stages, at intervals varying from a few days to several weeks.

Surgery of the thyroid is still in its developmental stage. In reading the literature one is impressed by the fact that each author, at one time, attributed his good results to some special feature of his operation which he has since found unnecessary or injurious and has abandoned. Fads are fast disappearing, and the work is rapidly approaching the basic principles underlying established surgery.

In the hands of men like Mayo, Kocher, Ochsner, Crile, Tinker and others, the mortality of operations for hyperthyroidism is now from two to five per cent, and 85 per cent of those who recover may be said to be symptomatic cures. It is neither honest nor expedient, however, to make light of the operation or to belittle its difficulties and dangers. The figures quoted are from the statistics of master

surgeons, and by no means represent the results of the average operator.

After a successful operation for hyperthyroidism, the improvement in the patient is immediate and marked. In fact, no operation in surgery produces such quick and brilliant results. Tremor disappears, the pulse falls to normal, the eyes become less wild, and restlessness and irritability are replaced by quiet and composure. The wound, as a rule, heals rapidly, and the patient is able to leave the hospital in from ten to fourteen days.

Because the patient is well from the operation, and because the acute symptoms are relieved, is not ground for immediate return to the ordinary activities of life. Crile very properly states that it requires approximately the same time to recover from exophthalmic goitre as from a nervous breakdown from other causes. A successful operation should be followed by an adequate rest cure.

EMPIRICISM IN MEDICINE.*

By H. H. MARTIN,
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H. C. Wood, in defining empiricism, says: "The primeval method of treating disease was that which we now know by the name of Empiricism, a method that may be defined as the using of a certain remedy in a certain disease because it has seemed to do good in similar cases. From time to time, led by chance, by fanciful suggestions, by mental influences unrecognized by their subjects, men have given remedies innumerable and most diverse to persons suffering from disease, and when recovery has occurred it has been generally attributed to the remedy administered last. No substance so vile and disgusting, no procedure so violent and injurious, that it has not been empirically employed, while men have affirmed and reaffirmed its great value as a cure. It is true that careful observations repeated on

many individuals may at last give a basis of practical truth and success to empirical treatment, but such methods must remain, even after centuries of study, uncertain and unscientific." The same author defining Scientific Medicine, says: "In a few words it may be described as being based upon a knowledge of what is necessary to do in disease, an acquaintance with the power of the forces at hand, and an application, by the ordinary processes of reasoning, of such forces to the needs of the occasion, and more important than these in most cases are those therapeutic measures which arise out of a correct understanding of the basal conditions of the body which underlie the symptoms." In interpreting any individual cause of disease it must be borne in mind that similar symptoms are produced by:

exactly opposite basal conditions. Thus, purging may be the outcome of intestinal paralysis or of intestinal irritation, whilst constipation may result from intestinal irritation or from intestinal paralysis. An apoplectic unconsciousness may be due to arrest of circulation in the brain or to a sudden increase of blood in the brain. A furious delirium may result from exhaustion or may be a manifestation of a violent irritation of the cerebral cortex; and in like manner a convulsion may be produced by lack of power of the nerve centers or may have its origin in centric irritation. If the temperature of the brain be lowered below the normal, as in heat exhaustion, unconsciousness with muttering delirium is caused, whilst the excessive heating of the brain which occurs in thermic fever also often betrays itself by unconsciousness and muttering delirium.

In an individual case of disease the nature of the condition is to be recognized, not so much by a survey of the chief symptoms as by a careful consideration of these symptoms in connection with others which may seem to minor importance to the inexperienced, but which really mark the direction which the current takes.

It is not within the scope of this paper to discuss in detail the study of the fundamental states in individual disease, but it seems to me that the time has come for the elimination of empiricism in medicine.

The treatment of any disease must be formulated upon a thorough understanding of the pathologic conditions which obtain in any case as well as a correct understanding of the "basal conditions of the body." Empiricism has taught us many things but incidentally has created some vicious habits. How many of us today cherish the delusions that colchicum will cure rheumatism, that potassium iodide will cure scleroses, that valerian will cure hysteria, that there is such a thing as an "alterative," that calomel acts on the liver, that hypophosphates and phosphites will cure neurasthenia, that pepsin will cure indigestion,

that lithium salts will cure gout, or any of the thousand and one delusions which empiricism in medicine has created in the minds of medical men, not to mention the countless thousands of so-called proprietary medicines which are being advertised in medical journals, prescribed by pharmacists and, sad to relate, by reputable physicians as well.

Mr. Edw. Bok, of the Ladies' Home Journal, said that in his great fight against patent and proprietary medicines he "had the co-operation of all classes of the public except physicians," and that he found "the physicians in direct co-operation with the proprietary and patent medicine interests." He says, "Look at your average medical journal reeking with advertisements of so-called ethical preparations, and not only advertisements but reading notices calculated to deceive." He says further that as a result of his investigations, "The evidence of the unintelligent prescribing of secret proprietary medicines on the part of physicians is appalling and that the prescribing of those nostrums is increasing to an alarming extent."

A committee appointed by the American Medical Association to investigate these charges found that in New York City twenty to twenty-five per cent of all prescriptions were for proprietary medicines, and that in a single New York drugstore seventy per cent of all prescriptions sent in by reputable physicians contained either nostrums pure and simple or as a part of a compound. In Chicago one drugstore showed forty-two per cent of all prescriptions to be for proprietary medicines and another fifty per cent. Boston showed thirty-eight and forty per cent and Philadelphia an average of forty-seven per cent. Truly a sad commentary on the practice of medicine. Is it any wonder that surgery has outstripped medicine in our struggle to make of them exact sciences?

Mr. Bok is considerate enough to speak of this as "a thoughtless practice." That, to my mind, is too mild a term.

It is generally understood that scientific medicine began with Hippocrates about B. C. 460. Hippocrates was an exponent of scientific medicine and bitterly opposed theories which had no basis in scientific facts. He carried out a system of observation and deduction which might well be emulated by the medical men of today. He was always open to conviction and willing to admit his errors. He was conscientious in the practice of his profession, was skillful in diagnosis, and relied greatly upon the healing powers of nature. For many years Hippocrates was the great authority among medical men.

Empiricism, as Dr. Wood expresses it, was the primeval method of treating disease, but was not countenanced by medical men until about the sixteenth century, when Paracelsus, that rampant, blatant, boasting, but marvelous knave and charlatan, grafted empiricism on to the medical profession and left it to medical men as an eternal heritage.

Mr. Kipling has said of Homer that,

"When he struck his bloomin' lyre
He'd heard men sing by land and sea:
And what he thought he might require,
He went and took the same as me."

Paracelsus took what he thought he might require regardless of its origin or virtues, and incorporated it into his system of medicine. And I'm afraid that we have even today more men of our profession who are followers of the Paracelsus school than of the school of Hippocrates.

However, there is a gratifyingly large number of the latter and they are daily increasing in number and scientific attainments as well. Empiricism has done more to retard the progress of scientific medicine than any other one factor even though it has given us some valuable assets. The few ascertained facts of scientific medicine are of most practical value than the accumulated rubbish of ages of empiricism. Now that is the first thing we must overcome in our effort to abolish empiricism in medicine. It is the "tendency to use certain remedies in certain diseases because they have

seemed to do good in similar cases," without taking the time and trouble to arrive at a correct understanding of the basal conditions of the body in health and in disease.

The next thing we must accomplish is the crushing of that "hydra-headed monster"—the proprietary and patent medicine association. This could be easily accomplished but for one thing, the power of money. A large majority of our so-called medical journals are owned soul and body by the proprietary medicine interests, a large majority of our newspapers are reeking with the obnoxious absurdities of patent medicine advertisements, and worse than all, a large number of reputable physicians have allowed the love of money to inveigle them into joining a recent organization known as the "American Druggists' Syndicate;" have in very truth "sold their birthright for a mess of pottage;" have allied themselves with these exploiters of cure-alls, and counter prescribers, because they have been promised a share in the profits.

These practices are absolutely unpardonable. If we must use drugs in our practice we have the U. S. Pharmacopeia, the National Formulary, and in addition the Council on Pharmacy and Chemistry of the American Medical Association publishes a list of New and Non-official Remedies which they have examined and approved. We should, therefore, withdraw our support from those so-called remedies and cures which are manufactured or compounded for the sole purpose of making money and not for the purpose of healing the sick.

The time has come when we must look this question squarely in the face, must lock horns with it in a death struggle, for it is materially hindering medical progress, it is holding our profession in disrepute, it is taking dollars from the poor and afflicted without giving them adequate return. Every patient who comes to us is entitled to a scientific investigation and an accurate diagnosis if his disease based upon a thorough comprehension of the

existing pathologic conditions and a complete and comprehensive knowledge of the underlying "basal conditions." It is an easy matter to look at his tongue, feel his pulse, write him a prescription, and tell him to call again, but that is not scientific medicine. For when we "take drugs and nostrums of which we know little and pour them into bodies of which we know less," we are practicing empiricism pure and simple.

Fifty per cent of our patients do not require medicines at all, and a well selected placebo will answer as well as many of our prescriptions. (If you do not believe me try it.)

A few years ago we were felicitating ourselves on the fact that a pure food and drug law had been enacted by Congress. But what became of this law? Listen to the words of Dr. Harvey W. Wiley: "A beneficent law, passed in good faith by Congress, was mercilessly eviscerated and the disemboweled corpse was turned over to the Secretary of Agriculture for dissection. The Secretary of Agriculture, inspired by his trusties in crime, Solicitor McCabe and Associate Dunlap, attacked the carcass with the avidity of fasting buzzards, and soon only the whitened bones of

the pure food law remained as mute witnesses if its existence."

The proprietary interests will not give up easily, but give up they must if we but present a united front in this just and honorable fight.

Let us as medical men, entrusted with the health and lives of our fellow-man, come to a fuller realization of our duties and responsibilities, let us shake off the superstitions and absurdities of empiricism, let us draw a sharper line between scientific and empiric medicine with "no compromise" as our slogan. Let us exclude forever the voluble "detail man" and his wares from our offices; let us exclude the medical journals which are allied with the proprietary interests from our offices, and let us also endeavor to establish if necessary one or more drugstores in every city and town in this country where drugs are dispensed on prescription only.

Let us also endeavor to secure the enactment of a law in each of our several States that would make the newspaper proprietor just as responsible civilly and criminally for the advertisements that go into his paper as he is for any article in the news column.

FOREIGN BODIES IN THE OPEN OPERATION FOR FRACTURES.

By HERBERT P. COLE, M.D.,
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The introduction of foreign bodies into the technique of the open operations for fractures has revolutionized all former methods of fracture surgery. The researches of Arbuthnot Lane, beginning in 1885 and surmounted by twenty years of practical application of his theories, place him first among the many to develop this surgical field.

Of the various objects suggested for use as fixation splints in the open operation—nails, brads, wire, steel plates and screws, bone and ivory pegs and plates and the absorbable magnesium strips—each has special qualities

claimed by different operators, and all have their place in this procedure. As is the case in all epoch-making surgical procedures, this is passing through the vicissitudes ensuing its adoption by the enthusiast and the unfit. Fortunately the ill results occasionally reported following the use of these foreign bodies have disclosed the imperfections and bad surgical judgment of the operator rather than the imperfections of the procedure itself. The use of modern aids to diagnosis, the exercise of surgical judgment, the employment of strict asepsis, and a reasonable amount of mechani-