope or anticipate, it is not likely to do serious injury, and, at the worst, will be merely superfluous."

The work is not, like too many which come from the American press, a compilation, but an original treatise. It is not written for practice, but from practice. Every page bears the impress of the author's research and observation. We do not say that every part of it will meet with unqualified approbation. We do not say that it contains no theories or statements which some will not criticize, but we do say, that whatever statements are made, they are evidently the result of the author's experience and observation. Dr. Wood has not given us the notions of another man, but his own. He has not treated us to a theoretical dissertation upon the uses of medicines, but has given us, in simple and unadorned language, the results of a long professional life devoted to the clinical study of therapeutics. This alone is enough to stamp the book with unusual value. We have books in abundance upon all sorts of medical subjects, therapeutics included, written by those who have nothing else to do than write. Only now and then do we come across a medical work, which is the result of close observation and long experience. In the work before us we find one that bears the stamp of the true coin.

We have said that it is written from personal observation; and so it is. Yet the labours and observations of others are constantly referred to and frequently quoted. No attempt is made by Dr. Wood to conceal the sources of his knowledge. He is always willing to give due credit to others. He is too rich in himself not to acknowledge all his indebtedness. We are, moreover, glad to notice that in his quotations, Dr. Wood has drawn largely from American sources. This is right and just. We have sometimes thought that American professional writers are unwilling to quote their own brethren, and prefer to cross the water and cite English, French or German authorities. Dr. Wood quotes freely from transatlantic authors, but at the same time, he does not hesitate to quote American observers in every part of the country.

A treatise on therapeutics, such as Dr. Wood has given us, supplies a desideratum in our medical literature. It is written from the point of view of therapeutics, and not from that of the *materia medica*. It differs from the *United States Dispensatory* in not describing drugs with that minuteness, which is essential to the latter work. Yet, while it does not contain minute descriptions of drugs, with detailed accounts of their chemical constituents and pharmaceutical preparations, it presents more fully and thoroughly than the *Dispensatory*, the therapeutical applications and uses of each drug. It differs, moreover, from the author's *Treatise on Theory and Practice* in not containing long and detailed descriptions of diseases; it describes, however, more fully than any work on theory and practice can do, the way in which every drug should be used for the relief of the diseases to which it is applicable. It is, in fact, a complement both of the *Dispensatory* and of the *Treatise on the Practice of Medicine*. A brief and sufficient description is given of the sensible and chemical properties of each article, but the largest space is devoted to an account of its physiological action upon the system, its various therapeutical applications, and of the best mode of its administration.

We should like to give a complete account of the whole work, but a sketch only of what it contains is the utmost we can offer. After doing this we must refer our readers to the work itself.

The *Treatise* is in two volumes, containing 840 and 901 pages respectively. It is divided into two parts. The first part is devoted to general therapeutics and pharmacology; the second to special therapeutics and pharmacology. The first part is in reality an introduction to the second, and occupies only ninety-one pages of the first volume. It contains an exposition of the author's

views of the *modus operandi* of medicines; of the influences which modify their effects, such as age, sex, idiosyncrasy, habit, etc., and of certain theories with regard to modes of therapeutic action. The forms in which medicines are used, and the parts to which they are applied, and the manner of applying them, are also described. This part closes with a classification of medicines, and thus prepares the way for the second and more important portion of the treatise, on special therapeutics and pharmacology.

The classification which Dr. Wood has adopted, is not based upon the botanical or mineralogical relations, or chemical properties of drugs, but upon their relations as therapeutic agents. The physiological and therapeutical action of a drug is made to determine its position as a member of one class or another. Accordingly, remedies are divided into two great classes, called systemic and non-systemic remedies. "The former division embraces the great body of remedies, the latter includes only two small classes." Systemic remedies are subdivided into general remedies, such as stimulants, sedatives, alteratives, etc., and into local remedies, such as emetics, cathartics, diuretics, &c. Astringents, tonics, narcotics, and all drugs, which act upon the circulation and the nervous system, are treated of under the head of general remedies. Those which affect some one part or organ specially, and influence the whole system indirectly (such as emetics and cathartics) are classed under local remedies. Non-systemic remedies are stated to be those which act on bodies foreign to the system, and embrace only two small classes, namely, antacids and anthelmintics. Under the subdivision of local remedies, Dr. Wood has placed several classes, which are not usually found in similar classifications, at least not with the same names. Thus he has made a class of cholagogues, of uterine motor stimulants, and of protectives. When a remedy has several powers, it is treated of most thoroughly in connection with its most distinctive property, and it is again treated of in other classes, to which its therapeutic properties ally it. Hence the same remedies are occasionally considered in different places, and under different heads.

Dr. Wood does not claim for this classification that it is new or that it is free from objections. It cannot be called a scientific one, yet it possesses many practical advantages, which approve themselves to our judgment. We wish, however, that Dr. Wood had not undertaken to compel all remedies into some class or other. We should have been glad to see in the work a class of *unclassified*. We mean that there are some well-known, powerful, and valuable drugs, which, in the present state of our knowledge, cannot properly be ranked under any class. Thus, we do not know enough of the *modus operandi* of mercury or iodine, arsenic or colchicum, turpentine, or nitrate of silver to attach them to any class. We may call them alteratives, or give them some other name, using the expression, like the x of the algebraist, to express an unknown power. But if this is all we mean by such a term, it is better to use a word which implies no theory. It is better to put those remedies, whose action is imperfectly understood, in a class by themselves, without any name. Dr. Wood has placed creasote and copaiva among diuretics, turpentine among stimulants, nitrate of silver among tonics, electricity among diffusible stimulants. We know very well that copaiva and creasote act upon the kidneys, that nitrate of silver will sometimes improve the appetite, turpentine and electricity stimulate the heart, yet copaiva is not generally used as a diuretic any more than nitrate of silver is generally used as a tonic. It would be simpler to discuss such articles, as well as mercury, iodine, arsenic, and some others, in a class without any name, which, as we have already said, implies no theory of their action. But, on the whole, the practical ad-

vantages of Dr. Wood's plan, with the single exception we have made, render it preferable to the classification of Pereira, or the ingenious one of Mr. Headland.

The description of each class is preceded by several pages of introductory remarks, of a practical character, which point out the therapeutic action and indications of the whole class. In these prefatory remarks, some of the most valuable observations in the whole treatise are to be found. We should like to point out many of them, as well as some of those, occurring elsewhere, but have not space to do so, and must content ourselves with calling attention to a few points.

Before doing so, however, let us remark that the work is not a treatise upon drugs alone. Physicians, as well as the public, have been too much in the habit of regarding drugs as the most important of therapeutic appliances, if not the only ones. Treatises on therapeutics often describe drugs alone, or give such a meagre account of other remedies, that the student is apt to look upon those other remedies as of little value. Dr. Wood has not fallen into this error. Under one head or another, he treats at length of the physiological action and the therapeutical use of cold and heat, of diet, climate, exercise, electricity, mental influences, regimen, hygiene, &c., and points out their value as means of treatment. Even the influence of artificial somnambulism, or what is commonly known as animal magnetism, is alluded to, and the slight value assigned to it that really belongs to it. Electricity is discussed in an article of no less than fifty four pages. The account is thorough, discriminating and practical, putting the reader in possession of the latest discoveries, and stating its use in special diseases. At the close of the article an allusion is made to the elimination of metallic substances from the system, by means of the decomposing agency of galvanism. This method has become very popular, of late, among charlatans, under the name of "Electro-chemical Baths." Dr. Wood alludes to this method, but does not express a decided opinion as to its practicability. We will only say by the way, that we have satisfied ourselves, by numerous carefully conducted experiments, that metallic substances cannot be withdrawn from the system, by a galvanic current thus applied.

Water, the one remedy of the hydrotherapists and their panacea for all human ills, is fully described as a tonic, a sedative, a diaphoretic and stimulant. Its therapeutic application, in the shape of the cold bath, hot bath, tepid bath, freezing mixture, fomentation, etc., are pointed out. We are glad to meet with a good description of the rational use of water, as a therapeutic agent. There has been a great want of precision among medical writers, who have written upon this subject. Dr. Wood has shown us the true method of its employment, and indicated the scientific rules which govern its application.

Diet is treated of chiefly under the head of indirect depletion. In the discussion of it, the common generalities with regard to the importance of diet are avoided. It is shown to be an efficient therapeutic agent. In the few pages which are devoted to this subject, the different kinds of diet which are appropriate to different conditions of the system, are indicated with precision and good judgment. We wish that our author had gone more into detail upon this matter than he has done. The subject deserves a careful and detailed account from the pen of every writer on therapeutics.

We have not time to speak critically, as we should like to do, of many important observations which Dr. Wood has made, and which are to be found scattered through the book under various heads. Most of those, which we

had marked for comment, must be omitted. We think it desirable, however, to call the attention of the profession to his statement, with regard to the use of the oil of turpentine in typhoid fever. Our own experience of it, in the way he recommends, has not been large. So far as we have tried it, our observations confirm his. The statement of so careful an observer ought not to be disregarded, and if the experience of the profession should bear out those statements, the oil of turpentine will prove a valuable adjuvant to our means of treating a most formidable disease. We can best present these views in Dr. Wood's language; and the quotation will serve as a fair sample of the author's style and way of treating a subject:—

“Though the oil may be of some use as a mere stimulant in this disease, (typhoid fever) it is, in that respect, of but comparatively little value, and cannot be depended on to the exclusion of a wine whey, carbonate of ammonia, and nutritious aliment, in low conditions of the fever. But the oil will accomplish what these cannot. It acts most happily in stimulating the diseased patches of Peyer's glands, and the isolated glands of the same kind, whereby the softened and disorganized matter is more readily thrown off, and the ulcerated surfaces disposed to heal, when they might otherwise be unable to do so. The remedy, therefore, is to be given at the period during which the discharge of the softened matter is going on, and ulcers are forming, or in existence. This is usually, I believe, about the middle, or towards the close of the second week. Before this time I count upon no material service from the oil. It is now that the tongue becomes *dry*; and the occurrence of the dry state of the tongue in a decided degree, is the signal for commencing with the use of the remedy. I give it usually in doses of ten drops every two hours, but sometimes increase to fifteen or twenty drops. At the end of twenty-four, or at the furthest of forty-eight hours, there may very generally be seen a return of moisture with a white fur on the surface of the tongue at the sides, for its whole length leaving the surface in the middle still dry and often cracked. With this amendment, there is often also a diminution of the tympanites, a cooler and moister skin, and a less frequent pulse. The same change goes on till the whole tongue becomes moist, and covered usually with a whitish fur, which then gradually disappears, commencing from the top and edges. Sometimes, even when there has been no dryness of the tongue in the case, I have found the oil to act favourably in ameliorating the symptoms; and frequently, when the disease has appeared to linger in its advanced stages, and, though not severe, to show a perverse disposition to hang on to, the patient, I have seen it almost immediately enter into convalescence under the use of the remedy. Again, when the case is marked in its progress by the cleaning of the tongue by flakes or in patches, leaving a red and smooth surface, as if deprived of the outer layer of the epithelium and papillæ, and when the surface of the tongue, whether completely or only partially cleared, instead of remaining moist as it does in favourable cases, becomes very dry with an aggravation of the general symptoms, I take it for granted that there has been a corresponding unfavourable change in the intestinal ulceration, indicating the use of the oil. It is precisely under these circumstances that, previously to my original use of the oil, I had seen a majority of the cases that came under my notice prove fatal; and, since the use of it, only two. I do not claim for the oil any specific power over typhoid fever. It will not prevent death from intercurrent pneumonia, or meningitis, or various other sources of mischief; but I do think, as the result, too, of great experience in the disease, that so far as the mere affection of the intestinal glands and its direct consequences are concerned, it will vastly diminish the chances of a fatal issue. The reason why, in the special condition of the tongue last described, the favourable effects of the remedy may be almost certainly calculated on, is that at the commencement of the cleaning process, the proper idiopathic disease has about run its course, and would almost certainly end well, but for an unfavourable change in the condition of the ulcerated surfaces; and whatever, therefore, will favour the healing of these, will in all probability secure a favourable termina-

tion. I have been more particular in this account of the use of oil of turpentine in enteric fever, because I have great confidence in the efficiency of the remedy myself, and wish to prevail on others to use it by showing the grounds of this confidence, and pointing out the precise circumstances under which, according to my experience, it should be employed." (Vol. i. pp. 563-5.)

The indications and contraindications for the use of tartar emetic are admirably presented. We wish, however, that the dangers of giving it to infants had been urged in more decided language. Its powerfully sedative and depressing action upon the system during the first year of life, is so great, that we are satisfied death has sometimes followed its incautious administration to children of a year old and younger. So great is this danger, that we should be inclined to prohibit its use altogether in persons of so tender an age. The heroic treatment of pneumonia and inflammatory affections of the chest, which was brought into vogue by Rasori and others of the Italian school, is properly condemned. "I am bound to express my own conviction," says Dr. Wood, "that the practice is on the whole not to be recommended." In saying this, we believe he expresses the conviction of most of our judicious practitioners. At the same time, the control of tartar emetic over pulmonary inflammation is fully admitted and explained, and its judicious use advised.

Among the subjects which we had marked for comment, are chloroform, alcohol, the use of heat as a stimulant, cod-liver oil, the use of quinia in rheumatism, travelling and exercise as therapeutic agents, and others. But we must bring our remarks to a close, and refer our readers to the book itself for Dr. Wood's views with regard to these and all other remedies of the *materia medica*. The latest reliable discoveries in therapeutics are incorporated into the work, and described with the exactness and precision characteristic of the author.

Dr. Wood closes his preface with the remark that this work will probably be his last professional treatise. "Advancing years warn him that the time is fast approaching when a failure of faculties, or the termination of life will render labour in any new field impracticable." We fervently hope that in both these points he is mistaken. Dr. Wood has not yet exhausted the stores of his experience. We trust that a hale and hearty old age awaits him, during which he may have the health and the leisure to draw from those stores, both for the benefit of the profession and the community.

In conclusion, let us commend the treatise heartily to the medical profession, and add as a parting word that the typography of the book is excellent. It is printed with a type and on paper, which is worthy of the subject, and highly creditable to the publishers.

E. H. C.

ART. XVI.—*Human Physiology, Statical and Dynamical; or the Condition and Course of the Life of Man.* By JOHN WILLIAM DRAPER, M.D., LL.D., Professor of Chemistry and Physiology in the University of New York. Illustrated with nearly 300 wood engravings. New York: Harper and Brothers, 1856.

THE work whose title is at the head of this article, has been but lately issued from the press, and comes from the pen of one of the most original thinkers in this country. Before the work reached us, we felt confident that