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"It Shall Be Well With Thee"

JUST as the Sun upon his westward way
At evening sets and leaves Earth cold and grey,
So, each bright thing of life must some time fade
And o'er the serene soul fall sorrow's shade.

STILL the fixed sequences of Nature's plan
Hold good for solar systems and for man;
The dawn MUST follow night, and joy serene
Return to hearts where dark despair has been.

G. H. C.

The American Journal of
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Dependable Therapeutic Fact for Daily Use

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About Honesty

LONG ago, Archbishop Whateley said that honesty is the best policy, although he who acts on that principle is not an honest man. It has also been said that the designation of "a good, honest man" nowadays is but a civil name for a fool. Commercial honesty is held to be an unavoidable condition for lasting success, and business men are honest because they have to be if they want to retain their good name in the business world.

These pessimistic views make it appear that honesty is being practiced merely as a means for furthering one's self-interest, and not as a guiding principle, for the sole reason that it is right to be honest. Whether this be true or not, need not be discussed here. One might almost be tempted to reverse the jesuitical axiom and say that the means justify the purpose. That honest people are not necessarily to be respected or are not always either altruistic or very good people, is the assertion of a French writer.

Looking through a back number of *Paris Médical,* recently, we came across a very clever arraignment of honest people who there are compared with rogues, greatly to their disadvantage—meaning to the disadvantage of the honest people. For one thing, this French writer maintains that the rogues stick together in a manner such as never is observed among honest people. Suppose, for instance, that you are attacked by toughs at night in a lonely quarter of the city. Do you think for one minute that the honest people who hear your cry will come to your assistance? Not much; at best, they may notify the police who arrive at the spot only possibly to find you dead.

But, supposing that you are a tough (the French writer employs the word *apache*) and are pressed hard by police officers; immediately all your "pards" will unhesitatingly risk their lives to deliver you from the hands of the minions of the law.

In defending a just cause, honest people evince a lukewarm ardor that contrasts strangely with the vigor with which rogues fight for their own interests. Vice is far less fragile than virtue. One may count upon the roguery of rogues; but, all too often, the honesty of honest people is wabbly. As a matter of fact, an honest man is one who is guided by the dictates of his conscience, provided no stronger interest leads him to act differently. Do you believe for one moment that any man, who is actuated solely by motives of honesty, has much chance of succeeding in his under-

taking, if his interests interfere with those of honest people who are in a position to influence his success? Hardly!

As this article was published several years ago, it goes without saying that the French author referred to the war for the practical application of his views. He asserted that the war was started by "apache nations" and that, here are elsewhere, birds of a feather flocked together, the enemy nations meriting, in his opinion, the designation of apache, every one of them. So far our French friend.

Now, what are the facts in ordinary life? Is the assertion justified that honest people are, often anything but good, really honest? To be sure, "Friend of the People", "Vox populi", "Constant Reader", and all these voluminous newspaper correspondents always have the courage of their opinions—on paper; and are very brave in criticizing the wickedness of highway men, of toughs, bootleggers, holdup men, and all the rest of them. Nor are they hesitant in placing the blame where it belongs (in their opinion!): on the police, on dishonest politics, on everything but themselves, not individually but collectively.

It seems to me (better write individually; for, this is my own, personal view) that the questionable honesty, the dirty politics, the frequent law breakings, the ignoring of the Eighteenth Amendment, and many other things that we should like to see eliminated, are as much at the charge of the honest people as at that of the rogues, toughs, thieves, and so on. It is, in one way, an occasion for crying: *"Mea Culpa! Mea Magna Culpa!"* Isn't it true that we, all of us, consider legal restrictions to be very excellent, oh! most suitable—for the other fellow? But, when they are irksome to ourselves, ah, well, we have discretion, we do not (no, never!) abuse things, and those legal restrictions may be dented just the least little bit, for our personal benefit. Of course, it would never do to let *hoi polloi*, the rabble, the plebs, in short, the apaches, and even the "common people" (what a superior air it does give us to talk about the "common people", to be sure!) exercise their own sweet will in interpreting the laws that they wish to obey and those that they may transgress. Never, in the world. You see, they are not sufficiently educated and cultured. But, as for ourselves; well, the case is entirely different. You see that, don't you?

We do not really see it. Deep down in our honest consciousness, we know that we transgress against the law of the land if we speed or make dandelion wine and fig wine or if we exact more than seven percent interest. The banks get out of that by charging the surplus as "commission". Beautiful word, that: Commission. Enables you to get so much more than the law would stand for, and quite legally, too.

However, what I was going to say, we all of us fracture the law occasionally. Even the women, and especially they, like nothing better than to beat the custom house officers and smuggle some cherished purchase through without paying duty on it. "Wrong? Why, pay duty on that little bit? Nonsense. No, it is not wrong. Why, the idea!!!!!" It makes one think of the poor young girl who had loved unwisely, had given birth to a baby and was being chided by her Father Confessor. She remonstrated: "But, Father, it is such a little, tiny baby!"

And then, the irregularities in certain politically managed offices, in politics generally; the cut-throat game of speculation and gambling in stocks; the disgraceful occurrences even in "the best society circles", the ever recurring scandals—if irregular, illegal actions and undertakings are indulged in by the educated, the cultured, the very leaders of society and of the people, is it any wonder that the "rabble" think that they are perfectly justified in shaking the plum tree while the shaking is good and promising?

It has often been said that a city, a country, has as good a government as it deserves, as it wants. That is true. And, it is equally true that public opinion and public morals are as good as, neither better nor worse than, the morals of the individuals making up the public. Those placed high, in positions of trust, in influential places, are looked to as examples, being in the public eye. If they infringe upon proprieties, on morals, if they break the law, the socalled lower classes will feel justified in following suit. The manifest truth of the saying that big thieves are honored with medals while little ones are jailed does not serve to impress the peepul very greatly with the worthiness of their alleged betters. The behavior of the latter offers, however, a convenient excuse for the transgressions of those whom the arm of the law reaches because they have not enough money or enough influence to wriggle out of its clutches.

It is my conviction that the state of public morals, of general honesty, whatever it may be, is in direct proportion to that maintained by the influential members of the population. Not only the wealthy, who are ever in the public eye because the newspapers record their

doings, but even more the professional people, preachers, teachers, lawyers, physicians. It is especially and particularly the professional classes whose representatives and whose individual members are watched and whose examples are followed by those who do not feel quite sure of themselves and want to lean on others, stronger than they are themselves.

The influence for good, and for evil, of the better educated is immense. Their responsibility is correspondingly great. Woe to the people whose leaders guide them astray, whose prominent citizens are themselves not free from reproach, ignoring and breaking the law for their own convenience. It is these who are, in part, responsible for the depravity of the rabble. It is they who help to maintain the apache population, by their example, by their influence and, sometimes, through their victims.

It is a mistake to suppose that men succeed through success; they much oftener succeed through failure.—Samuel Smiles.

USES OF PARAFFIN-WAX DRESSING

In the Abstract Department of this issue of CLINICAL MEDICINE (p. 776), there are two case reports reproduced from the *Journal A. M. A.*, in which two interesting methods for using paraffin-wax dressings are described. The second one, in which a varicose ulcer of long standing was treated with this application (of course, with suitable auxiliary therapy) is confirmed by some observations in our own and in the experience of others. Many varicose ulcers have been brought successfully to healing through the instrumentality of paraffin-wax dressings, rest and general hygienic measures.

The first of the two cases is of special interest. A young girl had been scalded and the wound had healed with much cicatrization of elbow and adjacent portions, leaving the arm flexed and almost completely fixed. Operation was done, removing the scar tissue and, for dressing, paraffin was used. Ultimately, the flexion being corrected by removal of the scar tissue, the arm healed perfectly with only slight discoloration of the skin. During the entire process, a flexible, light and comfortable paraffin-wax dressing was worn.

These are only some of the numerous uses to which this interesting substance can be adapted. There are many others. We have in mind, to pick out one instance only, the case of a very old man who was seriously ill with cystitis and various complications to which he ultimately succumbed. Although the physician had been assured by the nurse, on repeated interrogation, that there were no bed sores, the extreme restlessness of the patient caused him to investigate, when he found several ulcers which accounted for the great discomfort suffered by the patient. Washing with a mild antiseptic and then applying paraffin-wax dressing remedied matters and kept the patient in comfort for the rest of his days. We believe that this soft and pliable application will be found useful, especially in cases of bedsores.

There is one caution necessary, however. It has happened that the unduly prolonged administration of paraffin-wax dressings, particucially if it was applied very thick, caused a serious irritation of the skin. In one instance, where a physician had insisted on making thick and air-tight applications of parresine on severely burned hands—against our warning—and where those dressings had been continued far longer than would have been necessary, an unsightly and distressing verrucous dermatitis developed which was relieved only with difficulty. While, in the ordinary usage and with the exercise of common sense, paraffin-wax dressings are entirely innocuous, injury *may* follow their administration. Especially would we warn against the unduly prolonged application of these dressings without giving the skin a chance to be ventilated. We believe that it is a good plan to leave the skin or wound uncovered for short periods at frequent intervals. In this manner, undue softening of the epidermis and the lower layers can be avoided.

PERIODIC PHYSICAL EXAMINATIONS

In an article appearing on page 727 in this issue of CLINICAL MEDICINE, Doctor Siegelstein writes in favor of periodic physical examinations and criticizes the custom, that is now fostered in many places, of determining the presence or absence of satisfactory health conditions from the result of a urinalysis, the urine specimen being sent in and examined without any efforts being made to interview the subscriber for this alleged health service and without apparently paying attention to any other factors that might betray actual or impending functional disease.

We have no desire whatever to discourage the efforts that are made in the way of inducing people, more especially those in the best years of their lives and those who have passed

the climax, to take stock periodically in order to ascertain at the earliest possible moment when anything is wrong. Nevertheless, Doctor Siegelstein is justified in questioning the actual efficiency of this socalled service in the form in which it is being given.

While it is quite true that a urinalysis affords the physician, who knows how to read it, information that goes further than merely a determination of a functional ability of the kidneys, it happens often enough that such a urinalysis cannot possibly be made the basis of a clean bill of health. Yet, that is what the subscribers for health service are led to expect. As Doctor Siegelstein points out clearly, this incomplete examination may bring it about that the people who get it rest perfectly content, seeing that their urine did not contain any albumin or that it was otherwise designated as normal—while yet there might be found, elsewhere, evidence of impaired functioning and of impending ill health.

We wish to emphasize Doctor Siegelstein's insistence upon a complete and thorough examination which should be done twice a year. Such an examination should not only include all of the organs, in other words, be a complete physical inventory of the organism, but a very important part of it should be a very searching interrogatory in which the applicant (he need not necessarily be a "patient") is questioned regarding his habits of eating, drinking, working, sleeping, thinking, and in which advise is given to him wherever it is needed.

It has happened frequently enough in our own experience that a urinalysis was satisfactory and that, yet, on careful interrogation, and on physical search, some irregularities were found that yielded promptly to the adequate measures. While it is quite true that a complete urinalysis tells us much, it will not do to forget that it cannot tell us everything.

Edison's genius is ten percent inspiration and ninety percent perspiration.—Arthur Brisbane.

"ANSWER A FOOL ACCORDING TO HIS FOLLY"

(Prov. 26:5)

The fools are always with us, even like the poor, and usually they are blatant braggarts pretending a knowledge and a wisdom that they do not possess. So hopeless is their blockheaded narrow-mindedness that, as Schiller exclaimed, "against stupidity, the very gods themselves contend in vain."

The only way to deal with a fool is in accordance with the wise Preacher who, we are told, also gave us the Proverbs.

Recently, the annual P. S. C. Lyceum convened in Davenport, Iowa. We assume that the letters stand for Palmer School of Chiropractic Lyceum. A good friend sent us a copy of the *Davenport Democrat and Leader* for August 30, in which some remarks, made by Clarence Darrow, a Chicago Criminal Lawyer, were reported. Mr. Darrow said that the doctors get people coming and going, but, while one was in attendance when he was born, since he had no say in the matter (Mr. Darrow, not the doctor), he prefers not to have a medical man assist him in the act when he comes to die. Just a little bet; when Mr. Darrow does approach the valley of shadows, he will dismiss his Chiropractic friends and will call loudly for a physician.

Mr. Darrow took as his subject, "The Medical Profession," probably because he knows mighty little about it. Among other things, he declared that the doctors want compulsory vaccination and compulsory serumization (*sic!*). Yet, "there is no doctor who can explain the why and wherefore of vaccination."

It is just like in the case of story writers. That half of the people who does not know how the other half lives writes books about them. Where does Mr. Darrow get the idea that no doctor can explain the why and wherefore of vaccination? The wherefore is quite self-evident, because it is usually qualified by the word preventive or prophylactic. The why is outlined in every textbook on immunization and in numerous journal articles. If Mr. Darrow really wants to know, it will be an easy matter for him to find out. In the briefest possible terms, vaccination is practiced to assist nature to do what would occur under normal conditions but does not happen because the natural processes are deficient or in abeyance.

The thing that Mr. Darrow dislikes most about doctors is the continual change in their fashions, and, yet, he opines, this change must take place; "otherwise the M. D.'s could not hold their patients." For a lawyer whose reasoning power is supposed to be trained, this is a singular ratiocination. We might retaliate by saying what we do not like about lawyers (who usually make up the bulk of legislators) is the continual change in their fashions. The legislators have recently bestowed upon the suffering public many thousands of new laws.

All of them were drawn up and formulated by lawyers. Some of them contradict others that are already in existence. Many are so crazy that they do not stand the scrutiny of even a first-year high-school boy. Of course, to say, "you're another," is not a proper or dignified rejoinder. However, if physicians never changed their methods or even their views, they would justly be held up to obloquy because, where there is no progress, retrogression inevitably follows. The fact that physicians do change their views proves that they study and investigate. It is easy enough to be mistaken once and the wise learn from their mistakes and do better next time. If Mr. Darrow never changes his views, we are extremely sorry for him and for those who fall into his clutches.

Mr. Darrow asserts that "doctors have drugs to sell but they do not buy drugs for their own families." How does he know that? It is simply a fool statement, as could easily be proved. Mr. Darrow probably knows as much about doctors as he does about Sanskrit or Chinese. Otherwise, his peculiar assertions, all of which are false, could not have been made.

That remarkable address of Clarence Darrow, prominent Chicago criminal lawyer, was not the only titbit that was offered at the Chiropractic Lyceum. We are told that Mr. Palmer, the fountain-head himself, gave a splendid sales talk on "The Science of Being a Good Fellow for Better Business." Now, this is where we doctors can go to school to Palmer and learn: In the theory and practice of advertising and salesmanship. It is advertising, advertising in the fashion of Colonel Sellers and Mr. Barnum and other bunco steerers that has put Chiropractic on the map and that is maintaining it, even giving it a foothold before the law and keeping it in the people's minds. Surely, it pays to advertise. Also it pays to tell the people wild stories of people who got well after [not necessarily because of—Ed.] being treated—"adjusted" is the word—by Chiropractors. Of course, it is the part of wisdom to say nothing of the many who are treated and still keep on being ill. An occasional death or so need not deter them either, even though it may be shown that an adjustment of the spinal column is not the best curative measure in treating people seriously ill with pneumonia, with diphtheria and similar ailments. Incidentally, would any Chiropractor have the guts to adjust a patient with smallpox or with yellow fever, or some such virulent infectious disease? We doubt it. Supposing an unkind fate were to cause Mr. Darrow's immunity to smallpox to be exhausted; supposing, further, that he were to be exposed to infection and pretty soon started with the usual prodromal symptoms, including the atrocious backache, how soon would he fire his Chiropractor and howl for one of the physicians whom he criticizes now so harshly?

Centuries ago, Mr. Palmer's predecessors traveled through the land, robed in academic gowns, usually accompanied by a Punch and Judy show, perhaps by a clown, by a hurdy-gurdy, and by other things to attract attention. They would stop by the wayside, at country inns, on the village greens and give the people some good entertainment. Not much was required, because the tastes of the times were simple. After having put the yokels in properly contented minds, through a free show, it was not difficult to extract their pennies and shillings and procure the coins for bottles of alleged medicine, jars of salves and boxes of powder.

Today, and in Davenport, Iowa, the entertainments are given by splendidly-trained orchestras, singers and others and are broadcasted all over the country by radio. The consequence is the same; for, the program inevitably is followed by a rousing talk about the excellencies of what the Chiropractor has to sell and accompanied by vituperation of the regular medical profession. You can always get the people's attention by vituperation. The vulgar herd likes nothing better than to hear somebody else scolded and decried.

The moral? There isn't any. It is all pretty shoddy and vulgar and silly. There is one point, though. While, of course, physicians cannot advertise in the style of Palmer and do not use the radio for sending out little Jack-Horner messages, they can and should bring their wares before the people more than they do, by teaching, by showing how to keep well, how to prevent illness and by relieving actual disease in the most efficient manner.

There can be no rainbow without a cloud and a storm.—J. H. Vincent.

THE CHEMICAL FOUNDATION SUIT

The consensus of opinion in well-informed circles is, that the Government's case against The Chemical Foundation has fallen down. In view of the importance of The Chemical Foundation's aims and ideals to the medical profession, a brief review of the testimony, as given at Wilmington, Delaware, will be of interest. As physicians, we are naturally con-

cerned about the preservation, independence and progress of the chemical industry in this country.

Before considering this testimony, it will be recalled that, prior to the war, there existed no real dye nor medicinal chemical industry in the United States. The manufacture and sale of the world's supply of dyes and synthetic chemicals was practically controlled in Germany or dominated by German interests. The war brought about a shortage in this country of important medicinals, dyes and chemicals. Our lack of chemical preparedness was shockingly demonstrated as early as 1914. The story of the submarine "Deutschland", bringing over the last of the German "Salvarsan" to this country, and its selling for as high as fifty dollars an ampule is well known.

It was at this time that far-seeing statesmen and broad-minded business men agreed that this country should never again be confronted with such a perilous situation. They planned wisely that an American chemical industry should be encouraged, protected and guarded. The first step to bring about this condition was the executive order of President Wilson, so authorized by Congress, delegating the power of sale to the then Acting Secretary of State, Frank L. Polk, who authorized the sale of German patents held by the Alien Property Custodian to The Chemical Foundation, Incorporated.

Mr. Frank L. Polk thereafter issued certain orders by virtue of this power and authority, authorizing the Custodian to make the sales of patents, copyrights and trade-marks to The Chemical Foundation, Inc.

It has often been pointed out that these German patents had never been operated in this country, but were simply taken out and held in the United States to prevent American firms from building up a chemical industry. It will be seen that this sale was made by the Chief Executive of the United States, acting under proper authority from Congress, of property absolutely owned by the United States and disposed of by him after months of the most exhaustive consultation with every possible person cognizant of the lessons of war and competent to advise, so that the final steps in that victory (our only victory!) might be insured and accomplished.

Following the consummation of this sale, and after three years of successful operation of The Chemical Foundation, which resulted in the American chemical industry obtaining its first foothold, the Chief Executive of the United States was advised by the Attorney-General to attempt to abrogate the solemn executive order of his predecessor. It was the first time in the history of the United States that the Chief Executive had been advised by his Attorney-General to violate a contract entered into by the Government with its citizens. And, so, suit was brought by the Government against The Chemical Foundation for the recovery of the patents, based upon the report of the Attorney-General "That the sale was made at so nearly a nominal sum that there was reason to believe that the Government had not faithfully observed the trust which was implied in the seizure of the property."

The Attorney-General went so far as to accuse The Chemical Foundation of conspiracy and to threaten criminal action. Later, it was realized by the Government that these charges were unfounded, and they were dropped. After months of delay, the suit was finally brought to trial in the District Court of Delaware at Wilmington, presided over by the Honorable Hugh M. Morris.

The Government's case was greatly weakened when Frank L. Polk, Acting Secretary of State, in President Wilson's second administration, was called as a witness by the Government in an attempt to prove that he, Mr. Polk, had been duped by the Alien Property Custodian, and by manufacturers, into the sale of the patents to The Chemical Foundation, through misrepresentation and withholding of facts. Mr. Polk, on the stand, testified that he knew all about The Chemical Foundation plan, and was not misled at any time. He further stated that efforts to end the German monopoly had been talked over with President Wilson, and that both he and A. Mitchell Palmer were in full accord with the idea of the need of ending foreign control in this industry.

Judge Morris indicated at this stage of the trial, that he did not believe the courts had any right to review the war acts of the President. Judge Morris stated, "The authority to make a private sale is a presidential matter. If he could seize and dedicate the patents to the American public, then it indicates that the President in disposing of these patents could take into consideration other than the financial return therefor."

Mr. Polk's testimony was a distinct blow to the Government, as it was thought by the prosecuting attorneys that he was not familiar with the facts surrounding the sale.

An extremely important point was brought out in the testimony of June 22. It was ad-

mitted by Government officials that there was a possibility of these patents reverting to the Germans if the Federal Courts should cancel the sale to The Chemical Foundation. Such action would destroy the work of the past five years in fostering an American chemical industry, and again give to the Germans the monopoly which they held prior to the war, and which they are again seeking.

On June 23, the defense, in referring to the testimony of the previous day, charged that "German influence" was the invisible plaintiff behind the Government in bringing this suit, and that the aim was to have the patents reverted to the former German owners. Mr. Kresel, for the defense, pointed out, in support of this allegation, that witnesses, called by the Government, had served as German agents prior and subsequent to the War, and that these witnesses had tried to discourage our Government in supporting an American dye industry. Letters and other exhibits were submitted to prove these charges.

Mr. A. Mitchell Palmer, showed that both he and President Wilson were fully aware of the situation regarding the German patents in this country, and that he was very much in favor of the sale of the patents to The Chemical Foundation. He stated that President Wilson aimed to kill the dye trust of the Germans in this country. Mr. Palmer defended the sale price to The Chemical Foundation and declared he had to form The Chemical Foundation in order to find a purchaser. Mr. Palmer's testimony was very much to the point and created a good impression. Colonel Anderson, representing the Government, did not ask him one question in cross-examination.

Mr. Francis B. Garvan gave the history of his acts as Alien Property Custodian in full and described in detail the formation and operation of The Chemical Foundation. Although the Government apparently considered Mr. Garvan as the arch conspirator, they failed completely in cross-examination in showing that he had not been entirely honest in all his transactions.

Dr. E. H. Volwiler, Chief Chemist of The Abbott Laboratories, after many protests by Government Council, was qualified as an expert and testified that, in general, the German patents under which The Abbott Laboratories had received licenses from The Chemical Foundation, were of little value and had to be essentially modified or changed altogether in order to make the products commercially feasible. An important ruling was made by the court when the witness declined to reveal the methods used by his Company in the place of the patented German methods. The court held that these methods need not be revealed in open court and that the information which might be so obtained was immaterial and irrevelant.

Doctor Volwiler testified that over fifty thousand dollars had been spent by The Abbott Laboratories in developing commercially feasible methods for the production of Procaine, Cinchophen, Neocinchophen, Acriflavine and Proflavine, and also gave evidence concerning the workability of the arsphenamine patents.

Judge Morris, on July 8, read into the record, statements from the book, "The Riddle of the Rhine," calling attention to the need of a self-contained chemical industry in any country for the sake of its own military protection.

Three textile witnesses, Mr. Thompson, President of the United Finishing Mills, Mr. Hobbs, president of the Arlington Mills, Mr. Cheney, Member of the firm of Cheney Brothers, representing respectively the cotton, woolen and silk manufacture and dyers, testified that there was no American monopoly of dyes at this time and that prices had been materially reduced under American manufacture and protection of The Chemical Foundation.

Colonel Thomas W. Miller, present Alien Property Custodian, testified that he had conveyed in two instances patents to The Chemical Foundation, but that, when he did so, information had been withheld from him and that he would not do so again. When he was recalled to the stand later, he was unable to enumerate the facts which he stated had been withheld from him. Colonel Miller admitted that he considered himself a trustee for the German owners of this property, and indicated that there was a good likelihood that they would be returned to the Germans if the Government again obtained them from The Chemical Foundation, and if the present administration remained in power.

The Government, in attempting to show that the German patents for drugs were workable, called Dr. Louis Friedman, a chemist employed by Mr. Metz, to testify concerning the workability of the Cinchopen patent. Doctor Friedman testified that he had readily made Cinchophen of commercial quality under this patent, contrary to the previous statement of Moses L. Corssley, Chief Chemist of the Calco Company, who had testified to the unworkableness of the Cinchophen and other patents.

Judge Morris ordered Doctor Friedman to proceed to the laboratory, under observation of other chemists and several United States deputies, and to produce Cinchophen according to the method of the patent. After twenty-six hours of continuous work, Doctor Friedman returned and it was found that he had produced only a small quantity of impure Cinchophen and that this method would not be commercially feasible, either from the standard of purity of product or of yield.

This report contains a few of the high lights in the trial which has been adjourned for the summer. The testimony has been completed. In the fall, briefs by the Government and the Chemical Foundation will be filed; after a study of these briefs, Judge Morris will hand down his decision. It is probable that, unless the Government withdraws the suit, it will go to the Supreme Court for final decision.

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From the September issue of *Industrial and Engineering Chemistry*, we reproduce a list of the witnesses who testified in the Chemical Foundation suit as communicated by Mr. J. Merritt Mathews.

Witnesses in the Foundation Suit

Editor of Industrial and Engineering Chemistry:

It seems to the writer that there should be recorded a list of the witnesses who testified in the suit of the United States Government against the Chemical Foundation in the United States District Court at Wilmington, the hearing having been concluded July 23. It is interesting to note how different interests were aligned and with whom those concerned preferred to class themselves. The following were called by the Government:

KARL HOLDERMANN, director of Badische Anilin und Sodafabrik.

ALBERT M. PATTERSON, a prominent industrialist and president of the Textile Alliance, Inc.

HARRY E. DANNER, treasurer of the American Dyes Institute.

WILL T. GORDON, formerly an attorney in the Bureau of Investigation, Alien Property Custodian's office.

FRANK L. POLK, Undersecretary of State, 1918-19.

HARRY S. BROWN, of the Alien Property Custodian's office.

W. H. SWENARTON, a patent attorney at one time in the Nitrate Division, Army Ordnance.

G. W. STORCK, a certified public accountant of the Department of Justice.

C. R. PARMELE, president of the Chinosol Company, manufacturing chemists.

MRS. MARGARET R. WILSON, of the Federal Trade Commission.

HARRY W. SCHMITS, an accountant in the Alien Property Custodian's office.

HERMAN A. METZ, president of H. A. Metz & Company, and connected with other industrial concerns.

THOMAS W. MILLER, Alien Property Custodian since March 12, 1921.

These witnesses were called by the Government in rebuttal:

H. J. GALLOWAY, special assistant to the Attorney General.

GEO. W. MCCOY, director of the Hygienic Laboratory.

WALTER G. CHRISTIANSEN, research chemist at the Harvard Medical School.

LOUIS FREEDMAN, research chemist with H. A. Metz & Company.

WILLIAM O. EMERY, Bureau of Chemistry.

H. D. GIBBS, formerly with the du Pont Company and now with the Hygienic Laboratory.

PAUL A. BLAIR, a patent attorney of the Bureau of Ordnance, Navy Department.

CHESTER N. MYERS, chemist with H. A. Metz & Company.

The witness appointed by the court to supervise the experiment of Dr. Freedman was Gellert Alleman, professor of chemistry at Swarthmore.

It should be noted that several of the witnesses called by the Government, including Messrs. Polk, Patterson, Danner, and McCoy, proved disappointing as witnesses for the prosecution, their testimony being favorable to the cause of the Chemical Foundation.

The witnesses for the Foundation were as follows:

A. MITCHELL PALMER, formerly Alien Property Custodian.

FRANCIS P. GARVAN, president of the Chemical Foundation, Inc.

JOSEPH H. CHOATE, JR., attorney.

ERNEST H. VOLWILER, of the Abbott Laboratories.

B. W. DOLD, public accountant.

HENRY B. THOMPSON, president of the U. S. Finishing Company.

FRANKLIN W. HOBBS, president of the Arlington Mills.

FRANK D. CHENEY, president of Cheney Brothers.

ANDREW W. IMBRIE, treasurer of the U. S. Finishing Company.

JULIUS STIEGLITZ, University of Chicago.

WILLIAM W. BUFFUM, auditor, Chemical Foundation, and formerly chief accountant, Alien Property Custodian's office.

CHARLES L. PARSONS, consulting chemist.

ALFRED H. WHITE, professor of chemical engineering, University of Michigan, formerly lieutenant-colonel in the Nitrate Division, Army Ordnance.

HARRY A. CURTIS, director, Nitrogen Survey for the Department of Commerce, and professor of chemical engineering, Yale University.

JAMES F. STILES, JR., accountant of Abbott Laboratories.

ELMER K. BOLTON, director of the Chemical Section of the Dyestuffs Department, du Pont Company.

ERNEST H. KLIPSTEIN, president, E. C. Klipstein & Sons Company.

T. W. STILL, treasurer, E. C. Klipstein & Sons Company

M. L. CROSSLEY, chief chemist, Calco Chemical Company

JAMES B. ELIASON, comptroller, du Pont Company.

M. R. POUCHER, director of du Pont Company, and previous to 1915 vice-president of Badische Company of New York

At the counsel table for the Government was to be found H. W. Anderson, special attorney in charge of the prosecution, and among his assistants were H. J. Galloway, District Attorney Hughes, Special Patent Counsel Knight, and during the last few days of the trial H. D. Gibbs as chemical adviser.

The trial counsel for the Foundation was Isidore J. Kresel, and counsel attending were W. D. Guthrie, L. H. Boggs, Bernard Hershkopf and S. M. Stellwagen.

It will probably be many a day before a trial of equal interest to so many chemists and chemical industries engages the attention of our courts, and the individuals who are prominent in it are here recorded for the benefit of those who did not find it possible to follow the developments as they unfolded day by day.

J. MERRITT MATHEWS.

103 Park Ave., New York, N. Y.
August 15, 1923.

Literature is an avenue to glory, ever open for those ingenious men who are deprived of honors or of wealth.—Disraeli.

TOLERANCE VS. BIGOTRY

In a moving-picture show (the name has escaped us) one of the actors was a policeman, named Clancy, who was a mighty good chap. His red-headed, freckle-faced (Wesley Barry, of course), ten-year-old son was a great favorite in the police station. One evening, as the police detail marched to its assignments, young Clancy remarked: "Everybody's out of step but the Clancys, Dad."

The joke is ancient, but it contains an important truth. The minority is always apt to asseverate and vociferate the justice of its contentions. The more its claims are antagonized, condemned and ridiculed by authorities, or by the majority, the more eloquent, the more assertive become the adherents of the minority. Soon they are so absolutely sure of the justice of their claims, they are so energetic in calling the majority mossbacks, ultraconservatives blinded by dogma, and so forth, that they themselves overlook the desirability of constant and continued progress, the necessity for investigating carefully their own teachings, the needfulness of careful and everlasting watching lest they themselves become hidebound and imprisoned by dogma, strangers to progress and development.

In scientific pursuits, it has never failed that dissenters, who might possibly have a modicum of truth or even a good deal of it in their favor, would ultimately wreck all chances for victory by failing to observe this imperative requisite, namely, the continued and faithful guarding of their ideas and theories, the necessity of developing them in accordance with established facts and the avoidance of narrow bigotry.

It will never do to forget that it is not given to us in many things to know all the truth. The established authority, the majority upholders of any scientific system, may have a part of it and the opposing minority may have another part. Neither one has the whole. Unless both work and study and develop, they will lose their modicum of truth and go to the wall. This has happened with numerous minority systems of healing in which the ruling school-medicine was opposed, called reactionary, narrow, ignorant and all the rest of it. The reason for the passing of these opposing minority systems lay in the disinclination of their protagonists to advance and in the fact that they were just as unwilling to consider the good lying in the established school as the latter was to admit any good in the minority.

In pleasant contrast to this and, possibly, just a little surprising are the ideas advanced by Doctor Arneson in his discussion on electronic medicine, which will be found among the leading articles in this issue of CLINICAL MEDICINE (p. 734). We are so accustomed to having ideas, theories and systems that are out of the ordinary offered to us as cut-and-dried, firmly-established truths, which we might take and live, or leave and go to grass, that the manifestation of an honest, searching spirit comes as a pleasant change.

Somewhat at variance with most of Doctor Abrams' disciples, Doctor Arneson questions emphatically the wisdom of declaring all of Abrams' teachings as final and as not subject for further development or improvement. He admits that these teachings do not always work out in practice and that there occur more failures than can be laid to the charge of the "human equation," that very convenient alibi.

Doctor Arneson's attitude, which shows the sincere and honest spirit of the true investigator, induced us to publish this article, although, some time ago, we had decided not to print any more discussions of electronic medication, at least for the present.

We are interested in Doctor Arneson's discussions, in the open-mindedness that he manifests.

It occurs distressingly often that those whose opinions differ with those of the majority loudly proclaim their individual right to their own views but, incidentally, they deny that right to everybody else. Everybody whose ideas are at variance with theirs is a fool or a knave, and that is all there is to it. The bigotry and narrowmindedness of free and independent thinkers is more distressing and more absurd than that even of the Puritans. When we find generous and honest thought and wide toleration of the opinions of others, we appreciate it. It is what should be general but, unfortunately, is not.

The best teacher is the one who suggests rather than dogmatizes, and inspires his listener with the wish to teach himself.—Bulwer-Lytton.

"DAMPHOUL THOUGHTS OF A SMALL-TOWN DOCTOR"

Our good friend, Dr. G. B. Morris, of Goldsboro, N. C., who is well known to the readers of CLINICAL MEDICINE through occasional contributions to its reading pages, has collected a number of his articles that have appeared in medical journals and in the daily press and is about to publish them under the general title "Damphoul Thoughts of a Small-Town Doctor."

Doctor Morris' ratiocinations are certainly original and they are expressed in terse, unafraid and convincing language. He presents his ideas in a manner that inevitably causes the reader to think and that makes him get busy and do something.

We are told that Doctor Morris' book is to be sold by subscription, the price being $1.50. It will make good reading for the doctor and, from what we have seen of it, we know that it will be appreciated and commended.

THE SURGICAL SEMINAR

After an existence of somewhat over one year, the Surgical Seminar has established for itself a place in the economy of CLINICAL MEDICINE that merits consideration, and it has proved its *raison d'être* through the excellent service that it has rendered.

This service is not limited merely to the surgical problems that are presented and discussed by the editor, Doctor Blech, and by his contributors. To our way of thinking, the Seminar has accomplished something far greater and more important than simply to provide some surgical information. The main object and, also, the outstanding result of the Seminar, as we understand it, is, that the manner in which the problems are discussed induces the reader to think surgically and to arrive at an understanding of his surgical problems by a process of logical ratiocination and deliberate reasoning.

That is something that is of essential importance for each practitioner, and the same method of investigation, of discussion, of cogitation should be employed in every case of illness that is submitted to the practitioner for consultation, whether the case be medical or surgical in nature.

We feel that CLINICAL MEDICINE may be justly proud of this particular department and that Doctor Blech's enthusiastic and vigorous pursuit of the ideal, that he has set himself, has brought results that are commendable.

For some months, it has been in our mind to undertake something similar to the Surgical Seminar, similar in method, for the discussion of medical problems. Our plans have not yet matured sufficiently that we could outline a definite plan. We hope, however, that, some day, we shall be able to do something along these lines for the detailed and logical discussion of medical problems.

THE MARRIAGE PROBLEM

In another department of this issue of CLINICAL MEDICINE, Doctor Candler discusses one phase of the marriage problem which has exercised the minds of sociologists, economists and just plain people for so many years. Doctor Candler deplores the fact that the young people of today demand so much at the start of their active lives, that they are not content to begin simply, in a small way, but want to start where their parents leave off, so to speak. Again, Doctor Candler sees potent reasons for the existing increase in divorces and for the light estimation in which the marriage bond is held, in a general loosening up of standards, through which the young people can play together with less restrictions

[*Concluded on page 748*]

Leading Artieles

Non-Surgical Treatment of Cancer

By W. CLOVIS CUMMINGS, Oklahoma City, Oklahoma

SO much has already been said and written about cancer, that it would seem impossible to add anything more to what is now on record. But, granting that this be true, it is not always in vain that we restate and emphasize that which has gone before and, in so doing, may perhaps reach some who have not yet heard the message, as well as succeed in reviving the interest and quickening the appreciation of those who have heard but have failed to heed.

During the past ten years, the death rate from cancer has steadily mounted, and this despite the fact that there has been a vast amount of effort put forth to make the general public more alive to the dangers of this terrible scourge, and to teach it to assist the medical profession in its efforts against it by permitting early diagnosis and prompt remedial measures. Many more cases of cancer have come under observation and care, and many more cures have been reported; but, notwithstanding all this effort and this apparent progress in understanding and conquering the disease, the actual number of fatal cases has continually become greater until at the present time cancer stands third in the list of death-causing diseases, last year claiming nearly 100,000 victims in the United States alone!

When we are confronted with these astounding figures and realize that all the labor and diligence in spreading the cancer propaganda of the past ten years seem but to have increased the incidence of the disease, the whole situation appears wellnigh hopeless. The death-rate from tuberculosis has steadily fallen; many of the affections of infancy, which once exacted such appalling toll at the very threshold of life, have been controlled to the extent of more than half their victims rescued; typhoid fever has become almost a medical curiosity; but all the powers of medical science still seem impotent to check the ravages of malignant disease.

Surgical Results Not Promising

Let us consider for a moment what these powers are, and examine the weapons with which the fight against cancer has heretofore been waged. Until a very few years ago, the only treatment for malignancy recognized by the medical profession was the surgical—to cut out the growth, offered the only chance of recovery. That this chance was at best a slim one, is attested by the figures offered by some very distinguished surgeons, in 1915. At least one-half the cancer cases were regarded as inoperable when first coming under the surgeon's observation, and of the remaining 50 percent, that went under the knife, more than half suffered a recurrence and eventually succumbed to malignant disease. As a well-known specialist has put it: "In round numbers, sixty out of every hundred selected cases operated upon by our best men will be dead or dying within three years after the excision operation, from recurrence of the disease. Moreover, it is generally conceded that an additional twenty of every such hundred will be dead or dying by the end of five years, from the same cause."

And this, after the most renowned surgeons all over the world have exerted their powers to the utmost and marshalled their highest skill in the endeavor to prevent just such an outcome. Is it any wonder that a great fear of "cancer operations" has arisen among the laity, or that many members of the medical profession have lost faith in the efficacy of surgical treatment?

Hopes from Radiation Disappointed

With the advent of the Röntgen-ray and shortly after, of radium, as adjuncts to our therapeutic armament, new hope for the cancer sufferer arose on every side. It seemed as if in radiation we had at last found a reliable and efficient means of getting rid of malignant growths. Every surgeon recognized that, in cutting into such a growth, he ran a very grave risk of scattering the diseased cells into adjacent, previously healthy, areas, and, in order to avoid this, he had been including more and more healthy tissue in his

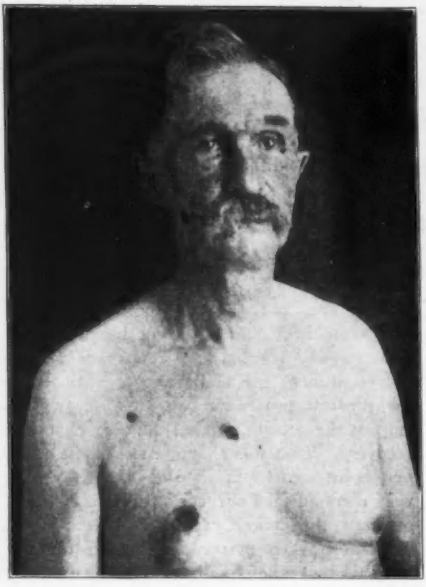

Fig. 1.—Mr. D. Before treatment. Note cancer in corner of eye, breast, chest and side of face.

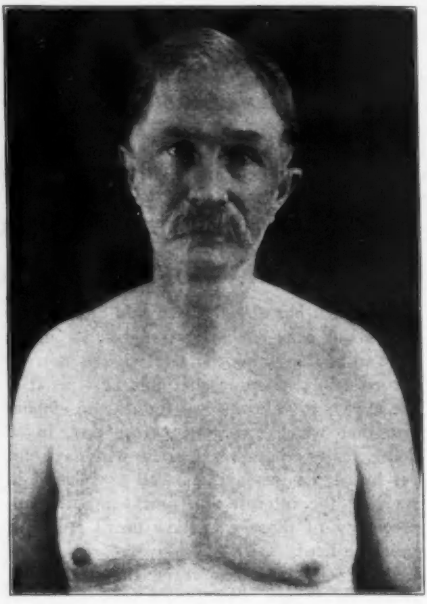

Fig. 2.—Mr. D. One year after disappearance of cancer, following five weeks' treatment.

excision and had also learned to look for and remove any possible seats of metastasis, even if located at some distance from the original seat of disease. This, of course, made the operation still more hazardous and proportionately more dreaded; equally of course, it left the patient who chanced to survive in a still more terrible state of disfigurement.

The use of radiation, however, seemed to offer a way to avoid the surgical dissemination of cancer-cells and at the same time make it unnecessary to excise such a large area outside the tissue which is actually diseased. Röntgen rays were first applied to the wound from which a cancerous growth had been surgically removed, in the hope of destroying any remaining malignant tissue; later, radium was used still more successfully for the same purpose. The results in many individual cases were excellent; indeed, the method now has the approval of most of the high authorities on the treatment of cancer. But, this does not seem to have lessened the incidence of cancer to any marked degree, nor do the latest census figures show any decrease in the final fatality of the disease.

Neither do Röntgen rays or surgery show much more brilliant results when used alone. The employment of either of these curative means requires a very high degree of skill, and a technic which can be acquired only through long study and practice, just as is the case with surgery. Unfortunately, a great many "x-ray specialists" and "radium men" have engaged in the treatment of malignancy, who have never taken time to perfect themselves in the technic they are attempting to employ and, in addition, are very frequently not supplied with proper equipment to administer the treatment, even if they knew how to do it. Much of the lack of success in the use of Röntgen rays and of radium may perhaps be traced to this cause; yet, there remains a good proportion of cancer cases which have come under the care of the most highly trained specialists, have received the benefit of every resource opened by the use of these elements, and yet have not been cured in sufficiently high proportion to warrant our feeling that the problem of the control of cancer is any nearer solution than it was twenty years ago.

Erroneous Views Concerning Nature of Cancer

It seems to me that the whole difficulty lies in the fact that every one, physician and patient alike, has failed to realize that every malignant growth is something more than a merely local condition. Despite all the study which has been concentrated upon its "pathology", no true understanding of it has ever been attained. The dictionary tells us that

Fig. 3.—Mr. M. Epithelioma of the back, 15 years' standing.

Fig. 4.—Mr. M. Eighteen months after treatment.

"Pathology is the branch of medical science that treats of morbid conditions, their causes, nature and so forth." Therefore, in studying the pathology of cancer we should first give attention to its *cause,* even more than to its *nature,* certainly *before* giving attention to its nature. We have heard and read a great deal about the histologic changes which take place in the diseased tissue; we have had the proliferating process by which the cancer cells are built up explained to us in great detail; but the *pathogenesis,* or the cause, origin and actual pathologic evolution of the disease, has been very largely overlooked.

The general conception has been that cancer, at the outset anyway, is a purely local disease, and that, if the evidence of malignancy can be cut out or burned out soon enough, the conditions which led to the growth will be removed at the same time. The possibility of the existence of constitutional derangements of which the malignant growth was but the "outward and visible sign", is all too frequently, wholly neglected.

L. Duncan Bulkley, senior physician to the New York Skin and Cancer Hospital, has remarked that "while laboratory and other investigations have not demonstrated any single cause of cancer, and have yielded only negative results, they have, by elimination, cleared the way for a study of its cause along other lines, which are bright with promise. They have also established certain facts which confirm the views which from time to time have been briefly expressed by many who were best acquainted with cancer; namely, that, because of its constant recurrence, and from the failure of surgery to check its rising mortality, it must be of a constitutional nature intimately associated with dietary or nutritional elements."

What is the Cause of Cancer?

Following along the line of reasoning laid down by this investigator, as we now know that the local lesion which we term cancer is but a deviation from the normal life and development of the body cells which, from some cause as yet undiscovered, have taken on an abnormal activity, we are forced to seek an explanation in an alteration of the enzyme content of the cell, an alteration which has been caused by defective nutrition, this in turn depending upon a state of faulty metabolism.

To justify such a course of reasoning, we have only to turn to laboratory analyses of the blood of cancer patients which has repeatedly been shown to undergo alterations from the normal, seemingly indicating a change in the mechanism of the blood-producing organs. To a lesser degree, changes have been demonstrated in the internal secretions, all pointing to the unvarying presence of a marked disturbance in metabolism in all cases of cancer.

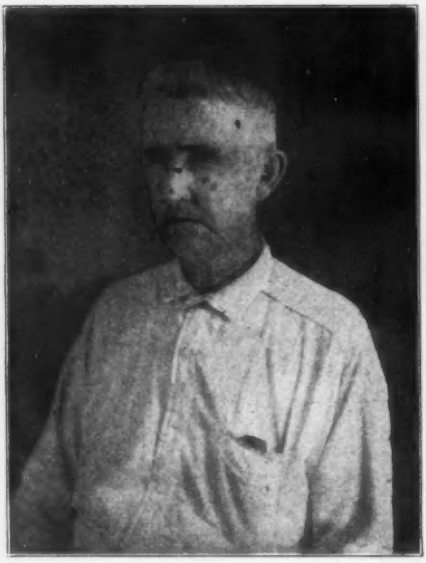

Fig. 5.—Mr. H. Multiplicity epithelioma of face.

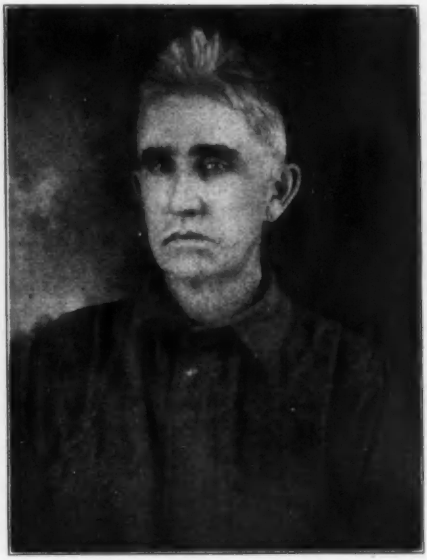

Fig. 6.—Mr. H. Six months after treatment.

To use Bulkley's own words: "At present, no clear demonstration is possible of the direct method by which errors of metabolism effect the changes in cells, to which we give the name *malignant*, any more than we know how other alterations in the body are produced, such as arterial degeneration, bone changes, obesity, etc., which are recognized as due to metabolic derangement"; but just as "repeated observation and report of the spontaneous disappearance of cancer, by careful and competent medical men, show that conditions of the system may arise which are antagonistic to malignant growth", in like manner we are able to point to "other conditions of the system which favor the aberrant actions of previously normal cells, resulting in cancer".

These observations have been confirmed by many eminent physicians, even by those whose belief in the efficacy of surgery still remains unshaken. In 1914, William J. Mayo said: "Cancer of the stomach forms nearly one-third of all cancers of the human body. So far as I know, this is not true of the lower animals nor of uncivilized man. . . . Whenever cancer is found with great frequency in certain situations, or in only one class of individuals, it appears to depend on a single cause" (as the kangri fire-basket burn of the natives of Kashmir or the betel-nut mouth lesion of the natives of India); "this is probably true of gastric cancer. Is it not possible, therefore, that there is something in the habits of civilized man, in the cooking or other preparation of his food, which acts to produce the precancerous lesion? . . . Plant life is parasitic on the inorganic world and depends on chlorophyl for its potency. We should know more about chlorophyl upon which in the last analysis life depends. Animal life is parasitic upon plant life, man on both, plant and animal and increasing rapidly the flesh intake. Within the last one hundred years, four times as much meat is taken as was before that time. If flesh foods are not fully broken up, decomposition results and active poisons are thrown into an organ not intended for their reception and which has not had time to adapt itself to the new function".

Mayo also emphasizes the possibility of acidity playing an important role in the production of cancer, for it is a remarkable fact that malignancy is common in the stomach where the secretions are acid and practically never occurs in the small intestine where the secretions are alkaline.

The views of surgeons, and of those who are beginning to believe that we must go farther back than the local growth if we are ever to master this disease, will thus be seen to be not so widely divergent as at first appears. As Robert Bell, a Scotch surgeon, who has now abandoned the attempt to extirpate cancer with the knife, has put it: "If ever we are to succeed in stamping out this scourge, we shall be compelled to investigate

Fig. 7.—Mrs. McC. Cancer of breast, 7 years' standing.

Fig. 8—Mrs. McC. After five weeks' treatment.

Fig. 9.—Mrs. G. Epithelioma of the face and body.

Fig. 10.—Mrs. G. Six weeks after treatment.

the various conditions of the body which are invariably in evidence before the local manifestation makes its appearance. We shall take into account those contraventions of Nature's laws which have militated against cell-life, for it must be admitted that cancer is essentially and intrinsically due to perverted cell metabolism . . . cancer is Nature's protest against disobedience, and is the penalty she imposes upon those who, though, perhaps, more from the force of habit than knowledge or willingly, have ignored her

Fig. 11.—Mrs. A. An old ulcer, resembling a cancerous condition.

Fig. 12.—Mrs. A. After four weeks' treatment.

Fig. 13.—Mr. G. Left ear entirely gone, cancer five years' standing.

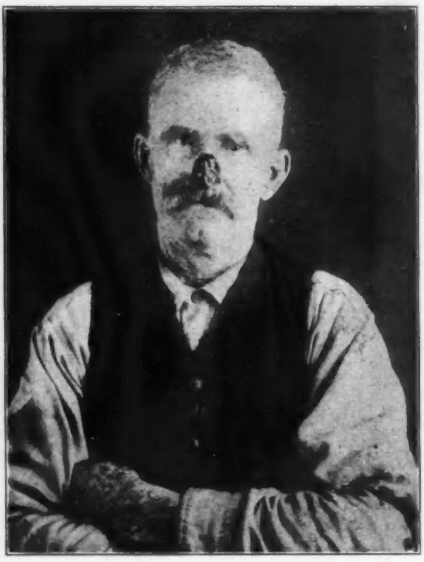

Fig. 14.—Mr. B. Cancer of nose, starting as a small scaly irritation.

teachings".

To Cure Cancer, Go Back to Its First Cause

We have now reached the point where it is evident that, in order to get rid of cancer, we must not depend upon merely extirpating the local growth, but must go farther back and correct the constitutional conditions, which gave rise to it in the first instance. During the past three or four years, a great deal of discussion and investigation has gone on in

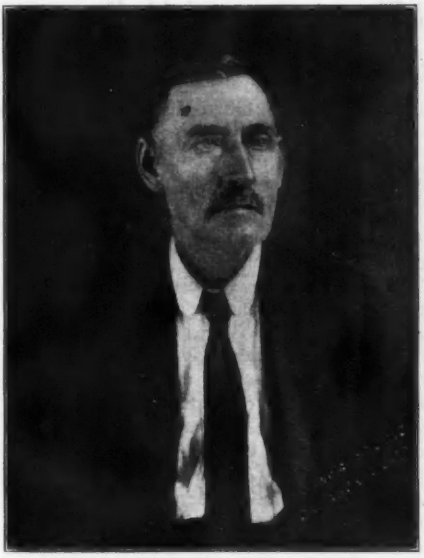

Fig. 15.—Mr. B. Cancer of forehead, 17 years' standing.

Fig. 16.—Mr. B. Eighteen months, after five weeks' treatment.

relation to the nature and function of the endocrine glands, and the increased knowledge of this part of the human organism has poured a flood of light into many hitherto dark corners of the medical field. It has been scientifically demonstrated that faulty metabolism will account for many ills and irregularities heretofore either wholly misunderstood or only partially recognized, and it seems probable that the pathogenesis of cancer may very well be greatly illuminated by further study and investigation along these lines.

Early Attention Essential

These changes in view in regard to the origin and management of cancer should not, however, be taken to mean that the general public should be any the less impressed with the vital necessity of early recognition and prompt treatment. The general practitioner should be even more alive to detect the very first evidence of the disease and to make use of all his abilities in combating it. The relation to acidosis pointed out by Mayo should always be borne in mind, and the presence of obstinate and chronic constipation, which is almost always noted and upon which Bell lays so much emphasis, should at once arouse the physician's suspicion. The waxy, yellowish complexion, the sense of weakness upon slight exertion, and especially any bleeding from the rectum or vagina, are all indications that should be promptly recognized by patient and practitioner alike.

Endocrine Support Useful

The course of treatment to be carried out must, of course, be dictated by the medical man who has the patient in charge. To those who have become convinced that surgery does more harm than good, there are still many other avenues open. Besides the ever-increasing number who are pinning their faith upon radium alone, there are many who have reported success by following the dietary regimen of Bulkley and Bell, the chemotherapy employed by Strobell, or the application of the diathermic current as advocated by Geyser. In my personal experience, attention to endocrine imbalance has been productive of most gratifying results. It should be our aim to raise, if possible, the functional efficiency of the body's resources by means of agents (such as the endocrine derivatives, thyroid in particular) which, by markedly increasing the function of the adrenals, correspondingly augment the proportion of autoantitoxin in the blood and other fluids. The curative process may then be favored by the local application of escharotics, the cautery, or other means which relieve pain and arrest hemorrhage. Along such lines, it is my firm belief, the cancer therapy of the future must inevitably lie.

253 American National Bank Building.

[*For literary references, see page 773*]

A Note on the Non-Surgical Treatment of Malignant Tumors*

By EDWARD AHLSWEDE, Hamburg, Germany

EVER since malignant tumors have been known to originate from body cells, therapeutic experiments were mainly directed toward the tumor-cells themselves. Though the inflammatory infiltration and hypertrophy of the tissue surrounding the tumor-cells had very early been noticed, these reactions were considered to be at the most due to irritation.

Advancing experience in immunization gradually led to different views. An active defensive action of the attacked tissue was assumed to exist, while the frequently extensive necrosis of the tumor, surrounded by tissue alterated by inflammation, could not always be explained by simply assuming an inadequate or insufficient nutrition of the tumor through the blood circulation. It appeared probable that immunizing substances, secreted by the cells of the inflamed tissue, had a destructive influence on the tumor cells. This would point to an active immunizing process.

Another important discovery, based on inoculation experiments with animals, then also showed that a tumor-immunity can be attained only with living tumor material. Thus, an attempt at passive immunization would stand a feeble chance, from the beginning. However, the tumor immunity does not appear to be specific in character. The essential point is that only material of the same species be used. Yet, Bashford, Haaland and others showed that the antibodies must be homologous to the tumor-cells if the immunizing process is to be strong enough, while a preliminary treatment with tumor-substances of a foreign species may be the cause of anaphylactic symptoms. Bashford, Burgess, Murray, Da Feno and Goldmann found that cells adjoining the inflamed tissue (lymphocytes, plasma-cells) were the possible birthplace of the antibodies.

Ehrlich's hypothesis postulates, in the malignant tumors, a struggle for the nutritives between the tumor cells and the normal tissue cells. Corresponding to the varying toxicity of the bacteria, Ehrlich assumes a varying avidity of the tumor or tissue cells for these nutritives, whereby either the healthy tissue or the tumor-cell masses finally command the situation.

*From the "Electro-Therapeutic Institute," O. Ahlswede, M. D., M. R. C. S., L. R. C. P., London-Hamburg, Germany.

This opinion was opposed by Bashford and others. Bashford holds that the resistance which the tumor cells oppose to the tumor represents an active, acquired adaptation in the sense of an active immunization. Basing their experiments on this idea, Bier, Ritter and Teilhaben tried to support the local tissue reaction by provoking an artificial hyperemia and inflammation. Thus, the application of large dry-cups made possible the complete cure of a sarcoma of the shoulder which showed no signs of metastasizing even ten years later. Surgeons know that erysipelas often considerably impedes the development of a malign tumor. As the artificial hyperemia did not prove satisfactory, Bier's next step was, to transfuse foreign blood. Some of his successes were encouraging. However, the reaction of the tissue was often so severe and the symptoms of intoxication due to the dissolved tumor cells so serious, that this method had to be abandoned.

Recent experiments with the intramuscular injection of foreign proteins, which have deservedly gained so much importance in modern treatment of many skin diseases, gonorrhea, arthritis, etc., led to the attempt to influence the inflammatory tissue reactions. The very encouraging experiments with a germ-free and toxin-free milk-albumin solution have not yet reached their final stage. The following case may demonstrate, however, that foreign proteins can effect a strong reaction at the site of a tumor, causing a distinct shrinkage and diminution of its mass. Of the proteins suitable for non-specific "foreign-body" treatment, those obtained from milk, either in the shape of a germ-free and toxin-free milk-albumin solution or as a 5-percent sterile casein solution have proved therapeutically most effective in our hands.

Case

Patient D., first reported on Sept. 10, '21. For two years, increasing icterus and loss in bodyweight. Six months ago, patient had received several weeks of hospital treatment and was then sent home at his own request. Diagnosis: Inoperable carcinoma of liver. Stagnation of vena porta and complete occlusion of the ductus choledochus is found. Liver enlarged.

Operation being impossible, protein injec-

tions were made. 1 Cc. of a 5-percent solution of casein was injected into the gluteal muscle once a week. A slight chill usually followed the injection, without any further disturbance. The icterus showed distinct improvement. The feces turned brown, from grey; the bilirubin contents of the urine considerably decreased. On the 12th of April, the injection was followed, 6 hours later, by vomiting of coagulated blood (a cupful). From this day, the feces were dark brown and there was no more occlusion of the choledochus. Further injections of casein were not made.

The injection of 2 Cc. of blood (drawn from the vein of a nephew of the patient) into the gluteal muscle had the following effect: Patient complained of extreme fatigue (no chills) while the very troublesome itching disappeared spontaneously. While the feces remained brown and the icterus regressed, intense fatigue was the only dominant symptom. Cachexia due to carcinoma finally proved fatal.

The possibility of influencing a tumor by intravenous injections of proteins seems to be proved by this case. Further experiments in this direction, I hope, will give more exact results which I expect to support by pathological findings.

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Periodic Physical Examination

By L. E. SIEGELSTEIN, Cleveland, Ohio

DR. WOODS HUTCHINSON, perhaps the foremost writer on health problems in this country, said in a recent article that it is only a question of time before the medical profession will be devoting its greatest efforts towards the prevention of disease, instead of towards the healing of disease.

I believe that Universal Periodic Physical Examination will accomplish this. Periodic physical examination is the means employed to detect many of the early manifestations of disease, before structural changes in the tissue have taken place, and to adjust the physical economy in such a manner as to prevent tissue destruction or to arrest it if it has already started.

For, though Medical Science has not yet reached that stage where it claims a cure for all diseases, it has proven effective in preventing and checking tissue destruction when this is detected in its incipiency.

The absolute necessity of periodic examination has also been forcibly brought to our attention during the draft period of the World War. Dr. W. A. Evans writes in the *Chicago Tribune*:

"A great many men who thought themselves physically sound have been rejected by the medical officers of the Army. In the opinion of the examiners, they were not only physically unfit, but they were incapable of being made fit by months of training in camp."

Had there been no draft with its compulsory physical examination, these men, and there were at least half a million of them, would have supposed themselves in good physical condition.

If, with the examination of a million and a half men between the ages of 21 and 31 years, it has been found that half a million are unfit and incapable of being made fit, what would be the result, were all men and women to submit to an examination?

Think of this condition, not necessarily with the end in view of stopping the death rate among grown men and women. Still, let us remember always that there is no fixed law of mortality, and that it is entirely within the bounds of scientific possibility to increase the vitality of the age of 40 to that of the age of 20.

Death rates are not due to time, but rather to what happens in the course of time, i. e., infection, mental and physical strains, abuses of all kinds and other bad influences.

Do not let us wait for another world war before taking an inventory of the nation's health. Make periodic examination of the human body available to all the people, now, and at frequent intervals hereafter. By detecting the slightest fault in the physical condition and by correcting the cause, you increase the resistance to disease and prolong life. For, with the exception of mutilations, practically all of the impairments listed evidenced ill health which would have been preventable in over 60 percent of the cases. The rational, common-sense plan is, to search for these factors in each life and do everything possible to eliminate them.

A General Custom Applied to Persons

This principle is applied to every organism in society; why not to the human body? A

thorough and complete physical examination should be made of the entire body, of all the organs, and not only a part of the body or some special organ. In this manner it is possible to ascertain the exact physical condition. Then, if any evidences of impaired health are found, proper instruction and guidance must be given.

In the industrial field, outside of the routine case of injuries, there ought to be periodical general-health inspection of each man, the same as it is extended to the plant and machinery. Every captain of industry either is or employs an expert capable of putting his plant on a 100-percent efficiency basis. Since this is a common practice, especially with regard to machinery and production, is it not time to go a step further and regard Man power as an important factor in industry and deserving of periodic inspection? A physically inefficient man is a liability on the payroll. An efficient man is an asset.

Surgeon General Rupert Blue tells of a large manufacturing concern in West Virginia that followed the advice of a health expert and, at a cost of over $5000, installed a clinic for social diseases. The president of this concern informed the United States Public Health Service that, as a result of the clinic treatment, labor efficiency was improved over 33 percent which (he figures), as a return on the investment of $5000, was equal to $40,000 profit, the first year.

But, why stop at social diseases?

The physical examination should cover every region of the body, from the color of the hair to the shape of the toenails externally, and all of the internal organs; not only the vital organs—all our organs are vital, the smallest ductless gland as well as the heart. There should be made a complete chemical and microscopical examination of the urine (24 hour specimen) and a hemoglobin and differential test of the blood.

This complete examination will serve as an index for future comparisons and should therefore be complete in every detail. For, by such examination only, can the apparently healthy be assured that they are not suffering from the beginning of some subtle physical impairment.

Mere Urine Examination Insufficient and Misleading

Preceding most illnesses, there is usually a period of impairment (socalled early manifestations) when the structural changes in the body are too insignificant to cause conscious symptoms. This is the curable stage of the socalled incurable conditions. This is the time when a thorough physical examination will detect the early structural changes and insidious development of unsuspected diseases (nephritis, tuberculosis, diabetes and other chronic conditions) and when, by proper treatment and advice, their onward march to destruction can be stopped or prevented. Even conditions that are not entirely preventable are at least postponable.

It is important to avoid the dangerous advice that is based solely on an examination of the urine. As a rule, the extent of such an examination consists of: A physical examination, i. e., color, reaction, odor, specific gravity, and transparency; the total solids are seldom computed; a microscopical examination, namely, a search for casts, epithelium, blood cells, etc.; a chemical investigation, which means, a search for albumin, sugar, urea, bile pigment, indican, and the chlorides, carbonates, phosphates, and sulphates.

No attempt is made, usually, in any of the finer details necessary to differentiate between acute and chronic cases, between nephritis, pyelitis and cystitis and many other details so essential to proper therapeusis. Even admitting that some of these laboratory examinations are perfect in every detail, the common procedure of sending the resulting report to the subscriber for alleged health service is, to me, erroneous. I can see only two results from such incomplete examinations: Either the patient believes himself a well man because his urine examination is normal, or he is unduly alarmed because the report shows a trace of albumin or sugar. This is illustrated by the following cases:

Case No. 1.—J. G., on his way home from work, had a dizzy spell, fell in front of an automobile. Fortunately for him, the brakes worked to perfection. While treating his bruised condition, he stated that he had had dizzy spells and headaches for years which sometimes ended in nausea and vomiting; but he added that he had his urine examined every 3 months and the report came back reading: "We have examined the specimen submitted to us and are pleased to advise that our findings are normal. No albumin was found." Hence, he thought he was all right and needed no medical attention.

Examination found a normal, healthy looking man, 40 years old. Head normal, eyes normal, tonsils and lymph glands not enlarged. Thyroid slightly enlarged, colloid condition. Heart normal in size, no murmurs, pulse regular and rhythmic, rate 60. Blood pressure

140-80. Chest negative to percussion and auscultation. Abdomen slightly prominent. No tumor masses. No tenderness. Extremities all normal. The reflexes present and normal. No Babinsky, no clonus, no ataxia either proximal or distal. No change in sense of touch, pain, heat, cold, or vibratory sense. X-ray showed abscesses of teeth, 2 upper, 2 lower. The teeth were removed.

Present condition, no headaches, no vertigo since October, 1922.

Case No. 2.—S. B., presents himself, a living skeleton, lamenting his physical condition. Has lost 35 pounds in 14 months, yet he has watched himself minutely. Has lived on milk and crackers and his condition is growing worse. When asked why he was dieting or starving himself, he pulled out of his pocket 9 urinary examinations, all showing albumin which, he said, meant Bright's disease. He was curing himself by dieting. Has seen no doctor, for, as long as he knew what was wrong with him, he did not need medical advice, until now, when he could endure it no longer, and came.

My first impression was, that I had a neurasthenic before me and that the albumin was not a symptom of Bright's in his case, but rather of an orthostatic form, because of an anterior curvature of the spine (lordosis). This opinion was later confirmed by a group-clinic consultation. After this patient was put back on a normal life and a normal diet, he regained his weight and ambition, in spite of the fact that albumin is still and always will be present in his urine.

Had either of these men gone to his physcian for a thorough physical examination and laboratory findings, J. G.'s cause of vertigo could have been detected and his injuries prevented, and S. B. would have been saved months of suffering from neurasthenia, brought on by fear of the impending danger of a disease that he did not have.

Sending a sample of urine to a drugstore or commercial laboratory for examination and report is a wise and useful habit, the importance of which no one will deny; but, of what use is the examination to the patient, unless there is some one competent to interpret the findings of the report? One who is not obsessed with the theory that the kidney secretions are the *bête noir* of all preventable diseases and contain all that is vitally important to the prophylaxis of disease, suffering and premature senility. Indeed, one who knows that the heart, lungs, alimentary tract, teeth and tonsils are still worthy of our consideration and that the correlation and interdependence of all our organs have not ceased to be essential for harmonious function. One who is not a recluse, exclusive in his adherence to one specialty or to one particular school of medical procedure or doctrine.

They tell us that China, whose civilization is centuries older than ours, has solved this problem by what is, to us, a unique arrangement. Physicians in China are paid to keep their patients well. When the patient is ill, the doctor's fees cease until his patient is restored to health. An Oriental interpretation of periodic examination. There is much to recommend this plan; for, the doctor's duty is, to keep people well and, to do this in a modern manner, requires not only a degree of medical efficiency, but a willingness of personal effort, to initiate Community Health Work and thereby seek to discover the underlying social and economic causes of our patient's illness. In our endeavor to banish disease, we must determine the assets and the liabilities of the human body as a basis, or starting point, for biologic behavior.

This means Periodic Physical Examination.

417 C. A. C. Building.

[Read the editorial on page 711.—Ed.]

The Cause of Insanity and the Pseudo-Psychosis of Puberty

By JOHN J. A. O'REILLY, Brooklyn, New York

WHAT is the cause of insanity? asks the ambitious questioner. That question is almost as embarrassing as the classical, "Have you stopped beating your wife? Answer, yes or no." Nevertheless, asked in good faith, the query is entitled to an answer: Insanity is a result of faulty nutrition arising in the anatomy (structure), physiology (function), and chemistry (construction and destruction), proceeding from heredity or acquired from the physical or social environment. That embraces everything from the epileptic insanity derived from an alcoholic parent to the cloudy mind and silly gibbering

of the convivialist of *ante*prohibition days or the "hip"-diseasist of *anti*prohibition days, acquired at so-much-per-quart; it is sufficiently comprehensive to include idiocy, which is not insanity but the status of a mind that "never could know, and never could understand".

I believe the foregoing to be a strictly scientific answer, but I know that it is far from satisfying to the ambitious questioner; so, we must try to restore his confidence in our great wisdom by letting him have a view of some fundamental differentiations.

To be insanity, the condition must constitute a change in the personality of a person hitherto regarded as a "regular fellow", and that change must be consistently continuous over an appreciable period of time, which would eliminate Mr. Henpeck who suddenly asserts himself, mimics a cave man, and then lapses into a "yes-man", as heretofore.

Then those manifestations must appeal to the observer as inconsistent with the opportunities for intellectual advancement enjoyed by the *average* person in the same environment in which the observed has his being. For instance, consider a humble old lady, living in a modest neighborhood made up of old-fashioned people "from her own place at home", who successfully builds up a grocery business and out of its earnings maintains a comfortable home and affords her children those opportunities for education which were denied her because of the poverty and isolation of her own parents. She should hardly be deemed a "senile dement" because she takes a drink out of a tin dipper at the sink and wipes her nose in her gingham apron, whether the observer be the ambitious questioner or an alienist with a string of hospital attachments a mile long—however much the old lady's inelegance of conduct may shock the esthetic sense of the more fortunately placed observer in whose set such things are not done, you know. I mention this because the liberty of a woman was actually thus jeopardized in a Court of Law, and because it emphasizes the need for common sense as the basis for psychanalysis.

An Illustration

Not every case of insanity is hopeless, because we have a differentiation between functional and organic psychoses, with the intoxications as a connecting link. Let me make the ambitious questioner wise on this point:

Standing on a little bridge, in the country, spanning a small stream which is the stem of a 'Y', of which two tributaries are the parent arms, one notes a field of corn beaten down by the wind and rain; it is not a saddening picture, because we know that, when the sun appears and the air dries the corn, it will straighten and be all the better for a little judicious 'hilling'. To the right of the stream, however, is seen a magnificent oak tree with a great, gaping, black hole at its base. We are sad, because we know that this means organic disease, decay and death. Beneath the bridge, flows the stream, polluted by the discharges of a factory along the line of one of the parent-arms, which the purity of its partner can never overcome; or perhaps the pollution has been acquired along the pathway of the stem itself and we are apt to fear that this pollution has been responsible for the organic disease at the roots of the oak and may, by seepage, convert the purely functional disturbance in the corn field into an organic blight.

So, also, we have the functional psychosis of hysteria and the organic degeneration, called the general paralysis of the insane (paresis), with the biochemic intoxication of a syphilitic taint as a hereditary or acquired pollution of the vital fluids of the victim.

A Difficult Problem

We began this definition with the words "faulty nutrition". So, if we trace this particular causative factor (with the ambitious questioner as the observer) and show the development of a condition that simulates an insanity with delusions of persecution incompatible with a 'reasonable' reason, the ambitious questioner may not only learn to appreciate the largeness of his question, but may acquire a respect for the finesse of differential diagnosis which he has heretofore regarded, perhaps, as a process of "dodging the issue" and providing a bridge for the alienists' retreat from an embarrassing situation when the tilt between medical insanity and legal insanity becomes too warm.

Another Simile

Here is a girl in the transition stage between youth and maturity which we call the pubescent period. She was born with a womb and a pair of ovaries, and they have been a part of her body all the time just as have been her unformed breasts; while they have been "in" her body they have not been "of" her body, just as an outlying section of a city has been geographically "in" but not civically "of" it.

The impulse to develop that inert, outlying district calls for the use of a portion of the city's water supply for the making of streets

and the laying of sidewalks, the building of houses, making of conduits, etc., but the demand has not been sufficient to disturb the quantity or force of the water supply throughout the city to a very great extent. However, as the development, physically, begins to manifest completion, the outlying section still must wait for a further development, socially and commercially, before it is really an integral part of the adult existence of the city and, during this period of adolescence, there is an ever increasing number of clothes to be washed and lawns to be sprayed and floors to be scrubbed and bodies to be bathed and foods to be boiled, etc., etc. Therefore, the appreciable increase in demand for water supply must reduce the quantity and the force throughout the entire city unless some attention is given to the conservation of waste and the adjustment of supply and force.

Obviously, if the ambitious questioner lives in a one-story shack, with a single cold-water faucet and I conduct a large laundry, my inconvenience from lack of proper quantity and force of water supply will be greater than his unless effective measures are taken for adjustment.

The little finger of the pubescent and adolescent girl has a single faucet, or artery, which is sufficient for its needs; but her digestive system, through which she must live and do her part of the world's work, is made up of a mouth, a gullet, a stomach, a small intestine and a large intestine (33-feet from one end to the other), a liver, a pancreas, a spleen, and two kidneys with all of their appendages. Some laundry! Its needs for blood supply are greater than those of any other system in the whole body, and its contribution to the needs of the adolescent generative system of that girl is correspondingly great; which means reduced quantity of blood and decreased efficiency by reason of decreased nutrition to the glandular structures upon which the proper digestion of food entirely depends.

Now, let us suppose that this girl has a heredity of 100-percent plus: that her infancy was marked by no serious illnesses; that her young girlhood was perfectly normal, physically, mentally, morally and socially; that she ate well and slept well and was happy and contented; that out of her food she got 70 percent nourishment and 30 percent waste, and that waste was legitimate and unavoidable. She leaves grammar school where life was one grand sweet song; where she knew and loved, and was loved by, the principal, the teachers and her associates: she enters high-school in the early part of the transition period, to meet new teachers and new associates and new "ologies", etc., with a change of life and an advanced process in the development of her personality, but utterly ignorant of the altering economics of her vegetative body upon which the development of her social and intellectual body absolutely depend.

There is no mid-point in nature. Either we go forward or we go back; the firm that stands still does not exist; it must head for success or drift into bankruptcy (which is the insanity of commerce), and the measure of that drift is the alteration between the percentage of nutrition (or profit) and waste (or loss).

Gradual Depreciation Through Ignorance of Laws of Nature

The 70 percent nourishment and 30 percent waste of that promising girl soon becomes 69 percent and 31 percent, 60-40, 50-50, 40-60, 30-70. Slowly and insidiously but surely, nutrition decreases and waste increases and, because the skin is the first-cousin of the mucous membranes of the body (derived from the same layer of the blastoderm, or human egg, formed by the male and female elements and yielding as an end-result a baby), that girl's skin shows a reflection of the inefficiency of the mucous membrane of the digestive apparatus and she has an embarrassing succession of pimples, most marked, usually, when the blood-distribution is intensively disproportionate—at period times.

When the Creator made the digestive apparatus, He provided a digestive ferment and a fluid to carry it, for the mouth; another digestive agent and a fluid for the stomach; then, just outside the stomach, in the beginning of the small intestines, He provided another digestive agent (pancreatin) and a fluid to carry it, called the bile (manufactured by the liver and stored away in a pouch for whenever needed).

Obviously, if He intended all of the digestion of the small intestines to be accomplished by the means of that digestive agent and that fluid, He would not have wasted thought in making a tube, 26-feet long from the end of the stomach to the pouch where the appendix is located. He would surely have made another large sac or pouch like the stomach and let those two fluids get busy.

Still Another Simile

Suppose we interpret that 26-foot tube in terms of a 26-mile railroad, with a station for every mile. Imagine a freight train laden

with food-stuffs coming down the line and stopping at station A, where there are two undernourished and inefficient freight handlers, named bile and pancreatin, who are "falling down on their job", so that a crate of honeydew melons, consigned to Mr. Smith, the grocer, at station A, fails to be digested off. Before we go a step further, let us see the probable result of this particular "indigestion" upon the tissues which had a reasonable right to be nourished from that point. The grocer Smith is irritable, his economics are disturbed because Mrs. Brown ordered those melons and Smith not only faces a money-loss, but he risks the displeasure of Mrs. Brown who takes through him; Mrs. Brown is irritable and faces embarrassment and probable though unexpressed criticism for not knowing what's what when her week-end guests have to be content with a fruit not in vogue or season.

Now, let us go to station B. Here there are two more freight-handlers who cuss and kick because that box of honeydew melons is always in the way and has to be moved and pushed aside so that they may digest off the food-stuffs consigned to station B. So also at C, and D, and right down the line until the train leaves station Z and rolls into the terminal freight-yard which is comparable to the girl's colon or large intestine.

In the Colon

In that terminal freight-yard, there are some cleaners-up whose business it is to clear out the cars and get them ready for another trip. There should be nothing in that train but legitimate and unavoidable waste, empty barrels, empty crates, excelsior, paper and twine. The box of melons is not only extravagant waste, but it is a claim against the company and a great temptation to those cleaners-up to neglect their duty and indulge in their pleasures—a banquet upon those undigested melons.

In that girl's colon, there are some cleaners-up which we call colon bacilli. It is their duty to keep the legitimate waste 'mushy' and on the move, so that it may be thrown out in the city's sewers; but, seeing undigested and partly digested particles flowing into the terminal, they abandon their duty and get busy with their pleasures and have a banquet.

Those germs are that girl's best friends when they are her servants; her worst enemies when they are her masters. They must eat to live, and digest what they eat to live well, and get rid of their own waste to live comfortably. The girl throws her waste into the city's sewers, but the colon bacilli throw their waste into her blood which tries, with all the power it can spare from the pressing and imperative demands of the girl's study-requirements, to neutralize and render inert those poisons lest they swamp that girl and put her out of commission. You can not have the battle of the Marne, and win it, without losing some soldiers. That girl cannot have the battle of the colon, and win it, without losing some of the red cells of the blood which becomes oxygen-poor because the actual oxygen carriers are diminished, and she becomes pale and washy.

She has pains in her legs and a tired back because the muscles are undernourished; her hands and feet are cold because the blood supplying the blanket of blood vessels in her skin and extremities is not rich and red and full of oxygen, but pale and thin and full of carbonized material from the tissues of the body which have died that she might live and, dying, have had to be burned to be eliminated.

Bad as it is to have an actual reduction in the number of oxygen-carriers, the poor girl is still further embarrassed because her heart action has become rapid (palpitation, she calls it) and her breathing shallow; not only because the muscles of her chest are undernourished, just as the muscles of her legs and back are, but because the activity of those colon bacilli, in banqueting on the undigested and partly digested food, has released gases which expand and make pressure along the line of least resistance, up against the heart and lungs, diminishing the actual space in which they may move, and downward against a soft, flabby womb. Perhaps this occurs just at the close of a period when the normal congestion is at an end, with the result that the womb is "kinked" so that, when her next period comes around, she will have cramp-like pains, differing only in degree from labor pains, until the kink is straightened out and the flow begins.

Intellect and Mind Suffer

This would seem to be ills enough and to spare for the poor girl; but, her legs and back muscles are just as good (or bad) as her blood supply and that is equally true of her brain. Her "thinkability" is impaired; she may not answer as promptly in class as her teacher thinks she should, the teacher being fully as ignorant as the child of the disordered body economy to which we have referred. That girl is blue and discouraged, her view not tinted rosy by a lens of brilliant blood. Her social condition has not changed a bit; she may be an only child, the darling of her

parents, surrounded by everything that should make life glorious, but she is blue, blue, blue; "her parents hate her, her teachers hate her", she is in the condition of mind of that little boy on the picture-post-card, cheek on hand, disconsolate and his purview of life contained in his muttered—"Nobody loves me; I'm going out in the garden and eat worms; yesterday I ate two smooth and one woolly one".

Surely, here is a change in personality, consistently continuous over an appreciable period of time and manifesting delusions for which there is no reasonable reason. Yet, it is not insanity. I have spoken of it, often, as Pubescent Americanosis, a pathological process going on in the pubescent stage of many American girls' lives; really a pseudo-psychosis of puberty.

Consider the Psychosexual Phase

A serious social menace of this too common condition is the effect which a rapid pulse and an overcarbonized blood supply have upon the psychosexual phase of the life of a boy or girl; its capacity for stimulating erectile tissue and shaping the thoughts toward indulgence of the sex-urge; the failure of that undernourished brain to quickly call up the images of the bright and beautiful and sweet and pure things of life and to swing into control the ethical sense with its esthetic and conventional reinforcements to drive to rout thoughts and practices which an alert judgment would recognize as morally vicious and economically wasteful and socially unsound.

The Remedy?

What's the use of the time spent on this Pubescent Americanosis if we can not point a remedy so that this pseudo-psychosis, purely functional in character, may not persist until the habit of thought merges it into the psychotic state and continued autointoxication converts a functional psychosis (remediable) into a possible organic degeneration, precocious in point of time?

And Now, Call the Doctor!

With the information contained in articles (such as this) in the possession of a mother or of her pubescent daughter, or both, why not call in the family doctor (there are a few of them left) and let him whip up a sluggish liver and impress upon the girl the necessity for examining her conscience every night and, if her bowels have not been right, to use some simple remedy which he can suggest. Let him point out the real reason why that girl should "throw out a herring (of sacrifice) to catch a whale" (of physical security) and, by moderation in mawkish sweets, leave room for appetite for health-giving common ordinary food and a visible supply of raw material from which the blood-making machinery may maintain a reserve; let him point out the economy of proper work and rest and play; his authoritative pronouncements will be given weight even by a girl of tender years if he will point out the sureness with which that "kinked" womb condition will rob her of pleasures when a social engagement and a menstrual period, coming together, may spell disappointment of mind and suffering of body.

Sex Hygiene Taught by Physicians

Better still, let us Doctors dedicate ourselves to the education of these young girls of ours; no one better than we can discuss so intimate a matter with less embarrassment; then let us make the mothers our lieutenants, acting under orders, but with knowledge. Do not let us leave a matter, so tremendously important to the girls and their mothers and to the Nation, in the hands of the lay expediency-artists who know the psychology of sex, and stress it rather than insisting upon the physiology, anatomy and chemistry of digestion through which the girl acquires the power of living and upon the mechanics of them all, which we have tried to portray and through which the girl may acquire the power to live-well.

405 Union Street.

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Limitations of Electronic Methods in Their Present Form*

By A. I. ARNESON, Austin, Minnesota

THE title of this article will undoubtedly strike consternation to the hearts of many readers. A year and a half ago, warnings were being voiced by experienced men that we must not place too implicit confidence in our present form of electronic apparatus and technic and by all means stop overestimating the value of electronic instruments designed for purposes of treatment. This warning was timely and vital; yet, it seems that it is being forgotten and disregarded on every hand. The purpose of this paper is, to attempt if possible to awaken the drowsing ones, to wipe away the veils of forgetfulness and dispel the cloying atmosphere of selfsatisfaction and complacency that is paralyzing progress in this field.

This is a period of turmoil in the medical world. A period of unrest; a tempest is brewing. What will the harvest be? This storm has several vortices, or storm centers, but the outstanding center is the application of electronic concepts themselves or whether it is actually directed against the methods of whether the opposition is really to the electronic concepts themselves or whether it is actually directed against the methods of application and the promulgator thereof. From a study of available literature, the writer is convinced that the opposition is aimed solely and entirely against the latter. Little straws point the way the wind is blowing. Little by little, the "authorities" are admitting that they must go beyond the cell, the atom and the molecule for the solution of these problems and, going beyond these, means going to the electron. There can be no ground for denying the applicability. The question does come in the manner of applying the electronic concepts.

No one who makes a real investigation into the electronic field can fail to realize that here we have the key to the solution of medical problems, just as it has proven the key to problems of other sciences, as physics, chemistry, astronomy among others.

The writer wishes in this article to point out what to him appears as discrepancies and inconsistencies in the methods of applying electronic concepts to the field of medicine as we know it today. The writer deplores the action of *Hearst's International* and Ford's *Dearborn Independent* in presenting the subject to the public in the way they have done. Their action has done no public good, rather serving only to becloud the issue and leave the minds of the readers in worse confusion than before. Since it is so evident that the electronic application points the way, then why not lend the effort, energy, money, etc., which, spent to a better purpose, would be constructive instead of destructive? Why not bend every effort to clarify the situation, to real research? The way is open, it is pointed out to us. Can we not get help along the way from these powerful agencies instead of kicks and buffets, hindrances and injuries? Won't they grant that we really are sincere in our search for something better than the present chaos in the medical world?

Constant Critical Investigation Is Essential

It appears to the writer that the users of the present form of electronic apparatus for diagnosis and treatment have, in a great many instances, ceased to inspect themselves and their methods as they used to do before they got into this work. Then, they were constantly trying and testing, clipping and culling the various methods offered. Now, they seem to be satisfied that they have the last word in diagnosis and therapy and resent intensely any inference or allusion to the fact that perhaps their methods are not quite as perfect as they think; setting themselves up to be gazed at as martyrs to a cause. Those who are not quite satisfied with present methods appear nevertheless to be satisfied to have Dr. Abrams do all the research work for them and accept every newborn notion put forth by Dr. Abrams as gospel truth, which needs no further confirmation.

This attitude certainly is fostered to a great extent by Dr. Abrams himself by the creation, intentional or otherwise, of the impression that none but he is qualified to make investigations, to make improvements in apparatus and technic, and that every one who tries to perfect instruments to accomplish as good or better results than his are all impostors, imitators without worth, charlatans, etc., who had

*A sequel to "Electronic Medicine," published in this journal, November, 1922, issue.

best be avoided and who must not be granted a hearing or an investigation of their claims by any of Dr. Abrams' "disciples" on pain of having their apparatus taken away from them, etc., etc., etc., ad lib.

The points brought forward in this article are such as appear to be the most pertinent at the present time. Should future research prove that the deductions herein are wrong, we shall be the first to admit it.

The Electronic Concept

We will briefly state the main points involved in the electronic concept, so that our memories may be refreshed and the points brought out more clearly. These concepts hold that all matter, including the matter making up the human body, is ultimately composed of electrons, which are the smallest possible division of matter and are electrical in nature. Electrons making up different substances are considered as being identical in all substances as regards size and other static qualities but differ from each other in the rate of vibration or rotation and in their arrangement or grouping within molecules. Applying this to the human body, it means that each organ and tissue of the body is made up of electrons which are exactly like the electrons making up any other organ and, in fact, any other substance known; but that the electrons of one organ are vibrating differently and grouped differently from those comprising any other organ or tissue. Electrons vibrating at one certain rate and grouped in a certain manner are concerned in the production of matter known to us as normal liver tissue, for instance, and another speed and arrangement produces heart muscle, etc.

Carrying this into the field of disease conditions, it must necessarily follow that, if the electrons making up a normal liver tissue, through any cause are caused to assume slightly different rates of vibration and arrangement, then they can no longer maintain normal tissue characteristics, and anything abnormal is known to us as a disease condition. Likewise, it follows that the particular rate of vibration present determines the particular type of abnormal tissue present, be it carcinoma, sarcoma, tuberculosis or any other. Likewise, it is logical that disease conditions which we know as similar types affecting different organs must also differ slightly from each other in rate of vibration. In other words, carcinoma of the liver must be composed of electrons vibrating at a different rate than electrons making up normal liver and they also must be vibrating at a different rate than electrons which produce a carcinomatous uterus for instance. If both were composed of electrons vibrating at the same rate, then both would be carcinomatous liver tissue, or vice versa.

In addition to these variations, we must also consider variations in vibration of carcinoma, for instance, affecting the same organ in different persons. These must also vary slightly, as no two people can well be conceived as being exactly alike in any particular; thus making every individual a distinct entity unto himself and a separate problem to the physician rather than as one of these interchangeable parts spoken of in automobile literature.

The Diagnostic Apparatus

If the above is a correct exposition of the main points involved, then let us proceed to see how these propositions have been applied to the present equipment and technic of diagnosis and treatment. The writer feels that it is high time that electronic practitioners take stock of their present situation and realize that we hardly have scientific ground to stand upon in defending our apparatus and methods. The writer feels that our present application of these principles does not continue along logical lines and that we have no right (e. g.) to content ourselves with making the statement that electronic diagnosis in its present stage of development approaches 100 percent accuracy and that the only factors contributing toward the fractional percent of error are entirely attributable to the human equation in the examiner and subject.

Do not misunderstand this to indicate a lack of faith in the methods. Diligent application, through a period of a year and a half to a large number of patients, has brought convincing proof that there is basis for implicit confidence in the diagnostic reactions when they are clear cut and distinct. The doubtful element enters in cases where the reactions are weak, dull, sluggish or entirely absent. If the foregoing exposition of the electronic concepts is correct, it must be evident that the reason for these varying reactions must lie, at least in a great measure, in the construction of the tuning apparatus, the Reflexophone of Abrams and others of same type. These instruments vary their capacity of resistance or inductance by taps taken from the windings at various points. Naturally, this limits the application of the instrument to the actual number of points on the dial. If we get a good clear reaction in diagnosis, we may presume that everything is in perfect tune, that the point at which the tap is taken from

the winding on which our switch arm is now resting happens to be exactly the right point. Such a reaction may be interpreted as being 100 percent accurate.

Possibilities of Error

As we have shown, the same disease in different organs in the same patient, and the same disease in the same or different organs of different patients can not logically be considered as having absolutely identical rates of vibration but must be of different rates. The question naturally arises then as to the range, or latitude, of tuning possible at any one given point on the dials of our diagnostic instruments. In other words, is its construction such as to admit of a broad band of vibratory rates or is it very selective, just as in the case of Radio receiving apparatus, some of which are broad tuning and others very selective? In the case of a broad tuning range, at any given setting, we find that there is a great deal of interference from wave lengths or from rates of vibration nearly similar to the particular one we want to get, and that clear reception is impossible. We can not know whether we are getting the vibratory rate we desire to tune in or whether we get some other disease wave which is nearly the same. If the apparatus is very selective, we can expect that only one very narrow band of wave lengths, or vibratory rates, is permitted to pass and, thus, we can expect that we are missing a great many reactions of disease whose vibratory rates would respond only to a setting somewhere between the contact points on the instrument. If the doubtful reactions mentioned are to be considered as true reactions and dependable in every way, they must be vibratory rates that just come within the limits of response of the apparatus at the given setting. How many reactions are we missing whose vibratory rates fall just outside this limit and somewhere between contact points?

The writer believes that something of the sort occurs when the 25ths points on the dials are employed to measure potentials of disease. Those familiar with the work will know that, at certain settings of this dial, the reactions seem to come through much clearer than at other settings. This question is naturally very intimately related to the question as to how the tuning apparatus really acts, whether by resistance properties or by induction. It is true that the Reflexophone is said to act by resistance only and not by induction properties, but it must be admitted that there are too many inconsistencies in that viewpoint for it to be accepted without a great deal of experimental proof being *demonstrated*. If it acts at all by induction, we have another factor of error in that the induction can hardly be alike in any two instruments because of the way the wires are placed.

Contradictory Diagnosis

One of the first and most disconcerting *facts* that an investigator into electronic diagnosis comes in contact with is in the different diagnoses made by different examiners from blood specimens taken from the same patient. This fact exists and must not be evaded. Several explanations are offered: That different examiners do not possess the same skill; that they do not use the same technic; that their auditory powers differ; that they use different hook-ups of the diagnostic instruments; that some use one, others two and still others three separate instruments in making the diagnosis. (We refer here to the number of reflexophones used.) If we accept the statement that each acts as a separate unit of resistance, it would appear that three instruments must be used in order to eliminate as many chances of error as possible. Then all examiners must use three reflexophones and, yet, if any of the other factors mentioned are present, we must still fail to get identical diagnoses from different examiners. If we now add another factor that is very real indeed, that of varying values of same contact points in different reflexophones, the confusion increases. It is a well known fact that a large number of reflexophones put on the market a year ago, when the sudden increase in demand occurred, are very far from satisfactory. The writer knows of reflexophones which, when set at 55 for acquired lues, really had a value of 57 ohms, the rate for congenital lues, and at 58 had value of 60 which corresponded to streptococcus infection instead of sarcoma as indicated by the dial.

It is recognized that the question of accuracy is one of relative values entirely. Such statements as made by a Mr. Morgan, in Ford's *Dearborn Independent*, concerning accuracy of Reflexophones, are to be deplored. They serve but to becloud the real issue and make confusion worse. It should be explained that any question of accuracy must refer to the limit of variation which is permissible in relation to the particular use to which any given instrument is to be put. A yard stick is accurate to the seamstress or carpenter. To a watch maker or lens grinder, it would be very inaccurate indeed. Therefore, the question is not one of accuracy in comparison with

any particular standard of comparison chosen by Mr. Morgan, but as to whether or not it is within such limits as to make it suitable for the work in hand.

Unjustified Claims of 100-Percent Accuracy

The foregoing is submitted for the study and consideration of all physicians now practicing electronic diagnosis. If the contentions outlined hold true, how then can we justify the statement so often made, that electronic diagnosis in its present stage of development approaches 100 percent accuracy; that only human elements of liability to error in technic and interpretation keep the results below 100 percent? If such be the state of affairs at the present time, need we lose all hope and confidence? Far from it. The present magnitude of the work has been built on real merit. Diagnostic reactions absolutely do occur in every case and, apparently, the large majority of cases come within the scope of our present apparatus. When reactions are clear cut and examiners employ the same technic and the apparatus is standardized to within reasonable limits of accuracy, the results will score still better. The approach to 100 percent accuracy in diagnosis must, however, await first the development of instruments for tuning vibrations in or out, which are of continuous range and not go by steps from one contact button to another, as at present. This holds equally true whether the modus operandi be by virtue of resistance or by induction.

It is the belief of the writer that resistance of a piece of wire can not be used satisfactorily to measure the potential af disease energy. Without going into details of how this conclusion is reached, we would add that, so far, the only practical method now appears to be the use of a variable air gap.

The Essential Truth Maintained

As the proof of the pudding is in the eating thereof, so the proof of any system of diagnosis is, the revelations afforded by the results of treatment applied in accordance with that diagnosis; the revelations of surgery, of autopsy, etc. These revelations have corroborated electronic diagnosis too often, scored too high a percentage of correct diagnoses from blood alone, to admit of any doubt as to its having great essential worth, far better than any other single method known today; but the assistance of all other valuable methods is needed and the method must be greatly improved before we can be justified in making assertions pertaining to 100 percent efficiency.

What other method can tell us even a small part as much about essential diagnosis as this method can even now? Can any other method tell us that a heart condition "diagnosed" as myocardial weakness is due to streptococcus, luetic or other definite cause? This is the true type of diagnosis in which we are interested. A diagnosis of mitral regurgitation is not what we are interested in primarily. We want to know *why* the patient has this condition. We are interested most of all in diagnosing the presence of abnormal vibrations of electrons in tissues and organs *before* mechanical change of structure or destruction of vital structure has occurred. There lies the real field of diagnosis. Electronic diagnosis in its present stage has pointed out the way by which we may approach that goal of early diagnosis. Given a truly early diagnosis, the treatment will be a much simpler problem. The problem will then practically resolve itself into one of prevention.

The Treatment Apparatus

Taking up the present forms of treatment apparatus, by which electronic vibrations are supposed to be corrected to normal rates or abnormal rates destroyed entirely and nature be made to resume normal vibratory rates, we find the same type of errors present in their application as in the diagnostic apparatus. The Oscilloclast, for instance, has 11 contact buttons per dial. If we grant, for the sake of argument, that this apparatus does induce charges of electronic energy in the body of the patient, to which the electrodes are applied which are of similar rate of vibration as that of the disease conditions being treated, we still fall far short of carrying that very principle to its logical conclusion. Any apparatus depending on tuning by steps (as is the case with these types) can only give off the rates of vibration corresponding to those contact points. All the rates intermediate to these points are unavailable. How can it be logical that point 3 can give off exactly the right rate for both, acquired and congenital lues when they have different rates, as shown by the diagnostic apparatus? Likewise, how can this same rate at point 3 be exactly right for sarcoma, for instance? All who are doing this work know that they have cases that respond wonderfully, that astound patient, friends and physician alike. Then they also have large numbers of cases that apparently, because of physical and electronic diagnosis, should respond just as quickly, but that fail to respond at all and many that respond very slowly. Why is this so? The writer ventures to say

that it is because the correct rates were available in those that respond so wonderfully and that in the remainder the proper rate is not available at the contact points available on the dials of the machines. Could we get at some intermediate portion of the windings, we would be more likely to score successes in those whom we now fail to help. Why is it that Dr. Abrams is so frantically scrambling around for the proper rate for streptococcus and Neisserian infections? Simply because the rate is not available at any of the 11 points on the dials.

Certainly, if we are to apply electronic concepts all along the line, it is impossible to conceive of any apparatus tuning by steps of contact points that can ever score a very big percentage of success in comparison to what might be accomplished if all portions of a tuning member were available. Nor can arbitrary numbers be established for each disease condition. Each individual case will have to be individualized and treated at the rates which are found to neutralize all disease reactions in that particular patient, so that one patient with congenital lues may be found to have all reactions neutralized at, say, 29 on an arbitrary scale and another congenital lues case, which seemed to be just like the other, would require rates at 34 to effect neutralization.

Here, again, be it understood that the writer is absolutely convinced of the efficiency of the Oscilloclast and similar instruments when the rates available are exactly right. It must be evident that, when a case is encountered which does not respond satisfactorily at the arbitrary setting, that case must be tested out in connection with the Oscilloclast to determine if that arbitrary rate is the nearest correct rate available or if some other setting more nearly covers the case. Too many patients with otherwise hopeless prognosis have been returned to health through the means of these instruments than that they could be considered accidents or coincidents. The instruments fill a field in therapy that no other means has done and they are exceedingly valuable for those cases that they fit.

The writer wishes only to point out the fallacy of the idea that any instrument of the Oscilloclast type can ever afford the solution of the cure of diseases when we consider the infinite variety and combinations possible in the human body. Where it does fit, it does what no other means can do. Lucky the patient whose condition it covers. He will likely soon be well.

Electronic View Applied to Radioactive Drugs

Applying electronic principles of vibration interference to the use of radioactive drugs, we find the same lack of following the principles out to their logical end. We find, for instance, that gamboge is recommended as being the best remedy for tuberculosis. Later on, we are told that vanadium is far better than gamboge. What is the answer? Simply a failure to carry out the individualization of patients. Just as button No. 5 on the Oscilloclast can not supply vibrations exactly right for every individual suffering from tuberculosis of various organs, not even the same organ in different patients, so vanadium can not supply vibrations exactly right or best in all cases. Drugs must be tested out against each individual case, and then it will be found that in one case gamboge is best, in another vanadium, in another creosote, perhaps, where streptococcus is associated. For best results in any type of case, your remedy must be able to annul all the disease reflexes. If more than one remedy does this, then take the one which annuls it through the greatest air gap. This will be the nearest correct, just as we find that, when our radio apparatus is in exact tune with some station thousands of miles away, we will get that station and get no effect whatever from a station a mile away, the potential of energy reaching our receiving set being millions of times greater yet being incapable of affecting any response in the receiver because out of tune.

Take the various remedies for lues. We may find that part or most of the reactions in a given case are annulled by thuja, quinine, calomel, arsphenamine, etc., but that mercuric iod. flavum is the only remedy that annuls all the disease reactions. Naturally, this is the remedy to give. If we go farther and try the various forms of this drug, we may find that the crude drug annuls the reflexes through an air gap of a couple of inches and that the 100,000 X attenuation thereof annuls them at 40 inches. Naturally, we would give a dose of the latter. On testing the reflexes in a minute or two, we might find all disease reflexes absent. We might find that these would not return again for five or six days. Then why repeat the dose oftener? If remedies will annul disease reactions for a week, and the Oscilloclast for only 18 to 24 hours, then why use the Oscilloclast and similar apparatus at all? Also, we may find that, as the case progresses, the sum total of vibrations in that

case changes so that the original remedy no longer annuls all reactions or that it annuls them over a lesser air gap than some other remedy of a different combination of wave lengths. Then we must give this other remedy which now fits the totality of the case better than the first remedy.

Value of Autotherapy

When one considers the great variety of combinations possible in diseases of human beings, one is constrained to feel that our line of most likely success lies in the utilization of the patient's own remedy; the preparation of autohemic serums or autogenous serums or vaccines prepared according to the basic principles outlined by Dr. Chas. H. Duncan. It would appear that only in this manner can we expect to obtain a source of vibratory rates that exactly fit every case. If we can diagnose disease conditions by the vibratory rates found in the patients' blood and we claim to effect a cure by means of *similar* vibrations setting up destructive or interfering vibrations, then why not use these very same vibrations, by which we diagnose a case, to cure it also? They must be exactly right in every case. The problem would appear to be one of perfecting some means of stepping up or increasing the power of these vibrations of the patients' blood or secretions or excretions, so that they would have the power to produce these desired effects.

Orificial Therapy

Lastly, we have to consider the effect on vibratory rates of socalled mechanical conditions. The effects there are very decided. The how of their action must be looked into and determined positively, if possible. This refers particularly to the field of orificial therapy. Why is it that we find cases with 30 and 40 ohms energy of congenital lues fall to zero almost immediately after a circumcision, a divulsion of the sphincter ani or the removal of anal papillæ? Why is it that we find in cases of epilepsy that the electronic reactions show lues and perhaps colisepsis and streptococcus infection in the epileptic area, and the treatment with the Oscilloclast takes many months, if successful at all in eradicating the trouble, when on the other hand, a great many such cases are cured practically instantly by the application of proper orificial therapy? Not only does this occur in the conditions named, but it may be observed in many others.

Do Not Limit Your Method Unduly

Naturally, an article like this applies to the men on the firing line, the physicians fighting the battle against disease. It is hoped that this article may point out the necessity of knowing and using other methods than the Oscilloclast and similar instruments, and that one must not persist in the use of the Oscilloclast when it is apparent that the progress is not satisfactory. First of all, see if some other setting on the instrument will annul the reflexes better than the usual one for the condition in hand. Then do not forget these other means of securing vibrations. Remember the potentized drugs, the blood and exudate preparations, the promotion of unimpaired functioning of the sympathetic nervous system. What matters it from whence we get the proper vibrations? If drugs give us the nearest correct vibrations in a given case, then it is necessary to use those drugs, rather than the Oscilloclast, for instance, in order to play fair with our patients. What right then has any man to take up with one certain line of treatment and insist on treating every case that comes along with that one method? If we have the source of correct vibrations at hand and still fail to obtain results, we must search for the reason for failure. Often we will find it in orificial defects causing malfunction of the sympathetic nervous system whose mission it is to correlate and harmonize the various vibrations of the various portions of the body into one harmonious state called health.

The electronic conception of health and disease is unassailable. Surely, we may labor unceasingly in the endeavor to perfect our present methods of socalled electronic diagnosis and treatment and, what is just as important, learn to properly correlate and assemble all valuable means into one worth-while whole, whereby we can really secure for the patient all possible benefit and again enjoy the confidence and respect of the people at large.

Unity in Medicine

In concluding, the writer wishes to again voice his pet hope; that the time may not be too far distant when medicine will become a true science and when there will no longer be the sorry spectacle of the various methods of practice fighting each other, refusing to admit that there could possibly be anything of value in any but their own particular single-track methods, when "allopaths" and homeopaths, osteopaths and chiropractors, electrotherapists, electronists, naturopaths, etc., will no longer exist as separate entities but that in their stead will be a Universal Medicine consisting of all that is good in all these methods and eliminating most of the useless bluff, front and

camouflage. Then and then only shall we merit the respect and confidence of the public, which medical men do not now enjoy and do not merit.

Why should a poor sufferer have to go the rounds from one practitioner to another, each telling him that his particular method of handling diseases is the only correct one, finally ending up in complete discouragement and failure and a distrust and disgust for all things pertaining to the healing art? Of course, the incurables will always be with us, but their number will be decreased through the judicious use of combinations of the various methods which in the present stage of affairs are only obtained by the patient shutting his eyes and picking the first kind he gets his fingers on, and so on through the gamut. Why must this condition continue to exist? Is it solely that the Pooh-Bahs are afraid that their present position would not bear investigation and they would have to work among the sick again instead of playing Kaisers to the various systems of practice? There is much that is good wheat among each of the various methods of practice, but there is entirely too much chaff and weed seed among the wheat. For the good of suffering mankind, can't we put them through the cleaning mill? It is high time that it were done.

Through the Latin Americas

By E. S. GOODHUE, Roosevelt, Hawaii

DESPITE entreaties and protestations over our short stay at Quirigua, where we visited the ancient Mayan ruins, we left our Guatemala friends for the Pacific port of San José.

The trip over the railroad was extremely interesting. At Esquintla, a hot little town of the Guacalate river, we got off for a bite and a two hours' wait, which lengthened into five hours, each extension being announced half hourly by the *conductor de ferrocarril* the proclamation meeting with laughter and jokes on the part of the Guatemaltecans * who evidently have a sense of humor.

We soon got away from the higher lands, canyons, deep gulches and mountain streams, passing through forests with here and there a stop of *despacho,* where there was a cleared space with palm-thatched huts, a few banana plants and, sometimes, little gardens of fruits, corn and vegetables. The latter were offered for sale to passengers on the train. The Indian vendors seemed kindly, as are our Hawaiians, and I was told that, throughout the Indian settlements of Guatemala, a woman may pass at night unattended without fear of insult.

We had lingered for miles along the shores of the beautiful Lake Amatitlan, which is becoming a week-end resort for residents of the Capital, and came, at length, to Santa Maria, a junction for trains going west to Mexico, through Quezaltenango, the town of that name being situated high up in a region almost cold.

* Guatamaltecan, Honduzoneon, Salvadoroneon as nouns; Guatamalon, Honduron, Salvadorean, as adjectives.

At San José, a tropical little port at which San Francisco steamers call on their way to Panama, we took the "San Juan," embarked in a box seating four, and were swung in mid-air from the wharf to a lighter. This, let me say, is an easy, safe and much better way than trying to get down a ladder or gang-plank into a bobbing boat, as we have to do at most of the Hawaiian landings. You get in on the wharf level, are seated in a car with cushioned seat and carpeted floor, lifted carefully, and landed in the shore boat, or lighter, without any effort or risk on your part.

The next day, we landed at Acajutla, Salvador, in the same fashion. We met very cordial passengers on the "San Juan," going to all points in Central, South America, Panama and the West Indies: Mr. Peter C. Wilson, a genial, helpful Scotchman, bound for Costa Rica, where his native wife and children live; Dr. E—, the ship physician, a cheerful optimist whose presence alone would be therapeutic; Mrs. Walter Roe, niece of the novelist, traveling to gather information about the various tribes of Indians which her husband, a missionary, had faithfully served; Mr. Mullins, a prominent railroad man from Cutuco, and others.

Acajutla we found to be a very pretty port dressed in luxuriant foliage of intense greens and reds. After customs' examination, without charges, this time, and viséing of passports by the *Commandante,* free, we took the train for San Salvador, 194 miles northeast; fare, $5.15 gold.

Another delightful ride with courteous officials and kindly passengers, through much

Gunboat at Lagoon, Puerto Cortez, Honduras

cultivated land, immense estates of corn, coffee and sugar. The mills are always near. Beautiful streams were crossed, ranges of hill and mountain penetrated. I saw some balsam (of Peru), our familiar *kamani*, and the pretty Mexican creeper, in two colors, which covered the trees for acres and miles.

We bought papaya, alligator pear, oranges, cocoanuts, mangoes, and other fruits from the Indian women who thronged the cars, also a peculiar turnip-like fruit called *guicamas*, liked by the natives, but tasting to us like raw potato.

San Salvador

San Salvador is a beautiful city of some 80,000, lying in its bowl of a valley, with rows of hills and mountains of varying height and shades of color, about it; skies like California, air like Hawaii, and a life all its own.

The streets are bright with color, the stores large and well equipped; stocked (if at high prices) with modern goods.

A number of the buildings are exquisitely designed, and the interiors finished in native woods than which none is more beautiful in grain and susceptibility to polish.

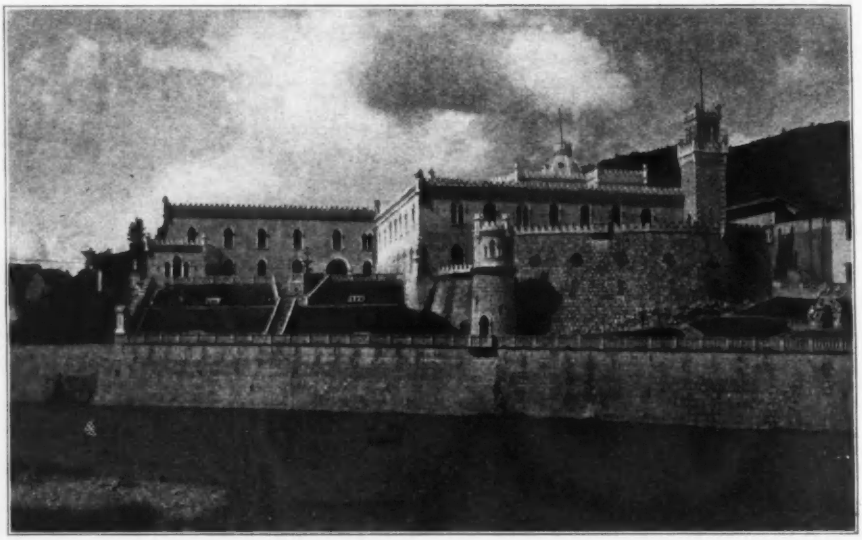
Among notable buildings are the National Theater, the President's house, his sister's home, the Medical School, Rosales Hospital, and the cathedrals. The plazas and *plazuelas* (smaller parks) are very pretty, well lighted up by electricity, with band stands and seats for the people who fill them sitting there late into the night to listen to the good music, see the well-dressed men and women, and gossip.

While smaller than the one in Guatemala, and less Cairo-like in its glamor of life and color, the market supplies a variety of fruits and vegetables, and has some extremely substantial and artistic hand-made goods in silk and native materials.

Here are woolen blankets somewhat inferior to those in Guatemala; baskets, pretty sashes for girls, mantillas, shawls and trinkets, showing considerable taste and skill.

Everywhere we found the natives, Spanish and Indians, friendly to Americans. There is a limited foreign element which does not like us, or our possible commercial supremacy in the country. A little more care in trading methods, a better knowledge of the language and people, by Americans, will establish and maintain this supremacy. We should certainly teach the Spanish language in our schools.

The National Palace, where the Assembly meets, is a very fine building opposite the Plaza. It is said to be one of the best buildings in Central America. There are many churches or cathedrals, the oldest being of most interest. Its exterior is striking, with its expansive roof, white cupola and towers; but the interior, while commodious, is tawdry in ornamentation. In the tropical moonlight, offset by tall graceful palms, the building is



President's Palace Near Bridge Tegucigalpa

very beautiful.

Outside are three statues, one to Cristobal Colon, another to the first Catholic bishop of Salvador, the third, a cheap wooden monument painted a dirty red, to "the memory of Jesus Christ," and erected in 1821.

The plazas are most attractive, some of them as gardens, others having only grass and trees placed without set arrangement.

Today the army, in blueish-grey uniforms, marched by our hotel to the sound of drums At the various consulates, President's house, National Theater and markets are soldiers with guns, Salvadoraneans, barefoot and lackadaisical. Every house has iron bars before its windows, doors being closed by ponderous timbers.

All the flowers of the tropics are to be found here in profusion. Roses are particularly in evidence and indicate that the Japanese beetle (as well as the Japanese himself) has not arrived. Men, women and children promenade up and down the well-kept sidewalks after the lights appear, the better classes in most fastidious dress. I have seen many priests in their gowns.

In Mexico and Guatemala, as at home, they are not allowed to appear gowned in public. Recently, Mexico has expelled her priests and nuns, and a party of the latter came with us to El Salvador on the boat.

At present, in Salvador, the clerical party is in power, though many "liberals" are clamoring for a participation in governmental administration. There was a political meeting in favor of the new presidential candidates at the plaza last night.

The President of Salvador, Sr. Don Jorge Meléndez, was inaugurated March 1, 1919. He and the vice-president, Sr. Don Alfonso Quiñonez Molina, were elected for four years and have a cabinet of four secretaries, or ministers: Foreign Affairs, Public Instruction and Justice, War and Marine, Interior and Agriculture, and Finance, Credit and Charities. I have been asked to confer with the Minister of Public Instruction, who is regarded as an advanced educationist.

While we have met a number of Americans throughout Central America, residents and others, especially in the large cities, there are, I think, more Germans than other foreigners in El Salvador. Many of them are in business on the coffee *fincas,* and scattered in different towns. I went down street yesterday to buy some films for our Eastman kodak. They tried to sell me a German film, saying that it was better than our own American article! We have something to do yet in making the value of our goods knowr here.

Señor Ribas, the editor of "Renacimiento," a creditable magazine published here, called to see me today. He is Spanish, speaks per-

fect English, and has most liberal views regarding our relations with the Latin Republics. He deplored the circulation of such papers as "The Nation," Hearst's publications and other similar "stuff" in Central America. He said his people were apt to be superficial in their judgments of America and accepted what these journals said as representative of our best opinion. In a recent visit to the United States, Mr. Ribas called on President Harding and Vice President Coolidge. He stood for the Allies during the war and is trying to educate his people up to a better understanding of America.

"It might be a good idea," said he in leaving, "for some of your Chambers of Commerce to send men here to acquaint themselves with the people and conditions of Central America."

Some of the most striking objects I have seen here are the magnificent trees which rise above their fellows in the wonderful forests. The *amate,* gnarled and massive; balsam, tall, graceful of whitish outer bark something like our elm, the socalled Balsam of Peru, grown in a small section of Salvador; the round, swollen, oddly-shaped, often immense ceiba; the *aguacate, castilla,* and mahogany.

The latter, of course, is a rich product, and several lumber camps are being developed. As for the balsam, which does not attain its full growth until its 25th year, Salvador exports some 175,000 pounds of its sap a year.

Liquor is sold freely at all the licensed *cantinas,* and I see daily evidences of intoxication. Owing to this, I am told that it is not safe to travel at night in the outlying districts.

I am sorry to say that some of the foreign residents, especially young men who are here on business, are not setting a good example in their use (and abuse) of intoxicants. They are fine young fellows, but they are injuriously influenced by the drinking customs of the country and, as is well known, the tropics are no fit place for drinking men, if any place is.

For the sake of its large Indian population alone(a kindly, peaceable lot) these republics should do away with the manufacture and sale of intoxicating beverages.

And, despite my friend, Clemens-Dooley, I shall relieve my conscience by expressing my opinion on the subject to the President, whom I expect to meet today.

San Salvador, Guatemala and Tegucigalpa.

Church of the Rosary, San Salvador

Surgical Seminar

Conducted by GUSTAVUS M. BLECH.

Solution of Surgical Problem Entitled "A Study in Blood-Counting"

Recapitulation of the Problem. (Published in the August issue.)

A laborer, aged 48, with no other history except that, while a resident of Texas, eight or nine years ago, he suffered from an acute attack of Texas fever, had been ill for several weeks and his condition had become worse under medical care.

The illness manifested itself by general malaise, headaches and prostration, compelling the patient to remain in bed. The condition had a sort of typhoid aspect; temperature, 104° F.; pulse, 100; respirations normal but shallow.

A "tumor" in the left upper abdomen was interpreted by the physician to mean an enlarged spleen.

Examination by you as consultant betrays a profound toxic condition. The "tumor" appears on deep palpation to be oval in shape, movable to a limited degree and apparently not connected with the intestines.

Urine shows a trace of albumin and amorphous urates, otherwise nothing special.

Blood-count shows 4,700,000 red cells, 30,000 white cells with 90 percent polymorphonuclears. Plasmodia not found. Widal test is negative.

In the "requirement" it was suggested that the clinical picture, taken together with the blood-count, should prove sufficient to enable you to arrive at a tentative diagnosis, which, while not absolutely final, should be at least in the right direction.

Discussion by General Geo. Acheson

In discussing this case, I must confess that I am ignorant of the symptoms and pathology of Texas fever, and so, a history of this condition affords me no light on the status præsens. Nor am I quite sure from your statement whether this attack of Texas fever occurred eight or nine years ago or just a few weeks preceding his present illness. This may have some bearing on the etiology.

Apart from all the symptoms described, the blood examination shows pus formation, probably acute (as the number of red cells is not far from normal) and no malaria. The question is, the cause and location of the abscess. All symptoms, except those of profound toxemia, appear to be negative, and we have only the sign, revealed by deep palpation, of a slightly movable tumor in the left hypochondrium, oval in shape, and apparently unconnected with the intestine. Is not this likely to be a distended gall-bladder, a purulent cholecystitis? What about a history of attacks of biliary colic, and perhaps jaundice, in such a case?

Another possible location for the pus is a subphrenic abscess occupying the left anterior space. This would probably be due to a ruptured gastric ulcer; and here we, no doubt, would have some history of pain and gastric distress.

The local practitioner, who treated the patient for several weeks, presumably for malaria, and saw him gradually becoming worse, does not tell us much about his symptoms during that period. So, about the only really definite diagnosis I can make on the data supplied is the existence of pus somewhere in the upper abdomen; examination with the fluoroscope would probably reveal the exact site.

Apropos of the question of blood examination, I don't think that we general practitioners make as much use as we should of this valuable method of diagnosis. A blood-count should possibly be as much a matter of routine as an examination of the urine; and it is not difficult or tedious to use a hemacytometer. Most medical men, I presume, have a fairly good microscope, and the additional apparatus required is a Thoma-Zeiss Pipette and Counting Chamber, or a Gower's Hemacytometer. Many a doubtful diagnosis would be cleared up, and a more reliable prognosis made, if a routine blood-count were carried out in our practice.

Discussion by Dr. Oliver H. Griffith

A casual consideration of the case suggests very much the possibility of an abscess of the spleen.

It it very doubtful to me that there is any

relation of the history of Texas fever to the present trouble. I understand Texas fever to be a bovine disease, and I have no knowledge that it is communicable to man. The history does not show anything about trauma to the left hypochondrium, but we must always bear in mind the possibility of an infected embolus being carried to and lodged in the spleen.

I am inclined to the belief that a lesion of the left kidney can be ruled out, because there is nothing in the urinary findings to justify such a diagnosis.

The blood count is sufficiently clear as regards the enlarged spleen to rule out with finality typhoid fever and malaria.

Discussion by Dr. S. C. Hamner,

The blood picture taken in connection with the clinical phenomena to me has but one meaning—pus.

In spite of the fact that nothing is said about tenderness in the region of the left kidney and that the description of the tumor felt is very vague and, furthermore, in spite of the absence of a report of the findings of urinary analysis repeatedly made over a period of several days, I venture to submit this diagnosis:

This patient began to suffer with a mild pyelitis, complicated by blocking of the left ureter, resulting in a pyonephrosis. The blocking of the ureter explains why no pus was seen in the sole specimen of urine examined.

A diagnosis of perinephritic abscess suggests itself, but would presuppose further data or certain definite findings.

The patient is desperately ill and needs surgical attention.

Editorial Comment and Solution

As I have said when I published the problem that, though the case in question was a rather important one, (since a correct diagnosis leads to a cure and an incorrect one to failure or worse), it is by no means a difficult one.

I am also very glad to announce that the number of participants has increased. I should have gladly published a few more discussions, if the gentlemen had gone to the trouble of giving a reason for their opinions, right or wrong. Bare statements are not discussions and cannot be accepted by me, even though they give the correct diagnosis. I have made this statement before, but it seems that our readers pay no attention to these comments. One reader asked me why I do not publish a list of the readers who send in correct answers. Well, this is a Seminar and not a puzzle department. In today's work, a medical man of distinction has not guessed at the true condition, yet I am happy and proud to publish his discussion because what he has to say is weighty.

As regards the case itself, we delve into our man's past and learn that, eight or nine years ago, while a resident of Texas, he had what, we are told, was Texas fever.

I should have had these two words printed in quotation marks, and I did not do it for a purpose. I knew next to nothing of Texas fever as it is understood in the scientific world. All I did know at the time I was called in consultation was, that Texas fever was a sort of parasitic trouble (Arachnida) producing nervous phenomena due to a toxicosis of some sort. I questioned the man about his fever, and he said that he has had chills and fever. From this I concluded that he had a plain case of malaria. I did not mention this in the problem, partly because I had no definite data I felt safe to present as facts, partly because, whatever the patient had, it was irrelevant with reference to the present trouble.

As the heading of the problem indicated, I meant it to be a study in the interpretation of blood-counts. No one who has followed my writings will charge me with having sought to induce any one to make a diagnosis from the blood findings alone. But, in this as in similar cases, the blood-count is of tremendous diagnostic importance, and I am heartily in accord with General Acheson, when he pleads for a more frequent resort to the counting chamber and microscope. As a surgeon, I know that a blood count may not only clear up a diagnosis but, under certain conditions, will indicate the proper time to resort to surgical intervention.

Now, let us return to the consultation room. A general practitioner, whose name does not matter, who has had the patient under his professional care for some time past, without producing any desired result, is facing Judges Acheson, Griffith, Hamner and Blech.

The witness, feeling that his work is to come under the sharp scrutiny of the judges, tells you only that his charge had malaise, headache and prostration. He does not tell you more, for two human reasons; either he does not know more, which is probably the most likely thing, or else he feels that, since we have been called in as experts, the burden of proof should fall on our shoulders. Whatever the reason, we can get no help from the

witness and it is up to us now to get at the facts.

We see a toxic patient, coated tongue, foul breath, parched lips, sordes, etc., tending to present a picture as classic as if prepared for a medical-student quiz. Thermometer and watch show a ratio indicating a low form of sepsis.

What can it be? Do not be too sure that we have a surgical problem, simply because this is a surgical seminar. First, even a "dyed-in-the-wool surgeon" would consider internal diseases before attempting to make a diagnosis.

(Permit me to interrupt the session long enough to warn all our readers that you may get a number of problems which, ostensibly surgical in character, may have no surgical aspect whatever. Forewarned means being forearmed!)

What comes to our mind? Malaria, Typhoid Fever, Miliary Tuberculosis.

The man may have had malaria some years ago, for malaria is very prevalent in Texas. Even if the blood does not show the plasmodium, I for one would not definitely rule out malaria; for one reason only, and that is, that it is as difficult to find a plasmodium in late malaria as it is to find the proverbial needle in the haystack. But, if this patient had any manifestation of malaria, his blood count would present quite a different picture. A high polynuclear leucocytosis means that there is no malaria here. I do not care much whether the patient has or has not had chills, for the chills are not monopolized by malaria. To me, the blood-count is all-sufficient

Now, this same blood count justifies me in ruling out typhoid fever, and I do not have to wait for the pathologist's report that the Widal reaction is negative.

Has this man an acute miliary tuberculosis? If he had any evidence of that class of trouble, we should have presented some evidence, because it is of too great importance to be overlooked, and if there is any doubt left in your mind—well, here is friend blood-count again, shaking his head to express an emphatic NO.

So far, all four judges are agreed, and we take off our robes as internists and don the vestments of surgeons to find the site of the culprit for our judicial attack.

Dr. Hamner, opening the session, says: "The blood-picture taken in connection with the clinical phenomena to me has but one meaning—Pus!" And he not only hits the nail on the head, but again all judges are in full accord. There is no dissenting voice or vote. And now we come to the most interesting part, because we have reached the end of the main road. However, as there are several radiations, one hesitates, not knowing which particular road will lead to the goal.

Let us see what we must bear in mind.

General Acheson suggests a purulent cholecystitis.

Dr. Griffith suggests an abscess of the spleen.

Dr. Hamner suggests pyonephrosis with something like a mental reservation of perinephritic abscess.

Dr. Blech, having had the advantage of following up the case by repeated examinations and operation, which absolutely confirmed the diagnosis, begs leave to be excused from giving an opinion, at least until the various ideas have been discussed.

Let us first see what the physical examination at the time of consultation reveals. "On deep palpation in the left hypochondriac region is a tumor, oval in shape, apparently not connected with the intestine and, while ill-defined, it is movable to a limited degree".

Far be it from me to exclaim: "You have your diagnosis right there," for, no one better than I knows the pitfalls of diagnosing abdominal tumors correctly before operation. However, here we must first ask ourselves whether what we feel is actually a tumor or merely an enlarged organ. It certainly is not an enlarged spleen—the description does not fit. Recently, I saw a case in which the family physician diagnosed malignancy when we had a case of splenic leukemia, but, after all, the term malignancy was not misapplied. Only, what I could not understand was, that the enlarged spleen was not recognized, since every young intern promptly recognized the massive tumor to be an enlarged spleen. For an enlarged and infected gall-bladder, the "tumor" is a little too far away from the border of the liver and, besides, the whole history and trouble does not jibe with the diagnosis of purulent cholecystitis. Clinically, I admit, it is very difficult to separate this condition from cholelithiasis, and, while large-sized monographs could be written on the variations of the symptomatology of cholelithiasis, it is at least reasonable to assume that we would not have such a low form of toxemia, that the patient's previous history would have some relation to biliary colics, that the patient would have suffered much or little from painful attacks, that he probably would have vomited, had chills, etc.

An abscess of the spleen is so rare, without a history of previous infectious disease in which the spleen participates by becoming swollen, without being secondary to some suppurative process in the immediate vicinity (e. g., subphrenic abscess) or when not due to trauma, that in a practice of over thirty years I have seen but one case, and then my skill as a diagnostician received a rude jolt when, on laparotomy, I found out that my original conception of the abscess was all wrong in that I encountered an echinococcus cyst which had suppurated.

No, from the appearance of the tumor and its mobility, there was only one thing to think about—the left kidney; and I immediately told the family physician that there is where the trouble was; and, of course, we secured a specimen of urine. When that specimen showed only a trace of albumin, the family physician expressed the idea that, if there were trouble in the left kidney the urine should show pus and a large percentage of albumin, to which I replied that he was perfectly right except in so far as the kidney may not function at all or else the ureter may be blocked, which shows that Dr. Hamner and I are in full accord.

A perinephritic abscess could be ruled out at once. There was too much mobility of the "tumor" for that.

On the other hand, a suppurating cyst of either the spleen or the left lobe of the liver might produce phenomena so similar to the present condition that, aside of their rarity, an exact diagnosis between either of them and pyonephrosis (left) was simply out of the question.

Here our problem ends. We can readily see that the opinions advanced by Drs. Acheson and Griffith are plausible, rational and absolutely proper. Their exclusion would, of course, have followed repeated cystoscopic and urinary functional tests which, in a day or two, would have established the diagnosis of pyonephrosis. With this finality we are not concerned, since the object of the problem was, to interpret the blood-count, with a view of selecting the best road of diagnostic approach.

In this we have not erred. General Acheson is an old dear friend of ours, but as to you Drs. Griffith and Hamner, I am proud to count you among my successful contributors and you have a standing invitation to join the Seminar family as constant collaborators.

A New Problem

In lieu of a surgical problem I present the following interesting letter from a colleague in old Mexico, which has sufficiently interesting material to merit full discussion. I shall comment on the treatment only, for the present.

Dear Doctor Blech:

Will you permit a poor devil, way down in old Mexico, to present a case report? Name, Ramon Cruz Cabrera, age 37. Diagnosis: Bitten by some poisonous insect about the middle of right shoulder, December 28, 1922, and came to my office for treatment on December 31, 1922. Examination showed some edema of posterior surface of the right shoulder, and a spot about the size of an American silver dollar, not dark but black. Near the center of this black spot, was a small pustule, which contained a yellowish serum.

Hot antiphlogistine poultices were ordered January 1.

Microscopical examination of the pus showed streptococci in abundance.

Van Cott's combined vaccines was ordered, but, due to the fact that we had to get our supply from Mexico City, it was January 5 before the first dose was given. In the meantime, I changed from antiphlogistine to hot fomentations of 2-percent chlorazene. Patient showed a rise of one degree from the first visit to my office, December 31, and a saline clean-out was one of the first things ordered; this was repeated all through the course, as needed.

The patient showed no improvement and, January 8, I incised freely, evacuated about 1 pint of pus, and continued 2-percent chlorazene dressing. January 5, first dose of Van Cott's vaccine was administered (1 Cc.) and repeated each day until eight doses were given. Within 12 hours after the first incision, wound diphtheria developed. January 12, a second incision made, about 4 inches below the first incision, and more pus was evacuated. Thoroughly cleaned the wound; chlorazene solution was continued. Within eight hours, the edges of the wound were covered with membranes. January 10, strychnine sulphate, 1/60 grain t. i. d., was given and continued throughout. January 18, third incision. More pus, seems to be following muscle sheath down. January 23, patient showed much weakness from pus absorption and 800 Cc. of physiologic saline solution was given. At 10 p. m., same date, 500 Cc. of physiologic saline was injected. Strychnine, sparteine and caffeine hypodermics were given every three hours.

Patient had eggnog, milk and chicken soup —all he would take, through his illness. Drs. Brigman, Juan, Graham, Cassosus and Overton, all saw this patient with me during the first fifteen days of illness. January 23, Dr. Castillo was called. He denied the existence of wound diphtheria, condemned the use of chlorazene, and suggested that iodoform be used in place of the chlorazene.

The patient died 5:30 p.m., January 23.

Now, Doctor, what I want is your opinion of the handling of this case. If I am in the wrong, I believe that you will tell me so. I have not tried to write anything for publication, only copied my notes. If you wish to work this over and use it in CLINICAL MEDICINE, you are at liberty to do so.

I. P. ISRAEL.

Colima, Mexico.

Reply

Dear Doctor: As you see from the introductory note, I am putting up your case to the bar of public opinion, by asking our many thousands of readers to discuss the problem.

Without wishing to influence or aiming at influencing any one's opinion, I will say that the diagnosis is very clear to me, and that your treatment has been, in the main, correct. In serious infections following a local injury, I make it a rule to make large, almost heroically large cross-like incisions, fairly deep, over the region of local injury and I apply mild bichloride of mercury irrigations. When the symptoms subside, chlorazene is the remedy *par excellence*. Stimulation and antistreptococcus serum, light and nutritious diet are all we can do. Dr. Castillo's opinion was erroneous and his treatment absurd.

[It is unfortunate that we are so very prone to forget the simple, old-established remedies in our constant attempt to be up-to-date in our therapy. Especially in places and regions where bacterial vaccines can not be secured, it would be well to keep in mind the mild but effective chemical antitoxics: calcium sulphide and echinacea. The excellent services rendered by the former are familiar to us through the writings of the late Dr. Robert Gray, also those of Dr. Ussher, a medical missionary in Turkey; the latter has been popularized by eclectic physicians. In all cases of toxemia, whether we employ bacterins or not, we think of calcium sulphide and fill up our patients until skin exhalations and breath smell "aloud" of "rotten eggs". The result is not imaginary; it is very real. It can easily be tested by any physician who takes the trouble to investigate. —ED. A.]

[*Concluded from page 718.*]

than were possible formerly—the play all too often becoming very serious.

The lessening frequency of marriages and the fact that marriage is generally entered at a later age now than it used to be present many more phases than could be touched upon in a single article. One of the very important ones is the economic factor and the difficulty to maintain an establishment in accordance with the standard that the young people have been trained to demand. Incidentally, there is the disinclination to assume the burdens of the family, and we have the impression that it is becoming more and more frequent for the young wives to keep on working after marriage, for the simple reason that they are not content to do with less than they were accustomed to.

We do not have any statistics on hand bearing on this particular problem. Still, some figures presented in the *Monthly Bulletin of the Department of Health, City of New York* (August) indicated that, in July, 1923, there were 5,662 marriages in New York, 10,953 births and 4,592 deaths. Reduced to a rate of 1,000 population, the figures are 11.25 for marriages, 21.77 for births and 9.12 for deaths.

As will be seen, the births are more than twice the rate of the deaths, which is a far better showing than is presented in some other countries, especially those in Europe.

It would be interesting if a fourth kind of figures were presented, namely, if not only the number of marriages were given during a certain month, but also that of divorces granted. The relation between marriages and divorces is quite an important one and must appeal to the sociologist.

HEAD LICE AND BODY LICE

With the opening of the school year, when many thousands of children spend the greater part of their waking hours in close proximity, the prevalence of lice will again increase. It is true that lice infest especially the heads of children who are not kept clean; but, even with perfect cleanliness, children may become the involuntary hosts of these little pests which then will yield only to strenuous measures.

The plight of the "lousy" child is not limited to the implied reproach of being unclean. These parasites are carriers of at least one deadly disease, known as typhus fever. Both,

[*Concluded on page 752.*]

The General Practitioner

Talks About Professional and Personal Problems
Conducted by WM. RITTENHOUSE.

The Value of Nature Study

THERE is a growing interest in the subject of Nature Study, and an increasing appreciation of its value in many ways, especially in helping the development of character in the young. Its practical value in dollars and cents to the nation at large has not been so fully recognized. To mention only two directions, in which this value is undoubted, should be enough to excite an interest in the subject: that is, in preserving our birds and other wild creatures, and in husbanding our rapidly dwindling timber supply.

The boy who has learned to appreciate and take an interest in nature is not likely in after life to destroy birds and other wild creatures wantonly and for the mere pleasure of killing. The ruthless slaughter, for instance, of birds tends to increase the multiplication of insects that are destructive to crops. Nature study teaches children to distinguish between the large number of birds, mammals, and reptiles that are harmless and feed on vermin of all kinds, and the comparatively small number that are destructive to crops or to useful creatures.

It is perhaps difficult to say in which way nature study is of most value, whether in the wealth it will add to the resources of the nation or in the good it does to the boys and girls in the development of character. There is abundant evidence of the good effect upon the young, of getting them interested in the study of the various phases of nature. The boy who has become interested in this subject will not grow up to join that army of careless men who start forest fires by throwing away matches, cigar or cigarette stubs that have not been properly extinguished, or by leaving camp fires containing sparks or live coals to smoulder in the ashes. Millions and millions of dollars worth of valuable forests are destroyed every year through these causes. This is only one of the many benefits accruing from nature study.

Last January, the American Nature Association started the publication of the *Nature Magazine*. The appearance of this magazine in the field of literature is a notable educational event—one that will have an enormous influence for good. The price of this beautiful monthly is merely nominal—$2.00 a year. Its illustrations are numerous and beautiful, and its typography is of the highest class. While it is primarily devoted to spreading an interest in the subject among boys and girls, it is nevertheless most interesting to people of all ages. I had the pleasure of sending in a subscription for a boy of my acquaintance, last winter, and, on visiting the family last month, I was somewhat amused to observe that the "grown-ups" of the household read the magazine so eagerly that the boy grumbled that he could not get a chance at it when he wanted to. It reminded me of the solicitude with which "Dad" and the other "grown-ups" find it necessary to conduct Johnny to the circus.

The *Nature Magazine* is fit to rank with such publications as the *National Geographic Magazine* which is generally conceded to be the leader of them all.

I am writing this article as a voluntary tribute to a meritorious publication and, especially, to a meritorious cause. I know of no more worthy work than to help spread information that will tend to check the wanton destruction of our wild game and of our forests.

I do not know what the advertising arrangements of *Nature Magazine* are or whether they send sample copies on request as a means of getting subscribers; but I do know that 25 cents will bring a copy, and I am sure that no one will regret the small expenditure. The address is: Nature Magazine, 1214 Sixteenth St., N. W., Washington, D. C.

I quote from the prospectus the following paragraph, which gives an idea of the spirit of the publication better than I can in my own words:

"At last, an adequate meeting place has been provided for the Fraternity of the Great Outdoors. *Nature Magazine* has come in answer to a long-felt want—a monthly magazine where the child and the grown-up alike may revel in pictures and stories of birds, beasts, fish, trees, plants and other living, breathing evidence of the Creator's handiwork.

"To every man, woman and child who thrills to the chirp of birds, to the friendly wag of a dog's tail, to the woodsy tang of cool, wet moss and the soft rustle of wind through the topmost branches of leafy trees, *Nature Magazine* will be a monthly treat.

"You will find in *Nature Magazine* a publication perfectly attuned to *your* nature, feeling the things that you feel, and expressing your thoughts. You will find instruction through the medium of entertainment. You will agree that here is not 'just another periodical,' but a publication with a real purpose."

It is this "real purpose" which leads me to call the attention of my readers to a magazine that will not only be read with pleasure and profit, but will have an influence upon the rising generation that will produce results for all time and will add enormously to the resources of the nation.

As an illustration, we may take the case of the snake. In the past, the attitude of both, old and young, towards this reptile has been one of fear from a mistaken belief that most varieties were poisonous, and also partly from an instinctive repulsion that is probably atavistic, or a race memory from our ancestors whose habits were arboreal. All snakes were regarded as vermin to be killed whenever met. The truth is, that, in the United States, there are only about four varieties that are really poisonous: the rattler, the copperhead, the water moccasin and the coral snake. A scientific study of the subject has proven that all the others are as truly friends of man as are our vermin-destroying birds. They live upon crop-destroying mammals, such as mice, rats, gophers and even larger animals, thus benefiting the farmer. Among the harmless snakes, are the common garter, milk, water, king, bull, black and many other varieties. The warfare of man against noxious insect pests is ably seconded by these reptiles which are so much feared by the majority of human beings. It is only since science has taken the matter in hand that the true facts have been promulgated. The average man bases his beliefs mostly on tradition; science finds the truth by observation and experiment. The average man believe snakes to be the enemies of the human race; the man of science cuts open their stomachs to find out what they eat, and the result proves them to be useful friends. If the farmer only knew it, he is injuring himself when he encourages his children to kill snakes.

In September issue of *Nature Magazine* appears an article entitled, "Why Nature Study?" by Elizabeth K. Peeples, in charge of the nature study department of the Washington (D. C.) schools. I quote a portion of it:

"Why teach children nature study? It would take a long time to answer fully, because there are so many irrefutable arguments for placing it in every well balanced curriculum. Its healthfulness as an outdoor sport with a purpose that gives it zest, its saneness as an approach to sex instruction, its safety as an outlet for pent-up energy, and its cultural value may well be urged.

"Forest aisles, sunsets, bird songs are free for all. The busiest man in the world has time to gaze for a moment each night at the stars and nod to his old friend Sirius, provided he is an old friend. No housewife but may lighten the drudgery by raising a window box of flowers or studying the habits of the ants against which, peradventure, she wages war in her kitchen. And even those denied the out-of-doors, through physical infirmity, may have it brought to them in generous portions and almost without cost.

"Best of all, there is no partiality in nature. The sweet wild things are not snobbish. The first hepatica and the bright-eyed furry creatures of the wood open their hearts equally to tramp and millionaire who really loves them; and with their shy companionship have brought content to men like Burroughs and Thoreau. Shall you and I, then, overlook such opportunity, a perpetual feast for all the best that is in us, given us without money and without price?

"That the normal child needs only 'half the chance' to become an enthusiast in nature study, any teacher of the subject will attest. Neither her munificent salary, nor the carrying of tons of material to class are her reward. Rather, it is the heartfelt grin of the small boy who meets her at the school door with the salutation, 'you going to give us a lesson today? Hot dog!'

[I am informed by a boy of my acquaintance that those two words are an exclamation of the highest approval.—Ed. R.]

"One of the pleasant, heartening things about the subject is that it has neither begin-

ning nor end. The best of its followers can but scratch the surface of the infinite. Then, why wait until we are authorities on weeds or insects, before calling the attention of our children to the dandelion in the dooryard or the fly on the window pane? Care in the selection of material, patience in observation, resoluteness in not jumping at conclusions, sympathy with the child, and a genuine, keen enjoyment of him and the pollywog he is studying, have put many a one farther along the road to success as a nature teacher than much learning. To be sure, when great knowledge and teaching ability are combined, we have the ideal toward which we struggle. But, may we not begin teaching before becoming Anna Botsford Comstocks or Liberty Hyde Baileys, and work toward our goal while we teach?

"But," you ask, "in a world full of material, where shall I begin?" Usually with the thing close at hand. Let the boy study the tree in the school yard before he investigates those in the nearest woods or city park—unless (and this is most important) for some reason, he has developed a burning interest in, and curiosity concerning, those trees in the woods or the park. Where conditions permit, the molding of the course of study to the individual interests of the child brings gratifying results. As a beginning, the only nature material better than the familiar thing is the thing about which the child wants to know, whether it be a Baltimore oriole or a cockroach. If, in a large class, interests prove too diverse to make such selection practical, the fauna and the flora of the immediate neighborhood should be used as a basis, with the teaching of the adaptation of the animal or plant to its environment, and its place in nature's economic scheme as the underlying purpose of each lesson.

"The wide mouth, long wings, and weak undeveloped feet of the swallow, which we watch round some nearby bank or barn, are ten times as interesting when we discover that this bird is almost never seen walking or hopping about on the ground; that, except when it perches to rest, it spends its time on the wing in pursuit of harmful insects which are caught in its capacious trap as a source of its food supply.

"A nature lesson without live material is Hamlet with Hamlet left out—and, whenever possible, carry the audience to Denmark, that is, out of doors, that it may see the jewel in its proper setting. When this is impossible, bring the flower or grasshopper or little pig indoors to them. Pictures and supplementary reading are good things, but living plants and animals and sharp eyes are better. The teacher who, while the circus parade passed, forced her unwilling victims into the school room to read a lesson on "Wild Life in the Jungle," made a mistake.

"We learn by doing. Projects not only instruct but keep up the interest. If the enthusiastic pupil does not 'start something,' the teacher may drop a timely hint. Let not the uninitiated be confounded by a reference to the much discussed 'project method.' It sounds technical, but the collecting of pressed leaves or the whittling of toys from various woods suitable for the respective articles are simple, if instructive, activities; a campaign against rodents or some injurious insect is a benefit to the community, and especially stimulating when competition plays a part; a scrapbook of personal observations of birds, wild flowers, or butterflies is a treasure for a lifetime; and a birdhouse in the yard is a thing that may well be regarded a joy forever.

"That nature study has a tremendously practical as well as an esthetic side, seems obvious enough; yet, it is sometimes a heartbreaking task to convince the adult who has not been taught this fact in youth. Surprisingly few people know that, if bird life were destroyed, insect pests would strip the earth of vegetation in about two years, leaving animals to perish. Surprisingly few people know that rats and mice destroy $200,000,000 worth of property in the United States every year and that, by spreading disease, they have caused more deaths than all the wars in history. Surprisingly few people know that forests are not merely necessary for timber supply, but that, without them, streams dry up, erosion destroys fertile soil, and the land becomes a desert; and that in spite of these facts, the United States of America annually cuts and burns four times as many trees as are grown. And, more surprising still, many an otherwise intelligent individual, uninitiated in nature lore, when confronted with these breath-taking facts, merely wags his head in apathy or incredulity.

"In a country whose future depends upon the conservation of her natural treasures, ignorance of this necessity is a sin. Thrice guilty the parents and educators of today who leave the men and women of tomorrow in such ignorance!

"In a world of natural beauty, blindness and deafness to the miracles about us is a tragedy —no less. Shall we not give to our children

this inheritance—better far than jewels and gold—whereby we insure to them happiness and uplift in every walk of life, and implant in each a realization of personal responsibility for the future welfare of our home land? Is there any investment of time that could yield a richer harvest in the future of the race?"

[The last three paragraphs of the foregoing quotation are worthy of being reproduced in every periodical in the land.—Ed. R.]

The leading article in the September issue of *Nature Magazine* is also a noteworthy one. It is by Dr. Wm. T. Hornaday, director of the New York Zoological Garden. He calls attention to the deadly effect of the automobile as a game exterminator. Men calling themselves sportsmen have found that, by the aid of this useful machine, they can kill in a day man times the quantity of game that they could without. Dr. Hornaday estimates that the automobile has increased the perils of wild life by 50 percent. The game hogs and pot-hunters are thus proceeding to exterminate certain kinds of game, if not checked by law. It behooves true sportsmen to help secure such legislation, or there will soon be no game to hunt. The article is illustrated with photographs of automobiles loaded with slaughtered game in quantities far greater than the products of a legitimate hunt. Many of these game murderers are wealthy men whose chief motive is vanity—they brag of their enormous "bag." They have not even the poor excuse of the pot-hunter—that of making a living.

Space does not permit me to quote Dr. Hornaday's article, but it is worthy of being broadcasted everywhere. He is probably the best-informed living authority on the subject of all matters pertaining to wild game.

Note—Since the foregoing article was written, I have received, in reply to an inquiry, a letter from the publishers of *Nature Magazine,* the gist of which is the following sentence:

"You may plainly state that everyone writing for it will receive a sample copy of *Nature Magazine.*"

And further:

"You will be interested to know that there is no one class or profession, with the exception of the teachers, among which we number so many subscribers as the doctors. They like the magazine immensely, not only for their own reading, but for the tables in their waiting-rooms. Many of them have written to me that it puts their patients into a very good state of mind for treatment, particularly when such treatment includes advice to have fresh air, sunshine, the out-of-doors, some nature hobby, or so forth."

I may add my own testimony regarding *Nature Magazine,* by saying that I have been a subscriber from the first issue, last January, and there is no periodical that I receive and read with such eager pleasure and satisfaction as this. It reminds me of the eagerness with which, as a boy, I used to read *St. Nicholas,* which was then under the editorial management of the late Mary Mapes Dodge.

[*Concluded from page 748.*]

head lice and body lice may transmit the disease by sucking up the germs in the blood of an infected person and transmitting them to other persons whom they bite. Tens of thousands of cases of typhus fever have taken its toll in Europe in the past few years. The United States is practically free from this disease; but, occasionally, cases are seen in a mild form. So, in this we have a good case against the louse.

Incidentally, it is well known that the lice that infest rats and may from them invade the heads and bodies of humans, carry the virus of bubonic plague and have been responsible for the epidemics of that terrible and fatal disease.

In the *Weekly Bulletin of the Chicago Department of Health* (Sept. 1), attention is called to this important and timely problem and it is announced that school children will be examined carefully for the presence of all vermin, especially lice. No child is to be allowed to remain in school who has lice or nits or who is in any way unclean or a nuisance. The sin does not lie in having lice, it lies in keeping them.

Whenever children are sent home for necessary care and treatment, because they harbor vermin, the parents are advised to take them to their family physician, who will undoubtedly give them the necessary treatment to remove the lice pest. To those who are unable to do so, the Department of Health advises the following in order to free the hair of vermin:

Kerosene Oil and Olive Oil
(Sweet Oil). Equal parts—
half a pint of each.

Mix the kerosene and sweet oil and rub the mixture well into the scalp. Cover the hair with a large bath towel or rubber cap. Do

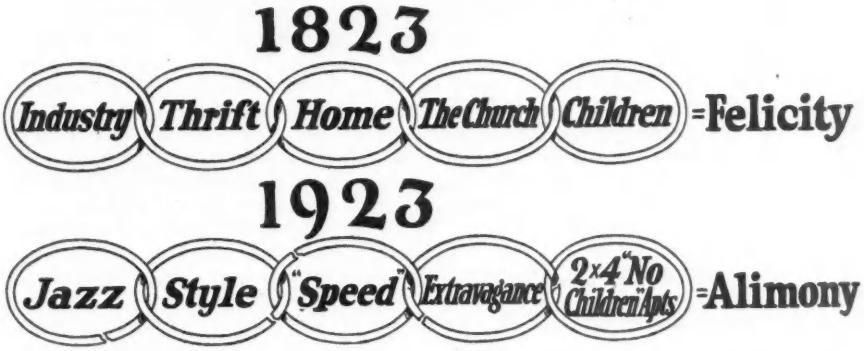
[*Concluded on page 780.*]

Good Medicine

Let us learn as we go, but not forget what we know

Conducted by GEORGE H. CANDLER.

"The Holey Bonds of Matrimony"—As Is



IF "a chain is no stronger than its weakest link" then, surely, day by day in every way, poor old Mat is getting weaker and weaker. One is pained—though not exactly surprised—to learn that, over a given period, there was one divorce granted to every five marriages solemnized. That term, canonical as it is, expresses the forging of the bonds most fittingly. One, forming his ideas from the happenings in certain centers of this United States, is almost prepared to be informed at any moment that the divorces *exceed* the number of marriages. Moreover, one cannot possibly tell how many of these marriages are "first chop" or second, third or even fifth-handed, for it is becoming quite the thing to trade in your mate and your car every second season. The 1924, "Marriage Memoranda" books will, one is reliably informed, have two pages added for entries of "decrees granted."

There is also some vague talk of modernizing the decidedly "old-model" marriage service by substituting for the rather terrifying "till Death us do part" the words "till one or the other of us gets tired." Old reliable married couples, of course, will object to this on the grounds that every couple gets "tired", more or less, after a little while and, like long-distance runners, have to gain their second wind to make the distance and so preserve the conventionalities and the HOME.

Children and the Family

Moreover, if, before that second wind is gained, the twain-made-one by lawful procedure find little replicas of themselves cluttering up their domicile, there is not alone the HOME to be preserved but the FAMILY. This is where the erstwhile "flowery bond" may become indeed one of tempered steel and, in the past at least, there has been a decided disinclination upon the part of organized Society to help loosen the fetters under such circumstances, no matter how they might gall one or both of the wearers. For, said the wise men and women "Society, the Home and the Race *must* be protected, even though the individual suffers or goes entirely to smash."

One must admit that the welfare of the many should be paramount to the temporary or permanent happiness of the individual, but, after all, the "many" is made up of individuals and, if too many of these are miserable, how can there *be* any "general welfare"? There can, of course, be no argument about parents being responsible for the welfare of their off-

spring. "All right," say the Liberal Unconventionalists, "we'll fix that by not having any offspring. Further, we don't want to build HOMES, we only want up-to-date apartments, congenial companions of the opposite sex and more or less frequent change of furnishings—all down the line. Moreover, we believe in the right of the individual to express himself or herself, and we deplore the tendency of less intelligent people to meddle with the sex life of other individuals. The present is ours—the future may take care of itself.

All of which sounds plausible enough—until one thinks awhile and realizes that those who plod along the old roads in antiquated fashion will, sooner or later, have to tow these unattached (for, ultimately, the majority of these roaming Romeos and sampling Juliettes will become passé and unattached) to some Snug Haven where they may dodder around till Death comes to ease them from the distress of living upon the bounty of those whose lives have been better regulated. "Of their own, to help them, they have none."

If marriage *is* a failure, it is undoubtedly so, in part—a very small part, though—because the number of virile males and impressionable desirable females who hold such views is continually increasing. However, lots of these people don't bother to get married at all: they simply flit, flirt, fit and unfit, as the Spirit moves them. Therefore, they neither add to the Matrimonial Roster nor provide grist for the Divorce mill. The thing of real interest then is, to find out why so many people hesitate to get married or, if they do marry, refuse to stay where they were put at their own request.

What Marriage Means

In order to study this problem, even half intelligently, one is first compelled to settle in his own mind what MARRIAGE means. It would be eminently unfair to say that this institution, condition of servitude or beatitude, or whatever it may be termed, is or is not a failure, unless one possesses at least a fair working knowledge of its fundamentals. The word marriage is derived from the medieval Latin *maritaticum*, from *maritus* husband, and this again from *mas* (mar-) male. It really means "the consorting, or union, of man and woman *which is sanctioned by the community.*" Unions not so sanctioned are not regarded as "marriages" and the offspring of such "unsanctioned" unions have for centuries had a more or less uncomfortable time establishing their right to exist. As the peoples became more inclined to bow to rules laid down for their guidance by State or Church, these unsanctioned unions and the natural fruit thereof became more and more distasteful—officially—and, in every land where the light of Christianity shone, the "mistress" and her "love child" were regarded with covert or open scorn and found themselves legally not much better off than the brood mare and foals. The *sire*, however, "sinner" though he was, could at all times *marry;* that is, *take*, "with the sanction of the community," the very flower of the female flock and if, as often happened, the children of this union, blessed by Church and State, were inferior mentally and physically to those borne by the mistress, they still were selected to bear the Sire's name and inherit his property. Children born out of wedlock, regardless of circumstances, were "nameless" or assumed that of the mother. The unfortunate mother herself, no matter how devoted a mate she may have been, was regarded as "without the pale" and the ordinary male, roué though he himself might have been, would hesitate a long time before covering such a one with the eminently respectable mantle of wifehood. The woman has ever taken the rough edge of Love and though, today, we are beginning to look at these things in a more just and rational manner, we still are hypocritical enough to sin secretly and stone those who get caught. MARRIAGE or "the union of the sexes sanctioned by Church or State," is "good and blessed"; any other form of such relation is "bad, very bad, and to be unhesitatingly condemned." Marriage, as we see it, is designed to bring about the necessary union of the sexes, the formation of homes, the perpetuation of the race and the preservation of property—particularly the latter.

Therefore, it is or should be the "desirable state" it is frequently described as being, and the question is not: *was* it; but, Is it? If it is an ideal or at least a reasonably satisfactory condition upon which every normal individual enters or hopes to enter sooner or later, what has happened to make so many thinking members of modern society regard it either with veiled suspicion or with distinct aversion? There must be a reason and, perhaps, where divines, legal luminaries and humanitarians have failed to find it, a medical mind fairly familiar with physiological, psychological and economic facts may formulate a satisfactory answer.

Marriage, to be successful, must be a success: that is to say, if the majority of marriages do not turn out successes, MARRIAGE

as an institution cannot be regarded as successful. *Occasional* failures are, of course, to be expected; but continuous disasters, or the failure of many of those who should marry, to do so, must throw a grave doubt upon the integrity of the structure itself. Is it possible that conditions have changed to such an extent that things which were possible and even pleasant for our forebears have become impossible or distinctly displeasing to us? Perhaps some of them have. Here it is necessary to state very distinctly that no criticism is made of the "sacrament of marriage" where it *is* a sacrament. If every marriage were *that*, surely no one could find a flaw in the result! Neither is any attempt going to be made to review the development of the Law of Marriage. We are concerned here with certain primary and really very simple facts, and upon these and nothing else worth while does the success or failure of marriage depend.

First and foremost, Marriage insures the union of the sexes—the *decorous* union might perhaps be the better term. Naturally, in this part of the world, the male reaches the reproductive period at or about the fifteenth year; the female sometimes a little sooner or a year later. In times primeval, when the mating urge came to John, he went forth and captured Mary; having her, he went "out on his own" and foraged for them both—she helping him then, even as she should do, usually does(?) even now. Their children came and the fit survived and the unfit died. Today, unhappily perhaps, there is an excellent chance for the weakling to live while his sturdier brother gets drowned, run over by an automobile or meets death, untimely, in some other guise. Evidently, the founding of a family and the seeding down of group or communal traditions was not, in the earlier days, a complicated matter. Young male and young female met, mated, moved from the parental shelter, whatever it was, and started a new nest.

Then Barter Entered

So, with more or less variation, things proceeded until fathers found that they could use their sons and daughters, first, to add to what they already possessed and, second, to aid defend their possessions from those who had less and would fain take from others that which they lacked. The men were now more valuable than the women, and the unmated young male could be used where the mated could not. So, the elders began to regulate mating, and it became a matter of "get something for me" or "do something for me John, before you go after Mary. I've fed you for a good many seasons and, now you can be of some use, you stay here and turn in. Later on, we'll see about the girl." Then Mary's paternal relative discovered that John, Thomas and William were all making funny eyes at her when they passed, and straightway (he was rapidly becoming civilized) he conceived the idea that, if they wanted something he owned, they ought to give something for it. As a result, the one who could give most, got Mary. THAT was how wives were first secured—by purchase. They became the lawful chattel of John or Thomas and he could, and did, sell or trade them (it was usually "them", not "her") if he felt like it. He might also keep her children or sell them with or apart from her. Usually, however, they all stuck together and prospered or went down *en famille*.

There were no "morals", as we know them, in those days and, even if John did not definitely and immediately leave the parental roof when he first realized that Mary was the one thing in the world he wanted, it is reasonable to assume that he acquired her by stealth. Doubtless, she, also having a desire for John, would have thought him a blamed fool if he hadn't. Which, of course, was all very deplorable and entirely wrong to our way of thinking but ridiculously *natural!* Just as soon as possible, however, and with no fuss about it, the young males and females definitely mated, migrated and thereafter maintained their own *ménage*. And the world went serenely along.

Time passed, as it always had, and conditions changed—in some places more materially than others. Here communities grew, combined and became powerful. Stern men ruled, with or without the help of inspired priests and sages, and crude codes were formulated which separated the sexes to a greater or less extent. Already the securing of a mate was becoming more and more difficult and young John had either to sigh out his soul to the moon or get up and hustle and be or do something before he could get hold of Mary. As time still went serenely along, things got more and more complicated, until they locked the really worth-while damsels up in moated towers, and all that John could see of his Dulcinea was, a glove or a veil waved as he caracoled past upon his palfrey. The "common rabble" still had a much looser code, but even there, while the peasant wench might grant favors to the gallant above her in station, she insisted that the male yokel should

take her for his own in the eyes of everyone, before she yielded herself. She had been taught that she had to be maintained and that she must have a definite, responsible father for her children. Someone just *had* to "bring home the bacon", and most men preferred to bring it back to their own mate and her broods. For, *there* was his place of comfort (more or less) and security. So, the family spirit grew.

A Double Standard

Still time went along and females, here and there, were taught that they simply must not listen to Nature's promptings or do more than look sideways at a male until the right one (from Papa's and Mama's standpoint) came along. So, Society developed the "virtuous maiden", and man was taught that she was a most precious thing—something he must or should give much to possess as his very own. Here was a most desirable situation—if only it hadn't had a fatal flaw in it, even as our moral code has today. Only, we have more fool flaws. The maiden must be virtuous and, naturally, the wife must be even more so (I don't know how she managed it, but she is supposed to have been), but the young (male) dog "must have his fling", the gay blade "must sow his wild oats", before selecting one of the virtuous maidens to bear his name.

As it now cost something to maintain a wife, and both, maidens and their adoring fathers and mothers asked, "what has he got?" before they looked kindly upon his suit, the young male had a good many years in which to "sow his wild oats" and, alas! he had to have someone to sow them with. Now the question arises: WHY has Society always and persistently damned the young female who shared in the sowing, and winked indulgently at the male? WHY has Society turned thumbs down for the girl who loved even once (if they caught her) out of wedlock and at the same time offered its own daintiest daughters to the man? Because, it seems, MAN MADE THE RULES OF THE GAME TO SUIT HIMSELF. HE was stronger than the woman; he felt the sex urge and he took what he wanted, if he could get it (if he could not do so with safety, he took what he could, often regardless of the consequences to his partner) and then, because it was quite often politic to do so, he dropped her (or *many* hers), married and became a "decent citizen" when opportunity offered. Then, because *he* now had a wife who *MUST* be beyond suspicion, he damned loose morals in other people—and went serenely along, awfully proper at home, but still a "devil among the ladies", when abroad.

THERE, Society itself put the first dynamite charge under the structure of Marriage. They made it a sham and a pretense. The earlier man had not waited, pretended or deceived. Neither had the woman. They were on a common footing save, perhaps, as regards strength. As a matter of fact, the ardent young female of the species, in those days, was probably quite able to hold her own with any male of her age. Later, she became weak, dependent and a chattel, not an equal. Hence, her only chance for survival lay in being, or appearing to be, particularly desirable, the peculiar property of one man. And man fought and died to keep her such. Naturally, safely enthroned, she turned her nose up and her thumbs down upon any weak sister who had no such sworn protector, even though her own liege lord was accredited as the one who had plucked the blossom.

Not a distinctly admirable picture, perhaps, but Society seems to have admired it greatly, and it has remained framed in gold to this day.

By this time, of course, the Holy Bonds of Matrimony had assumed very definite form and those who wore them were freed only by death or, under very particular circumstances, by some "high dispensation." Man trifled if he could, when he would. But, when he got married, he shared his bed and board with the female of his choice until the undertaker took a particular interest in the affairs of one of them. Of course, the woman the man married was a vestal when she married and, after that, like Cæsar's wife, was entirely above suspicion. Which may have been convenient. To a mathematician, it must always be somewhat of a puzzle how the man—who had latitude—found so many ladies to philander with when all the maidens awaiting marriage and all the dames already safely wed were so extremely proper? That, of course, is merely a side issue; hardly worth even a moment's consideration. And yet, come to think of it, hasn't it perhaps something to do with the rather shaky status of modern Matrimony?

Has Nature changed her plans to meet all these dictums and rules of a highly organized Society? *Hardly* an iota!

The Evil Consequences

As we are aware, the male of today matures long before we deem him a "marriageable man". The girl-child, as heretofore, blossoms out and feels more or less keenly the urge of sex long before she could convention-

ally became a "lawful wife." What are we doing to bridge that very dangerous period of years, to keep the girls vestals and the young men at least chaste enough to be fitting mates for such jewels? What are we doing to make early marriages possible? Nothing whatever! On the contrary, we are rendering such unions for the great mass; especially of the middle class, almost impossible and, at the same time, are throwing our growing girls (revealing more of their femininity than has ever been revealed since the days of the nymphs) into practically unrestricted association with young men; we feed them both, or permit them to be fed, with sex morning, noon and night. Books, music, plays, today mean sheiks, shimmy, salacity—straight sex stimulation; and marriage not even to be thought of by the young who have their own way to make in the world! John, even though he earn $40.00 a week, cannot hope to maintain Mary on that sum when a tiny apartment would cost him at least $70.00 a month and the furniture fit for such a place set him back, at a very conservative estimate, half a year's pay. Then take Mary. She has developed expensive tastes. Lisle hose, pretty gingham growns and white lawn unmentionables are not for her. She has felt silk next to her dainty skin, and every dollar she can possibly spare goes into garments which, twenty-five years ago, the plutocrat's wife or daughters would use sparingly. Oolah (Christened Beulah), the *svelte* stenographer, Madeline the mannequin, or Susette (she was Susan when smaller) the sales lady, demand "class"—from fur throws and wraps to sheer silk Teddies. If, single, they can earn enough to keep up the installments on their "glad rags", they are not going to give them up and wear house aprons and a poor little fur-trimmed coat even to be Mrs. John. Not Oolah or Susette!

The years slip by. They have a wonderful, wonderful time. They go far afield with Bob, in the green roadster. Tonight, they dine and dance with William. Tomorrow, they dance and sup with Herbert. And, once a week (perhaps twice), they spend a simple evening with their real "sweetie" who hasn't a roadster and can't, after paying his board and laundry (to say nothing of barber and haberdasher bills), afford more than the movies and chop suey and a swing at some open dance hall.

These "Wise" Virgins

Oolah and Susette both "know men thoroughly". Oh, yes, they're "wise to these guys"! "No one can string them." They say so, and that ought to be sufficient. Yet, the martial or massively mental males they "go out with" will tell you that no girl can "string *them* along." *They* know what they're doing. The girls assure their friends that they "were out down the line with a real spender last night—some class to him"! and the "feller" tells his buddies that he "hooked up with a smart wren", the evening before, "and she sure was some baby." There you are!

Wedlock on the Rocks

Now, all you have to do is multiply Oolah and Suzette by 100,000 and put matrimony, for reasons stated, temporarily at least, out of the question; and, where do we land?

But, marry if you please, a girl of this type to a "poor but worthy" young man; put her where his income only can put her; give her for one year just what he is able to provide, and what do you see coming?

On the other hand, take one of these Gloco'd Romeos and pin him (lawfully) down with a girl "who doesn't expect *everything, but does want what her other lady friends have.*" Will he or will he not, within six months, be tired of life in a 3x7 pigeon hole with in-a-door bed, disappearing bath-tub and beans cooked on a revolving gas plate? Won't the other "dolled-up babies" on the street look awfully good compared with Ellen Marie without her make-up working, and hasn't he learned long ago that variety is, after all, the spice of life? Does it take much imagination for you to see either or both of these poor deluded young things headed for the Divorce court?

With a wide experience, the "feller" says, "why *should* I marry?" The girl, often making almost as much as the man, wants to know also why *she* should be such a fool as to stop having a good time and all the clothes she wants just because her "sweetie" thinks he'd like to settle down.

If she does submit to having an engagement ring thrust upon her, she insists that it shall "cost more than Mamie's"—must be at least one carat (never mind the water or a few flaws) and be set in platinum. John, poor thing, pays a full week's salary (or wages) down and contracts to fork up ten a month for the next two or three years. That being settled, the loving pair start out to select the furnishings for their Love nest. Oolah thinks $700 would be about the right price for their bedroom set. John says, they're not going to *absolutely live* in bed and half the price would be too high. Oolah weeps and makes motions as though she would hand back the diamond,

whereupon John shivers but pays down the last fifty he has on the set. And the very next night, Oolah breaks the engagement because he won't (or can't) purchase a wonderful overstuffed davenport at the ridiculously low price of $230. She informs John that she never, never could stand a cheap skate and she'll *think* about returning the ring. Anyhow, she hopes he'll soon find some other girl with nice simple tastes. And she goes right off, rings up Harold Highblower and, curled up in his maroon eight-cylinder, ruminates upon the absolute ineffectiveness of John.

Naturally, a girl like Oolah, attractive as she is to men, should know what Love, that Love which leads to real mating, means. She will assure you, however, that she "isn't a bit mushy", that she has heard all the soft stuff the men put over, and it would "take *some* hot-air blower to ruffle her serenity." She has said it. Were the best man in the world, the most desirable and ardent, but decent, suitor to come along and woo her with the fervor (lingual) of an Adonis, she would merely regard it as mere rain pattering on the roof. She has heard it all before. She *always* hears it. She expects to be so entertained but it means nothing in her young life; and the hand clasp, the tentative arm about her waist, even the more or less lingering kiss on crumpled lips, are but "things which a girl who goes out with 'fellers' has to expect". She would undoubtedly be disappointed if they weren't forthcoming.

But, unhappily, she won't know the real thing when it does come and is apt, in some unguarded moment, to marry someone who can buy her an $8,000 bungalow she has set her heart on and pay at least one thousand down on it. "Yes Marie, and he's going to spend $2,000 more on the furniture." Within two years, she finds that she made a ghastly mistake—and that's that. She, again, is but one of many, many thousands.

Privileges Impose Responsibilities Which Can Not Be Escaped

Now, do you begin to see why modern conditions and the old model marriage, where Church, Home, Industry and Babies meant everything, don't fit in? And, is it not also possible that, contemplating things "as is" in your own home town, you can sense the fact that, slowly but very surely, things are drifting (ever so little, of course, in *your* town but with terrible speed elsewhere) to some sort of a catastrophe?

If "Marriage is more or less of a failure", isn't it because we are forgetting how to make it a Success? Demanding, perhaps, too many of the privileges of that estate without being willing—or able—to assume the responsibilities? Is the fault with us or are the bonds, as forged by our forefathers, too holey to hold us?

I AM told that it is no longer fashionable to believe in a devil—but I care nothing for fashion. A devil there is, I am sure, who, for some inscrutable reason has a share in the ruling of this planet—a devil who delights in mocking us from the cradle to the grave. And perhaps we are never so hopelessly, utterly fooled as in our marriages.

Marie Corelli ("Vendetta")

Let's Talk it Over

Active-Principle Materia Medica

With Physiological Effects and Therapeutic Suggestions

By WM. T. THACKERAY, M. D., Fowlerton, Texas

[*Concluded from September issue, p. 682.*]

Sodium Succinate

While the dosage of this drug is massive, its remarkable remedial effect in the treatment of cholecystitis, cholelithiasis, and all catarrhal conditions of the gall bladder and duct makes its use a necessity.

Without claiming that the use of this drug tends directly to the solution and subsequent dissipation of biliary calculi, clinical experience has demonstrated conclusively in very many cases that, under its continued use, the paroxysms of colicky pains become steadily less frequent and less severe, some serious forms ceasing entirely in due time, the dreaded surgical intervention being found unnecessary.

Moreover, in the majority of cases, as pain and discomfort disappear, the evidence of the presence of calculi gradually becomes less and less noticeable, until they can no longer be demonstrated.

The writer has two cases under observation where the last attack of bilious colic, (relieved by the administration of Hyoscyamine, 1/250 grain, every fifteen minutes, to effect), happened in July, 1921, and, in one of the cases, a surgical operation had removed an accumulation of gall-stones about five years previous to the attack in question; up to the present date, May, 1923, there has been no sign of a return of biliary trouble in either case.

Dosage:—5 grains three times daily before meals. About once each month, the writer has used Calomel, at night, followed by a saline in the morning. The daily use of a saline laxative is always advised.

Solanine Hydrochloride

The salt of an alkaloid from solanum tuberosum (potato).

Physiological effects:—Antispasmodic,* nontoxic sedative, diuretic, diaphoretic, mildly narcotic. In full doses, it is a circulatory depressant.

Therapeutics:—Indicated in all conditions where irritation of the cerebral cortex is the cause of muscular spasm, as in epilepsy, infantile paralysis, pertussis, asthma of the spasmodic type, neuralgia, myalgia, cramping of the muscles of the extremities and dysmenorrhea, when these latter are due to pathogenic nervous tension.

Alternate with Gelseminine Hydrobromide when spinal irritation is present. Solanine is an excellent substitute for Potassium Bromide, it being equal in pharmacological potency to the latter, without its protoplasm-destroying action.

Since the intestinal tract is the most prolific source of peripheral irritation, the association of Verbenoid with the Solanine is highly recommended in those conditions where the brain cortex is the reflex source of muscular spasm. Verbenoid apparently has much the same action upon the peripheral nerves of the intestinal tract that Solanine has upon the cortex. This is an especially useful combination in epilepsy and allied states.

Dosage:—Minute doses are stimulant; medium doses, decidedly sedative; maximum doses, depressant. The toxic dose is high, from 5 to 10 grains.

In all cases, secure therapeutic saturation as quickly as possible with a few comparatively full doses, 1/12 to 1/6 grain, every three to six hours to effect, then maintain effect by smaller doses of two to four granules of 1/64 grain, three times daily.

Careful, complete and continued elimination, together with regulated diet and habits of living, always essential. (Abbott.)

Sparteine Sulphate

Salt of the alkaloid from Scoparius Cytisus (broom-corn).

Physiological effects:—The salts of Sparteine are bitter but not irritant to the stomach and apparently have the tonic action, the power to improve appetite and digestion, common to all bitters. Sparteine acts within an hour or two after its administration, the characteristic impression on the heart being made,

which confers upon this agent the well-merited title of heart tonic, above any other of the same group. Irregularity in rhythm, inequality in the force of the contractions are almost immediately corrected, and the action is lasting as well as thorough. Specially indicated in the derangement of the motor apparatus of the heart with weakness and irregularity of the pulse, when Sparteine affords relief in an hour or two, while Digitalis would require a day or two to accomplish the same results. Sparteine has no "cumulative action" in the sense in which the phrase is applied to digitalis.

Therapeutics:—Indicated in weakness of the right heart and incompetence of its valves, and in lesions and functional derangement of the mitral. Also in arhythmia, whether functional or structural, and due either to lesions of the heart muscle or valves.

Dosage:—1/64 grain every three hours until effect; then *pro re nata.*

Strophanthine

Glucoside from the seeds of Strophanthus Hispidus (the Kombe Arrow Poison).

Physiological effects:—By its bitter taste, like all bitters, promotes appetite and digestion. It does not irritate the stomach or cause nausea. Slows the heart-beat, lengthens the intervals between contractions, and increases the force of cardiac muscular tissue. The arterioles contract some and the blood pressure is augmented, which is chiefly due to the increased power of the cardiac contractions. The action of the heart is arrested in diastole.

As it decreases the amount of blood in circulation at a given time, it lessens oxygenation, hence it lowers the temperature. Its action is similar to that of Digitaline on the heart and arteries, but not on the arterioles which it contracts only slightly, and it consequently does not demand an extra amount of force from the heart to overcome it.

Therapeutics:—Indicated in the same conditions that require Digitaline and Sparteine, chiefly in mitral lesion, with its attendant disturbances. Also useful in exophthalmic goiter.

Dosage:—1/128 grain every one or two hours to effect, then three times daily, *pro re nata.* Children in proportionate doses.

Strychnine Arsenate

Salt of the alkaloid from the seeds of Strychnos nux vomica and other varieties of Strychnos.

Physiological effects:—In small doses, it stimulates the salivary glands, the gastric glands, and also those of the intestines, promoting peristalsis at the same time. The heart action is increased, the blood pressure somewhat raised, and the respiration is rendered more active.

The spine, brain and nervous system are also tonified by the action of this salt, the properties of the alkaloid predominating over those of the acid. In large doses, it acts as a powerful toxic, death resulting from fixation of the muscles of respiration.

Therapeutics:—It is the nerve tonic *par excellence* and the best incitant of the vitality. Available in nearly all diseases, especially in those where paralysis and atonia are present. It should be used in the initial period of all fevers, to combat vasomotor paralysis, in connection with Phosphoric acid.

When the defervescents are not tolerated, their association with Strychnine Arsenate renders them acceptable until their effect is attained; in spastic diseases, it aids to obtain the physiologic equilibrium controlling paralysis, while Hyoscyamine controls spasm. It tones up all organs and all functions, and it is one of the principal aids in acquiring longevity.

Dosage:—1/64 grain at shorter or longer intervals, in proportion to the acuteness of the disease and the diminished vitality.

Strychnine Sulphate

Physiological effects, therapeutics, and dosage, same as Strychnine arsenate.

Strychnine Hypophosphite

Physiological effects:—Nerve tonic with direct action on nutrition.

Therapeutics:—Indicated in all cases of vital depression arising from excessive work, disease or old age. It is indispensable in the pneumonia of the aged, in all adynamic diseases, in rachitis, in chloranemia, in impotence and in the convalescence of grave diseases.

Dosage:—1/64 grain every hour or as required.

Strychnine Valerate

Physiological effects:—Partakes of the properties of the Strychnine as a nerve tonic and of the Valerianic acid as an antispasmodic.

Therapeutics:—Especially indicated in all cases of mental or physical shock, in which class of cases its action is prompt and positive.

Dosage:—1/64 grain as required.

Taraxacin

Bitter principle contained in the root of Taraxacum officinale (Dandelion).

Physiological effects:—Mild hepatic stimulant and diuretic.

Therapeutics:—Indicated in dyspepsia dependent upon a torpid liver and other biliary disorders.

Dosage:—1/6 grain before each meal and at bedtime, followed by a saline aperient in the morning.

Tartar Emetic

Double salt resulting from the chemical union of Tartaric Acid, Antimony and Potassium.

Physiological effects:—In minute doses, well diluted, and taken at intervals of two or three hours, it acts as a laxative; in doses of 1/12 grain every hour or two, it promotes the secretions of the salivary, gastrointestinal, bronchial, hepatic, pancreatic and sweat glands and in doses of from 1/2 to 1 or 2 grains it acts as an emetic.

Applied to the skin with friction, it excites a follicular inflammation, followed by a papule, or vesicopustule, umbilicated, resembling those of vaccinia or variola.

The emetic effects of Tartar Emetic, (much better produced by Apomorphine), are accompanied by copious alvine dejections resembling rice-water, and by great nervous and muscular prostration. After entering the circulation, it diminishes the number and force of the arterial pulsations, and rapidly lowers the blood pressure.

Therapeutics:—It is useful in the incipient stages of acute catarrh, nasal, pharyngeal, bronchial and pulmonary.

Dosage:—1/6 grain to 1/3 grain in a tablespoonful of water every ten minutes until emesis occurs; 1/6 grain every two or three hours, as an expectorant and antispasmodic.

Veratrine Hydrochloride

Salt of the mixed alkaloids obtained from the seeds of Veratrum album, Asagræa officinalis, Sabadilla (cevadilla).

Physiological effects:—In small doses, Veratrine slows the cardiac action; also the pulse-beat may be reduced from eighty to forty or thirty-five; lessens respiration and lowers the temperature. In large doses, it acts first as an emetic and cathartic, followed or accompanied by violent twitchings, convulsions, and afterward great muscular weakness and prostration. When snuffed up the nose, the smallest amount excites violent sneezing, sometimes lasting for hours; applied with friction to any part of the periphery, it excites a sensation of warmth and pricking and, if persisted in, a red itching rash.

Therapeutics:—Indicated in pyretic and congestive conditions when the pulse is hard and full. Useful in acute pneumonia, inflammatory rheumatism, often in connection with Colchicine, in congestive cutaneous diseases and in acute chorea. In gastric catarrh, it clears the coating from the tongue and provokes appetite. In puerperal eclampsia, it should be pushed until convulsions cease or vomiting is produced. It is an excellent emetic for children. Aconitine is frequently used with Veratrine in pyretic conditions, also with Digitaline to sustain cardiac action.

The drug should be exhibited cautiously, if at all, where gastric irritation exists, where vomiting might prove disastrous.

Dosage:—1/128 grain, preferably in solution, each half to one hour to effect.

Zinc Cyanide

Physiological effects:—The activity of this salt is due to the hydrocyanic acid in its composition. In small doses, increases the salivary secretions, slows the heart action, lessens the movements of respiration, and causes nervous and muscular weakness. The temperature is unaffected.

Therapeutics:—Indicated in nervous cough, whooping cough, irritative dyspepsia, vomiting, ulcer of the stomach, gastralgia, enteralgia, etc. In stomach and intestinal affections, the association of Oxalate of Cerium and Bismuth Subnitrate with the Cyanide of Zinc, adds to its therapeutic effects.

Dosage:—1/6 grain every three or four hours for adults. 1/64 grain at similar intervals for children.

Zinc Phosphide

Physiological effects:—In small doses, Phosphide of Zinc, like Phosphorus, is a tonic and stimulant of the nervous system, aiding the repair of waste; stimulates the circulation, increasing the frequency of the pulse and producing dilatation of the cutaneous capillaries. The temperature is at first elevated, afterwards lowered; the urinary secretions and the relative proportion of urea excreted are increased, and also the secretions of the skin. The bony structure of the body is stimulated, so that the formation of bone, chiefly of the compact tissue, takes place.

Therapeutics:—Indicated in neuralgia complicated with migraine, nervous breakdown from overstudy, mercurial and other tremors, aggravated hysteria, epilepsy, chorea, locomotor ataxia, melancholia, local paralytic manifestations, impotence (functional), spermatorrhea, splenic leukemia, skin diseases, rachitis, caries, etc.

Dosage:—1/64 grain to 1/6 grain; the proper dose must be found in each case by careful clinical test.

Zinc Sulphocarbolate

Physiological effects:—Asserted by many clinicians to be an intestinal antiseptic. Dr.

W. F. Waugh says of it: "The writer has possibly administered more of the sulphocarbolate of zinc than any other man living; and he has not observed any effects from it except those exerted in the alimentary canal. If impure or if given in too large doses or too concentrated form, it irritates the stomach and may cause vomiting. But the chemically pure salt has been given many times in doses of 10 grains each and up to 2 drams in twenty-four hours, without any such effects."

[The Editor has found it advisable to watch the kidney function while giving the zinc salt of the sulphocarbolates. Sometimes it produces irritation. Ordinarily we prefer the salts of calcium and sodium.—Ed.]

"There are conditions of the stomach when many agents not ordinarily irritant will provoke nausea or cause soreness.

"Sometimes, a granule of veratrine in half a glass of water will give rise to a sense of warmth or tenderness that will outline the stomach accurately. A 5-grain tablet of potassium bromide, swallowed whole, caused a brother physician to roll on the floor in agony; and yet this is not considered specially irritant.

"It is wise to give the sulphocarbolates in solution or trituration with abundance of diluent."

It has been demonstrated beyond question that the sulphocarbolates exert a diuretic action increasing the excretion not only of the volume of fluid, but also of the solids.

Therapeutics:—Useful in all pyrexias and should be administered after the bowels have been thoroughly evacuated. When there is acidity, or when the zinc salt proves irritating, the sodium salt may be substituted, but in double the dosage, as this salt is not as antiseptic as the Zinc Sulphocarbolate.

In dealing with scrofulous children, in the peculiar diarrhea of rickets, and for consumptives having night sweats, the sulphocarbolate of lime may be used. It is about the same strength as the sodium salt. In fact, whenever the reconstructive effects of lime are indicated, this is the salt of choice and may be given with the hypophosphite or other salts of lime. (Abbott and Waugh.)

Dosage:—1/6 grain to 5 grains, *pro re nata.*

Zinc Valerate

Physiological effects:—Combines the nervine tonic action of zinc with the antispasmodic effect of valerian.

Therapeutics:—Useful in neuralgias, especially of the spinal and of the fifth nerve; also in chorea, especially in hysterical persons, epilepsy, and neuralgic and nervous headaches, sciatica, ovalgia, and angina pectoris.

Nervous unrest, worry, irritability, crossness, fidgets, even well grounded grief such as that from the death of a friend, are relieved by zinc valerate.

Sexual excitement is regulated by this drug, controlled but not weakened, and for nymphomania, satyriasis, spermatorrhea, and the erethism so common after abuse of the sexual functions, there is no better agent for restoring the strength and the control at the same time. This remedy is as useful for one sex as for the other. (Waugh and Abbott.)

Dosage:—1/6 grain, for adults, , repeated every 15 minutes to effect.

DR. BRYCE'S TALKS

Our Homeopath Friends

I was much gratified at the liberal attitude of The American Journal of Clinical Medicine expressed in a recent issue concerning the merits of the homeopathic profession as viewed from the standpoint of the "allopaths," regulars, or whatever we may be termed, nowadays. There is no truer sign of real progress in our profession than a spirit of liberality and tolerance—a willingness to listen to the beliefs of the other fellow.

It is interesting to note the gradual recognition of the homeopathic by the regular profession, until now very little separates the well-educated homeopath from other medical schools but his special belief in therapeutic application, and I am not prepared to say that he is by any means essentially wrong in that. In my opinion, a closer acquaintance not only has given us more respect for each other, but has actually taught many of us that we do not know it all. When I entered the profession, the homeopath, the Thompsonian and the Eclectic were all classed as outsiders, or irregulars as we called them. Those were great days for all of us, and now that I look back, I cannot say who were the greatest sinners, but I am sure that the homeopaths were the most merciful and the least dangerous with drugs. While we gave rousing and nauseous doses, blistered by the yard and bled to fainting, the Eclectic-Thompsonian ran us a full even neat with his May-apple purges and his lobelia pukes and sweats, to say nothing of his many other botanic (and really meritorious) remedies. But it remained for the homeopath to come in between us all and, with his psychology and little sugar granules, win the hearts of thousands of tired and overdrugged sufferers.

Without subscribing to the doctrine of similars or the efficacy of infinitesimals or high potencies, I will admit that the educated and liberal homeopath has added much to the sum total of our therapeutic resources and has won his way to professional recognition and society affiliation.

Somehow, I have always felt that the honest homeopath was a most credulous person or simply a suggestive therapeutist; but, after long acquaintance with some of the most liberal of their school, I find that they are, like all liberal physicians, reaching out for whatever is good wherever they may find it. This has no bearing on those practitioners who assume the name for its business value only.

And now, looking back over a long period, I can say honestly that my personal acquaintance with many homeopathic physicians has been both pleasant and, in many particulars, instructive along certain therapeutic lines. I have learned that one may do more harm with massive doses of potent drugs than the disease would if left untreated altogether; that the little sugar pills or scented potions of high dilutions neither offended the stomach nor did any imaginable harm to the patient and gave nature a chance to do her work unopposed. I learned the great value of optimism, faith in the effect of supposed remedies, and hope. While I am in no sense a homeopath, I am indebted to my brothers of that persuasion for considerable change in my practice, from the "heroic medicine" of auld lang syne to pleasanter remedies and more merciful therapy. The homeopathic profession gave a good account of itself during the world war as physicians, surgeons and sanitary advisers, while recently one of them has acceptably filled the position of White House physician to the late lamented President Harding and, we learn, has been asked to retain the same place during the new President's term.

From my view point, there *may* be something in the law of similars, but I have never been able to demonstrate it to my satisfaction. That may be due to my ignorance of the real principles of homeopathy. However, I am a firm believer in "dose enough" to produce immediate, tangible and demonstrable results. Nor am I the only one who thinks this way, for, in a letter just received from one of the most prominent homeopathic physicians of the Pacific coast, I find the following utterances from an honest and liberal man. "I am not a very good homeopath. I use anything that I think will help my patients. I give low dilutions, there is nothing to the high dilutions any more than to the socalled Christian-Science treatments, Couéism, *et. al.;* and that's what has knocked our school galley west (high dilutions)".

I had a recent experience at the hands of a homeopath friend in Pennsylvania, who prescribed for me from the symptoms that I described to him in a letter. He promptly sent me a vial of tablets with instructions to take two every two hours for relief of neuralgic eye pain. The pain did not leave fast enough and, assuming that he was a good homeopath and consequently there was no danger in the whole bottle, I partook rather freely of the sweet little tablets until I realized that something was wrong with my eyes, head and stomach, and became convinced that I was under the influence of a pretty good dose of gelsemium. My only solution of this unlooked-for result was, that this friend was first a graduate from a regular school and afterwards took a degree from a homeopathic college, and I think he must have had his mind on his earlier training when he fixed up my medicine. In other words, *he* was another not very good homeopath, but a splendid fellow all the same.

Among my earlier acquaintances in the profession, was a dear old soul who had practiced "regular" medicine until Time had wrinkled his brow and deeply furrowed his cheeks, when he suddenly became an ardent disciple of Hahnemann and, accordingly, qualified his sign by placing under his name the word "Homeopath". He was popular with the physicians of Richmond, and his old confrères and colleagues did not outlaw him but kindly alluded to his change of faith as an evidence of mental fatigue peculiar to old age. He frequently visited me, loaned me books to enlighten me on his favorite theories, and we enjoyed the company of each other while differing in therapeutic belief. At his suggestion that I send him some of my cases that I could not cure, that he might demonstrate the value of his system and convince me, I had a case for him very soon. The patient was a middle-aged man living over a store, in poor circumstances, and dying of an enormously dilated heart. Seeing him propped up, swollen from head to foot and gasping for breath, my diagnosis and prognosis were made out at a glance, and I told his wife to send for Dr. H. who was an older and more experienced man than myself.

The next day, I saw the old doctor drive up, ease himself out of his old-fashioned gig and come creeping into my office. I noticed that

he was red in the face and seemed somewhat excited as he flopped down in an easy chair. As soon as he got his breath, he looked at me and said:

"Did you tell that woman to call me in to see that man dying of heart disease—the man living over a dry goods store on Broad street?"

"Why, certainly, doctor, didn't you request me to send you some cases that I could not cure?"

"Yes, but that is no joke, packing off your dying cases on me."

"But, I thought you might be able to save him with homeopathic treatment," I said to the old fellow.

"You didn't think any such durn thing," said the old soul with considerable warmth.

"Well, what did you give him, doctor?"

"Just what you should have given him yesterday, big doses of calomel, squill and digitalis repeated until effect, and I told them *to send for you today,*" he rejoined with a satisfied grin.

We had among our earlier Richmond doctors a very accomplished and genial friend, who was an orthodox homeopath and never tired of extolling the virtues of his system. One day, while he was sitting in my office and harping on his favorite theme, a hurry call came for me from a groceryman living only a couple of blocks from my office. I told him that I would be glad to have him go around with me and prescribe for the patient. He very promptly accepted my invitation and we were soon at the scene of trouble. We found a man lying in the middle of the floor of the back room with his legs drawn up and his hands pressing down on his abdomen, face contorted and sweat rolling down his cheeks, while he groaned with agonizing pain as he was spasmodically gripped, partially relaxed and quickly and more severely seized. He had what is most appropriately named "cramp colic," and this is a malady that stands no foolishness, as is well known to every boy who has passed through the green-apple age. I said to my friend:

"Dr. Barrett, please give him something for prompt relief." He called me into the next room and said:

"If you don't give that fellow something dam quick, he is going to die—this is no time for foolishness, give him some medicine."

"But, suppose you were here by yourself, what would you do?" I queried.

"I would send for you," he promptly replied!

I had a dear friend of the same faith as B., and we agreed to differ in our views of practice and agree on all other points. He was an accomplished man, a good sport and a fine musician, but in medicine an uncompromising adherent to his system. In the early fall, he went down on the Chickahominy River hunting sora, and, after a week in the swamps and marshes of that section (that did as much to disable McClellan's army as the Confederate soldiers), he came back to the city loaded down with sora and malaria. It was not long after his return, before he sent for me to come over just as soon as I had breakfasted. As I had never prescribed for him, I asked the messenger if he was sick. He informed me that he was "mighty sick", and was in a hurry to see me. When I entered his bedroom, I found him with a red face, a rousing headache, a burning fever, and about as miserable looking a man as I ever saw. I told him that I did not know enough of his system to treat him according to his preferences and that he had better send for some homeopathic friends. He said, he had fooled with Drs. B. and S. for over a week and he was willing to submit to any medication that would prevent another paroxysm. So, he very obediently swallowed 10 grains of calomel and 5 of jalap and prepared himself for 5 grains of quinine sulphate, three times a day for a week, which he took without a murmur; in fact he swallowed it with actual gratitude.

I learned, after he had gotten over his chills and fever, that some of his professional friends rallied him as not being true to the law of similars, and that he came back at them in his characteristic witty way by saying that "*big* disorders had to be met with *big* doses" and that was similar in size anyway.

Circumstances often make it allowable for a doctor to change his customs in prescribing and to change his ethics, too. I remember that a young Virginia doctor, a graduate from the regular schools, discovered that he had developed tuberculosis, and went to Arizona to live, in the attempt to regain his health. After several years, he returned to this city. In telling me of his experiences out there as a practitioner, he mentioned that most of the practitioners in that section were irregulars. I asked him if he ever affiliated with them in practice? "Affiliate? I should say I did", said he. "On one occasion, I gave a patient a hypodermic and in a few minutes she went into convulsions. Being a stranger among them, they looked at me in a most unfriendly and ugly manner, as if I had made a blunder, and I felt that, if she died, I might be sum-

marily dealt with. There was a *horse doctor* living near and I sent for *him* to consult with me. He came over and treated me most ethically, endorsing my practice and staying with me until the danger was over. Affiliate? Huh, I was thankful to him for recognizing *me*."

C. A. Bryce.

516 N. 10th St., Richmond, Va.

THE MAN UP-STAIRS*

Oh, listen, child, with the hectic flusr
And ghastly white of skin,
Hold close thine ear, so you may hear
The yarn that I shall spin.

'Tis a tale of the wild, of the resinous pine—
A tale of the Medicine Bow,
Where flowers bloom when there is room,
At the line of eternal snow.

A western town on a western plain,
Surrounded by serried peaks,
Where the hot sun burns, and court "adjourns"
When the deadly six-gun speaks.

And one of your kind had found this town
And he stayed at a bum café;
For he thought, like the rest, when he hit the "west",
He could live most any old way.

So he stayed in his stuffy room up-stairs,
Away from the wild-eyed crew
That swarmed at nights in the town's red-lights,
And danced the whole night through.

And he shivered and shook and coughed at night,
And he cursed the chilly airs;
And blesséd few of those who knew
Gave a dam for the man up-stairs.

But one there was with a kindly face
And a bristle of reddish hair,
And an eye of blue that looked you through;
He found his way up there.

And he held this poor old duffer's hand
And stethoscoped his chest.
Though he knew dead-right 'twas a losing fight,
He worked his strenuous best.

Just "Doc" they called him everywhere,
A name with a meaning, though.
For, in every direction was love and affection
For this odd and reticent old "bo".

He'd been for years there, in the town,
Old "Doc" was a house-hold pet,
In sickness and health, disaster and wealth,
Old "Doc" was their one best bet.

And so he worked for the man up-stairs,
Though he played a losing game;
But the cards were dealt, so he tightened his belt,
And fought on just the same.

The "man-up-stairs" was sinking fast,
And "Doc's" old smile was gone,
With teeth set hard, he had played his card,
For the winter was drawing on.

For, child, when it "snows in" once in there,
It stays "snowed in" till June,
And Doc well knew the man was due
To pass out mighty soon.

Then, kind but firm, he told the man
How he was mighty sick,
Though he might, at least, see his folks back east
Once again, if he beat it quick.

Then he found that a "freighter" was starting out
For Steamboat in an hour,
To try and win, e'er it snowed in,
The "pass" with a load of flour.

Well, "the man-up-stairs" rode on that load
With blankets wrapped about
'Mid the merry clip and crack of the whip
And the cloud of dust about.

And the joggle and ruckle of the wheels,
As over the plain they creep,
And the lurch and sway as they ride away,
Lulled "the man-up-stairs" to sleep.

He awoke shifting down the slant of the load
Heard the long-drawn sigh of the breeze,
Smelt the resinous smell in fen and dell
'Mid the gloom of the great pine trees.

Came a deeper shade in the sky above,
Where he glimpsed the storm-clouds loom,
And the rising sound in the trees around
And the rolling thunder's boom.

All told the tale of the "pass" and the "storm",
And he knew that the storm was on
As quick from the air floated flakes everywhere
Fell, melted, and were gone.

But, on they climbed through the gathering snow,
And won to the top at last.
But, there, in a bank of snow they sank,
Almost out of sight—stuck fast!

The "lunger" groaned and the driver cursed
As he cut the horses loose,
For they might get to Steamboat yet,
But the "lunger" and him—no use!

Well, grabbing his axe, he went to work,
With courage born of their plight,
And started in to try and win
A shelter for the night.

And this was the start of the cabin there,
You may see it yet today,
Tree-trunks were felled and firmly held
By trunks felled another way.

*This true story of the man up stairs may be amply verified. Personally, I had the story from his own lips. He is now a rancher of more than seventy years of age and lives in the country to the north of Steamboat Springs, Colorado.

Open? I will say it was,
Holes big enough for bear
To hike out through—if they wanted to,
Or in, most anywhere.

But it held the two of them till Spring,
What with the flour and meat,
Such as venison—a benison—
The two of them did eat.

And eat? I'll say they did, at that,
From biscuits to bear-veal,
Why, the "lunger" wound himself around
Two pounds at every meal.

And when Spring did show her face at last,
And snows no more endured,
The happy fate is mine to state,
The "man-up-stairs" was cured!

J. A. DUNGAN.

Greeley, Colo.

A CASE OF PERSISTENT HEMOPTYSIS

It was on the twenty-ninth of last June, about three o'clock in the afternoon, that I received a call to go to a house on Fourth Street and attend a young lady, a Miss B——, who was suffering from a pulmonary hemorrhage.

First seeing to it that I had along the things ordinarily needed to stop a hemorrhage from the lungs, I jumped into my automobile and started. It came to me, as I went down the street at the top speed of which the car was capable, that the name given me was that of a young lady recently from Kansas, who had signified that she intended to take treatment for pulmonary phthisis but whom I had not as yet seen, for some reason or other.

I was not long in arriving at the house and found that the young lady, who was a more than ordinarily attractive looking girl of dark complexion and rather full-blooded type, twenty-six years of age, had indeed had a furious hemorrhage, the amount of blood which she had lost being equivalent to almost two quarts. Yet, aside from the rather excessive paleness of her face and the basin about full of blood at the side of the bed, there was not much to show the extent of the trouble. In fact, her demeanor was what would have at once been set down as extremely hopeful. It developed later that her home physician had given her rather a hopeful prognosis of her hemorrhages of which, it appeared, she had had some four or five before coming here. If I remember correctly, he had always been able to stop her bleeding with a few doses of stypticin, at six-hour intervals, and it was plain that she had no expectation at all that I would not have the same good fortune. Confidence usually begets confidence, and it was so in this case; I had no expectation myself but that luck would attend me and that I would be able to stop the hemorrhage. Setting about the usual things done in such cases, I slanted her body upward from the hips to the head supporting it in a semi-reclining position with pillows and other supports, enjoined absolute quiet upon her part (though a strict adherence to veracity compels me to state that the injunction went to a considerable extent unheeded) and began to auscultate and lightly percuss the chest. The history that I was able to obtain from her relatives at the house made it apparent that, up to this time at least, the tuberculous invasion had been confined to a space about the size of an orange, involving the apex of the left lung. This space I found to be consolidated. Her former hemorrhages had, it seemed, come from this region, and it was apparent that the same thing was true of the present one, since the condition of both lungs otherwise was good.

Influence of High Altitudes on Hemoptysis.—

The young lady was at a loss to know why she should have had such a severe hemorrhage immediately upon coming to Colorado, where, at least according to her preconceived ideas, she should have been "better every day in every way" and where her hemorrhages, if any, should have been less. Some explaining was palpably necessary and, partly with the idea of keeping her quiet and partly with the idea of setting her right as regards the common effects of introducing an altitude element into a case of lung tuberculosis which is but slightly active and of the ulcerative variety, I took occasion to explain to her Webb's Mononuclear-Lymphocyte Theory, making the special application to her own case. Briefly it was this: Some years ago, Doctor Webb, of Colorado Springs, as a result of a series of blood-cell counts conducted from sea level up to ten thousand feet above, found that the mononuclear lymphocyte became increasingly frequent in its ratio amongst the white cells of the blood in direct proportion as one passed to higher levels. This fact, of course, would not be of such importance, were it not that it was simultaneously established by him and his collaborators that this same mononuclear lymphocyte was the only one of all the white cells able to absolutely destroy—wax-coat and all—a tuberculosis germ. The increase noted in rising from sea level, where this

cell would be found in the blood somewhere around fifteen percent, to an altitude of seven thousand feet, would be anywhere from one hundred to three hundred percent. In other words, after a short residence at 7000 feet, one might expect to find mononuclear lymphocytes existing in the blood at a ratio amongst the white cells of forty-five to sixty-five percent, and his resistance to the tuberculous process increased thereby to a similar ratio. From this, it would be easy to explain the apparently increased activity of a tuberculous process, for a time, upon the patient's entering the higher altitudes, as, following the usual order of all bacterial and parasitic life, the invading organism (as if aware instinctively that a force inimical to its life had entered the bloodstream) at once seeks to leave the bloodstream, perhaps taking up a more or less temporary residence encapsulated in the tissues and thus, at least for the time being, rendering itself safe; although threatening starvation on the other hand would, of course, eventually force it to throw off its envelope of fibrin and again seek the field of its former activities.

Although seldom found in the blood-stream, except in miliary tuberculosis, there seemed small doubt that the tuberculosis germ reacted in its habitat in the tissues to the same instinctive dread of the mononuclear lymphocyte as the latter increased in the blood stream, and with the idea, no doubt, of escaping destruction, sought a deeper hiding place in the tissues, boring its way after its usual manner and thus perhaps causing the ulcerative process to open a wider rent than common in a blood vessel, and perhaps causing the ensuing hemorrhage to be more severe than usual.

The Prognostic Significance of Pulmonary Hemorrhage.—

In this connection, the question came up whether or not hemorrhage cases were more hopeful as to recovery than non-hemorrhage cases of tuberculosis, and it seemed to me that they were, although I had no statistics to prove my contention, which was, that the better prognosis would be due to the fact that, just as in pleurisy with serous effusion of tuberculous origin, the lungs, upon the reabsorption of the fibrinous exudate, would have at hand a most ample supply of fibrin within which to encapsulate the original tuberculous focus or foci, and that quite similarly the prognosis would be a better one in the case of hemorrhage of tuberculous origin, as, in the residue of blood left at the site of the bleeding after the latter had ceased, there would be an abundance of material at hand from which nature could take up, as it was needed for building purposes, fibrin with which to heal and close the rent and with which to start the process of walling up the entire focus.

Treatment.—

It will occur to you that this patient must have been rather above the usual mental attainments or that my own garrulity had been exceeding all bounds. A little of both was true I think. I know that I was conscious of a desire to minister to the natural confidence in her recovery, which the patient seemed to have in spite of the considerable hemorrhage from which she had suffered. Furthermore, I had not been otherwise idle while the one-sided conversation was going on, having during this time also found out that her pulse was ninety-six, temperature ninety-nine, having applied several overlapping strips of three-inch adhesive plaster during the patient's forced exhalations involving the entire left lung, having applied to the left mammary region a light ice bag and, lastly, having administered hypodermically two cubic centimeters of hemostatic serum and in the other arm ⅛ grain of morphine without atropine. She was at this time feeling comfortable, had ceased spitting up blood, and, as there was nothing to show but what we would now be relieved from any further danger of a recurrence of the hemorrhage, I gathered up my things, took my departure "and went".

Persistent Hemorrhages.—

It was nine o'clock that evening, that I was again summoned to the house. The patient had suffered two more hemorrhages, the last one being somewhat severe. The hemorrhages were plainly of a passive character. According to my instructions left on the occasion of my previous visit, nothing but liquid food had been given, the ice had been renewed in the ice bag as desired and, above all, the patient had been kept as quiet as possible. I could find nothing to do except order a continuance of the measures already adopted, and to repeat the injections of morphine and hemostatic serum, which I did.

On the next day, I was at the house three times on account of renewed bleeding and, on one of these visits, I saw her vomit almost a basin of nearly black blood which had evidently lain in her stomach some time. There appeared nothing further to do, however, so far as I could think, except to repeat the injections, which I did thereafter every four

hours, only giving one cubic centimeter of the hemostatic serum at each injection.

Pneumothorax Considered but Found Impossible.—

On the following day, the patient was much weaker and very nervous, evidently having reached the conclusion that she was not destined to recover; which I secretly shared myself to a considerable extent. A trained nurse had been put on the job. It would be a proper case, one might think, on which to perform pneumothorax, but there was no available machine. However, with this idea in mind, I called up on the telephone a Doctor G. of Denver, who has under his charge a considerable sanatorium at that place. Going over the details with him, of the treatment so far pursued in the case, and the exact condition of the patient so far as I was able to gather it, he concluded that a pneumothorax operation was all that there was left to do. This coincided with my own opinion and, in the end, we arranged that he should come down on the following day and that the operation should be done, if all other things were favorable.

One will recall that there are certain dangers from the operation in even the most favorable cases for pneumothorax. Da Costa mentions the following: shock, dyspnea, spasm of the epiglottis, pleural reflex, gas embolism, convulsions, edema of the lung, empyema, pulmonary abscess (if the lung is stuck), cerebral embolism and emphysema of the chest wall. I think that it is only fair to say, though, that the dangers may be looked upon as inconsiderable in a favorable case, the most usual dangers being those of shock and pleural reflex.

Doctor G. arrived as arranged, bringing also his wife, who is a trained nurse, and his expert assistant in the use of the pneumothorax machine. His operation was all that could be desired as to technic, but it was impossible with two insertions of the needle, at different and apparently favorable spots in the left chest wall, to find a pleural cavity, and the effort was reluctantly given up to do a pneumothorax operation.

Intravenous Calcium Chloride.—

The gloom deepened several degrees after the Doctor left for Denver. The next day, the hemorrhage having continued until nightfall, at which it was easily apparent that the patient had bled more than three quarts altogether, I decided to give an intravenous injection of calcium chloride. Sterilizing ten grains and adding ten cubic centimeters of sterilized distilled water, I injected the solution into the median basilic vein. Part of the fluid escaped from the vein wall and afterwards made a slight sore, but never gave us much trouble. The hemorrhages were not so bad after this, although the patient was in a terrifically precarious condition. Her bowels had become tightly bound up through the continual administration of morphine, and I ordered a fourth of a glass full of castor oil to open them, believing that the continual absorption of waste products from the alimentary canal might possibly tend to keep up the hemorrhages. I think, however, that except in a negative way, the castor oil had no further action in stopping the bleeding.

Oil of Cinnamon Successful.—

The patient was at this excessively pallid, pulse only a flutter, the respiration of a sighing character, and without hope of recovery. I came home at eleven o'clock p. m., believing that I would never see this patient again alive. Convinced that I had used or tried to use all of the modern methods in this patient's behalf, I sat down in the library, took down an old book which I had not looked into for years, Dr. Finley Ellingwood's "Materia Medica and Therapeutics," and commenced reading in the clinical glossary the remedies named for use in pulmonary hemorrhage. The first one my eyes lit upon was "oil of cinnamon". Referring back to the discussion of this remedy, and recalling vividly and olfactorily that, twenty years ago, I had carried it in my medicine case, I found this statement made regarding it: "An extemporaneous prescription—is made by combining 1 dram each of the oils of cinnamon and erigeron and adding enough alcohol to make 2 ounces. Of this, from 10 to 30 drops on sugar or dropped at once on water will control nearly every controllable passive hemorrhage."

It was almost midnight, but I found one drug store open. They were out of oil of erigeron but filled the prescription with the other ingredient and the alcohol. Of this, I ordered 30 drops on sugar every three hours. I was able to get service from the house, and the remedy was hurried down to the patient and given religiously for the next three days. I am glad to state that the patient never had another hemorrhage after the first dose and she now is convalescing nicely, although she will have to remain in bed from six to nine weeks.

J. A. DUNGAN.

Greeley, Colo.

DISLOCATION—SUBLUXATION

I am an osteopath of thirteen years' experience, with a license to practice in Oregon; graduated from Los Angeles College, in 1910. I had taken one year's course at the Palmer Chiropractic School, but decided that it was too crude. So, I followed it up by the osteopathic course.

Instead of signing my initials as X. Y. Z., I want to be open and say who I am, and to show that I know both, chiropractic and osteopathy.

In my training as a chiropractor and an osteopath, I was never taught to say that a vertebra was dislocated. Subluxated vertebræ or rigid articulations are bony lesions. A subluxated vertebra, slightly deviated from the median line, is very different from a dislocated one. Many ignorant practitioners use the expression dislocated hip-joint when the sacro-iliac articulation of the right or left side is forced backward or forward. The proper term is "subluxated innominate."

I feel insulted as an osteopath to have a man who does not sign his name make the aforesaid disparaging remarks out of his ignorance of the osteopathic school. After fifty years' persecution, this school has at last won out this year, in California, and gained a licensing board, independent of the medical fraternity.

I have subscribed for your journal for the last four years, as I found it was very broad-minded. But, I have always been amused at the remarks made against osteopathy and at the custom of some men of calling us quacks and ignorant.

GODFREY HEATHCOTE.

Mexico City, Mex.

"HOURS IN SCHOOL"

In the September issue of CLINICAL MEDICINE (p. 674), reference was made to some information contained in the "Log Book", a college publication of one of the osteopathic schools. In this case, the fundamental studies in the healing art, which are given in all schools and which range from anatomy and histology to psychiatry, are given as consuming 7068 hours in medical colleges; 7078 hours in osteopathic colleges and—495 hours in the Palmer School of Chiropractic.

In a letter received late in August, too late to find attention in the September issue of the Journal, Doctor Schorb enclosed a page from the *Herald of Osteopathy* for April, 1923. According to this, the curriculum of standard instruction recommended by the American Osteopathic Association for Osteopathic Colleges provides for 4422 full hours. In the Palmer School of Chiropractic, those who wish to take the eighteen-months' (socalled three-year) course, are given 4103½ hours of thirty minutes each; that is, 2051¾ full hours. However, what is actually required to become a Chiropractor and to be entitled to the certificate to practice is attendance of 2634 hours of thirty minutes each or 1317 full hours.

Although this is a better showing than had been presented in our first information, it is still wretchedly inadequate, as is quite apparent.

"SOME PRESENT-DAY MEDICAL PROBLEMS"

Under the heading of this letter, a very prominent and successful surgeon has outlined, before the State Medical Society, his views of the present relationship of the component parts, or schools, which together constitute the healing profession. You will notice that I have grouped them all together, independent of what each thinks of its own relative importance. He emphasizes the danger which confronts the Regular Medical School through encroachments by the various cults, or irregular schools.

It has been said that each crow thinks its own young ones the blackest. So, possibly, each cult prides itself on its own superiority.

Now, the term "Scientific School," as applied to any of the branches, is a misnomer. A school may be more or less scientific, and one school may be to a greater extent scientific than another, but, when it comes down to the fine point, the term scientific should not be used to define any one of them or even the whole lot, because the practice of the healing art, in the very nature of things, cannot be scientific. In fact, as one well known surgeon has said, he wouldn't guarantee the successful outcome of even removing a splinter from a finger. So much for the term "scientific."

I am constrained to reply to this criticism of the writer of "Present-Day Medical Problems," because I cannot see the arguments adduced as being founded entirely on fact.

While I have every respect for a great name and an eminent surgeon to whom I have had the pleasure of listening in his own city, were I to allow such criticisms of the cults

of healing to go unchallenged, it would seem as though I had not the courage of my convictions for the faith which is in me.

I am a nonsectarian in Medicine, with degrees from the Regular, Homeopathic, and Osteopathic colleges, and have studied Christian Science as much as I could through Mrs. Eddy's book and at lectures and meetings and discussions.

I am ignorant of the practice of a Naprapath and, very likely, of a good many other minor sects, but I have spent thirty-seven years in the study and practice of Medicine, and, on the basis of that and with no ill will, I would like to express some views divergent from those of the author of "Present-Day Medical Problems."

That there are several schools, or cults, in Medicine, is a self-evident statement. I cannot state the proportion, in numbers, of adherents in each, but I venture the assertion that the aggregate number of the supporters of the irregular schools would show not an insignificant part of the community, especially in the larger centers.

Our critic allows that there are three degrees of gullibility, especially in regard to belief in medical treatment: first, those who never tire of being humbugged; second, those who are not really happy unless stung once; and, finally, those that always play safe.

Now, some of these different schools have a great many adherents, and possibly one has more than any of the others, but the aggregate of the many equals or exceeds that of the largest single one. Who is going to determine which group is being humbugged, if any are? Is the criterion to be by numbers or by results? If a person is sick and is not cured or relieved by a practitioner of one school, and he seeks other methods of healing and obtains relief therefrom, he might reasonably be content to be considered a sucker by those who failed to help him, since he has his health back again.

I would like to add a fourth degree of gullibility to that list, and I apply this to the physicians themselves, particularly. I question whether gullibility is the proper term to use for the class of people to whom I refer. Perhaps you can for yourself supply a correct term for those who, on the strength of incorrect information or of biased and prejudiced information, pass on from father to son criticisms which are founded on lack of investigation, either through willful neglect or from lack of opportunity or through fanatical prejudice.

I have seen such critics referred to as "criminally responsible" in the face of results demonstrated and published time after time, but I rather balk at the term as approaching unparliamentary expression. You may find a less harsh appellation, though possibly all unparliamentary language is not necessarily improper. This applies to each of the several schools which, against reason and result, deliberately turns away from investigation and practice of methods that may not dovetail into some theory or other characterizing its own particular cult.

If I were asked to say which school was the greatest sinner in this regard, I would name the Regular school of practice. It is a safe bet that, when a medical man of the Regular school belittles or attempts to ridicule the practice of Homeopathy, he does so upon no practical experience. I've heard these critics time and time again, and I have asked them upon what they based their adverse criticism, what practical experience they have had, and the invariable reply, after considerable hemming and hawing, was worth just as much as their practical experience, namely, nothing. So also, their criticism of Osteopathy and Chiropractic, when based on no practical experience, is of value in proportion.

It is a marvel to me why the Regular-school physicians will run after some new remedy brought out by some possibly obscure promoter, but will not even investigate the system of Homeopathy, which is endorsed by hundreds, nay, thousands, of honest and influential physicians having the same standards of education as themselves and with just as eminent a clientele.

Do not for a moment suppose that all culpability in this regard is found in the Regular school; for, it is not. The Homeopathic, the Osteopathic and the Chiropractic are also to blame. Some of the writers in each of these are foolish in their claims and so tend to discredit the whole system which they may represent. But, if ridiculous claims are made by some enthusiasts, surely the bulk of the profession does not necessarily have to go on a stampede either one way or the other. There is no doubt that cures by manipulation have been made where medicines have failed absolutely.

Christian Science I call Mental Science and as such it seems to have a very useful field. However, if Mrs. Eddy's book is a criterion of the soundness of the system, I acknowledge defeat at once. I have the consolation, though, of knowing that I tried to digest her meth-

ods in order to make practical use of them. I know for a fact that her criticism of Medicine, and especially of Homeopathy, is fallacious and made with evident intent to bolster up her own theories. Therefore, I may reasonably conclude that the balance of her (to me and many others) incomprehensible compilation of words is on the whole equally erroneous and misleading.

Now, it is quite possible that the regular medical profession (and by that I mean the old established school of medicine) is in more or less danger of being swamped by the aggregation of various sects comprising the healing art. Is there a remedy for it, and what is that remedy?

There is but one answer that I can see, and that is, for the Regular School, with its established machinery for teaching, to incorporate into its curriculum, as compulsory, the teaching of the greater minor sects which have earned and command the confidence of the public. Then and only then will these newer schools, as separate institutions, be memories of the past. The student will then be able to obtain at one institution, at a minimum labor and expense, what he requires in order to compete with other practitioners successfully.

The greater minor cults, Homeopathy, Osteopathy, and Chiropractic, have come to stay. Take that in clearly and definitely. They offer systems of treatment which are not taught or practiced by the Regular school. Whether we like it or not, they have a great many adherents and their practitioners cure or relieve patients where the Regular physician fails. Statistics are not always reliable, but they do not always err; and, when they so often show the superiority of one method over others, is it not the part of an honest, reasonable and rational physician to endeavor to find out why his results fall below those of his brother practitioner? There should be but one school of practice embracing all sects which have proved themselves of sufficient worth; and, after all, it would not be such a tremendous work.

To many the term "doctor" means a certain standing in the community and a means of livelihood, and the way they choose to get this degree is, the easiest way. Is it fair that the Doctor of a Regular medical college should have to give so much labor, time, and money to obtain his right to practice, and that a like degree, or (at least to the general public) a similar degree can be obtained, by a short cut so to speak, at another college having an easier and less comprehensive course of study? Obviously, it is unfair. Still, such is the case and will continue to be the case until the Regular school wakes up and throws off its prejudices which it has inherited from generation to generation.

Homeopathy is far from being a dead proposition. Hundreds of students were refused tuition, last year, on account of lack of accommodation.

Osteopathy and Chiropractic are very much alive to those who do not bury their heads in the sand like the ostrich. I have offered my services to my Alma Mater without cost to spread the knowledge of Homeopathy, but have been politely turned down. It is nothing to me personally; I did what I considered my duty.

It might be reasonable enough for a specialist in surgery to criticise a medical man who undertakes to do surgical work; but, does it not weaken his argument when he, a surgeon, passes judgment on the medical side of practice? When he also quotes as a leading authority a writer of poems who has the faculty of wielding a satirical pen and who uses this gift to ridicule a system of practice, Homeopathy, which is endorsed by over ten thousand reputable physicians in the United States alone, many of whom are graduates also of the Regular school, it would seem bordering on the ludicrous, did it not involve such a serious matter as the health and possibly life or death of many a poor suffering patient. Truly, it appears like a case of prejudice gone crazy.

The only solution to "Some Present-Day Medical Problems" is, to teach these great new systems in the Regular schools and make the course compulsory.

This article is not meant to apply in any way personally. It is merely an effort to reply to statements made in another article.

E. M. MORGAN.

Westmount, Que.

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[Doctor Morgan's ideas found discussion in an editorial article, appearing in the last issue of the JOURNAL.—ED.]

ELECTROTHERAPEUTIC LECTURES AND CLINICS

It is a sad fact that theoretical and practical instruction in electrotherapeutics is available in only very few places and that most physicians who desire to take up these physical methods of healing are, more or less,

thrown on their own resources.

To be sure, there have been various schools in which such instruction was given, but, at the present time, we are informed that there does not exist a single institution devoting its efforts definitely to the teaching of physical methods of healing. We hope that we are mistaken in this. If we are, we shall gratefully accept correction.

Things being as they are, an undertaking by a Chicago firm deserves credit, through which, once a year, a course in electrotherapeutic measures is given in which the lectures and clinics are offered by men who are prominent in their particular fields. These courses have been held now for several years and the next session will be given in Chicago during the week from October 15 to 19.

H. G. Fischer & Co., Inc., who are arranging this course, do so entirely for the benefit of medical men who desire training in physiotherapy. The lectures are given in the Logan Square Masonic Auditorium, at the terminus of the Logan Square Metropolitan Elevated. The Fischer people issue invitations on request, and acceptance of these invitations implies no obligation of any kind—excepting the gratitude that everybody who receives benefit would naturally feel. It is even offered to make hotel reservations and to aid visiting physicians in every way possible.

The physicians who are to lecture and to hold clinics during this course are the following:

Gustav Kolischer, M. D., G. U. Surgeon at the Michael-Reese and Mount Sinai Hospitals, Chicago, Ill.

R. W. Fouts, M. D., Roentgenologist, the Lord Lister Hospital, Omaha, Neb.

T. Howard Plank, M. D., Physiotherapist, the American Hospital, Chicago, Ill.

Frederick H. Morse, M. D., Boston, Mass., ex-President the American Electrotherapeutic Association.

Curran Pope, M. D., Louisville, Ky.

Emile Du Val, M. D., Chicago, Ill.

Frank M. Burns, M. D., Albion, Neb.

Roswell T. Pettit, M. D., Physician-in-charge at the Illinois Valley Hospital, Ottawa, Ill.

H. I. Smith, M. D., Chicago, Ill.

Ward P. Burdick, M. D., President, St. Anthony Hospital Staff, Rockford, Ill.

A. L. Yocum, Jr., M. D., Chariton, Iowa.

We feel that this undertaking merits the appreciation of medical men and that it is one in the right direction: that of cooperation between physicians and those who provide their means with which they treat their patients. We hope to be present at several of the lectures ourselves, as we want to learn something about electrotherapeutics, at least theoretically, and we should be glad to meet many of our readers on that occasion.

OUR FAVORITE METHODS

The Use of Unna's Paint in Varicose Veins and Ulcers

There are, today, thousands of patients suffering from varicose veins and ulcers who, for one reason or another, do not submit to surgical operations for relief. Full 90 percent of these could not only be relieved but cured by a very simple nonoperative procedure. This procedure consists in the proper application of an Unna's Paint Boot. The first important thing in this application is, to have the proper material with which to work, and of this the Unna's Paint is the most important for, if this is not properly prepared, the result will be unsatisfactory.

Preparation of Unna's Paint

Take a double boiler (ordinary oatmeal boiler), fill the outer receptacle one-third full of water, then place ten ounces of cold sterile water in the inner receptacle and four ounces of ordinary grocer's sheet gelatine and allow to stand until the gelatine is dissolved. Place inner receptacle in outer receptacle and put over slow fire until thoroughly dissolved and hot; then stir in ten ounces of glycerine; then slowly add four ounces of zinc oxide, stirring constantly.

Its Application

Whenever the Unna's Paint is required, place the double boiler over a slow fire, being sure there is plenty of water in the outer receptacle, and heat until melted. Then apply the warm (being careful it is not too hot), melted Unna's Paint to the extremity with an ordinary paint brush, about two inches wide, about as a painter would paint woodwork with white lead paint. Over this, apply a lintin-gauze bandage about two and one-half inches wide without exerting any traction to the bandage and without reversing. Then another coat of paint. Repeat this five or six times, having the limb thoroughly covered in this way from the base of the toes to the popliteal space. Permit to dry and then cover well with ordinary talcum powder. Over this, the stocking can be applied and then the shoe, and the patient may go about his business. This boot may be left on from one to four months, if comfortable, until the skin and the veins

again become normal. If the extremity is swollen, it is necessary to elevate it on pillows for a nigt before the boot is applied.

If an ulcer exists, cleanse it thoroughly with benzine, then paint the surface with Unna's Paint, cover it with one layer of sterile gauze, another layer of paint, another layer of gauze, until about eight layers are applied. Then put on the boot, as previously directed in simple varicosities. However, in this instance, the dressing cannot be left on as long. It may be necessary to remove the first boot in two to four days or when the secretion begins to get foul. After this, the interval may gradually be lengthened. When the ulcer is completely healed, the further treatment is the same as that for simple uncomplicated varicose veins.

If properly applied, this dressing will cure all types of varicose veins and ulcers except two—namely, first, those ulcers which are caused by syphilis and in which the treatment must be supplemented by proper antiluetic therapy; and, second, in cases where the valves of the internal saphenous vein are incompetent, that is, not large enough to prevent the blood from flowing down past the valves, in which case a portion of the internal saphenous vein must first be excised and ligated before the boot is applied and before a complete permanent recovery may be expected.

EDWARD H. OCHSNER.

Chicago, Ill.

Dr. Edward H. Ochsner's suggestion, that we give others the benefit of our experiences with some of our favorites that are unusual in treatment, is very good indeed. Here is one that has never failed me and has saved several lives. It is the application of a fly blister to the scalp in meningitis.

In the first case of this disease that I had, the patient died a most horrible death. The next case, a man forty years of age, had a very severe attack. He had a bald head. It occurred to me that a fly blister over the scalp might help him. I applied one over the whole scalp. I was utterly astonished, next day, to find that the inflammation was controlled. Convalescence was prompt. I have used this remedy in many cases of meningitis since then, with the same result.

I use the cerate. Where there is hair, the cerate should be melted and worked down to the scalp. I have never found it necessary to sacrifice the hair. W. E. FOWLER.

Brookville, Kans.

I was much impressed with Dr. Ochsner's suggestion and am looking forward to his article.

The most useful trick I have is using pure guaiacol, in equal parts with milk and water, as an enema in all pleuritic and bronchial infections: First, clear the bowels with a quart of very hot water to which you add ½ pint syrup, preferably corn. Then wait a half hour and, with rectal tube or catheter inserted 6 to 8 inches, inject ½ pint milk or water to which add one drop of pure guaiacol for each year of age, up to 25 drops; repeat without a cleansing enema every twelve to twenty-four hours until temperature remains normal.

With a good nurse to follow directions, you will not have many calls to make on your pneumonia patients; in fact, they get well so quickly that you will doubt your own diagnosis.

Of course, use other treatment, but have no more prolonged cases of bronchial pneumonia in children.

F. W. STEWART.

Colfax, Iowa.

AMERICAN DIETETIC ASSOCIATION

The American Dietetic Association will hold its sixth annual meeting at Indianapolis on October 15th, 16th, and 17th, with headquarters at the Hotel Claypool.

With the present sensational progress and development of dietetics throughout the country, there exists the greatest need for well informed dietitians keenly alive to the problems of the day. The demand from hospitals, universities, schools, public-welfare associations and the commercial field, for food experts, exceeds the supply.

The program for Indianapolis will cover every phase of applied dietetics.

NON-SURGICAL TREATMENT OF CANCER

Below follow the literary references to Dr. Cummings' article on p. 719 to 725.

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What Others are Doing

"INTERNATIONAL MEDICAL ANNUAL"

In our announcement of the 1923 volume of the "International Medical Annual" (p. 779), we referred to the introduction by the editor of the "Annual," which contains the excerpts of a reference to many of the serviceable and informative articles contained in the body of the volume. We have found so much of use in these pages, that we venture to present, for the benefit of our readers, a few specimens excerpted from the introduction referred to.

While going through the proofs of the volume, the editor declares, he has been struck by the large number of articles it contains of practical clinical value. For some years, the work in the laboratory has tended to overshadow that of the clinician, and mechanical methods of diagnosis have been regarded as more important than personal examination, both physical and symptomological. We have now reached a stage, the editor adds, when we realize that clinical diagnosis must come first, and then we can seek every possible aid that the laboratory can afford to support or correct our reasoned opinion.

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The socalled Erlander method of "deep therapy" by x-ray radiation in malignant disease has been the subject of investigation and discussion for some time. An interesting article is contained in this volume of "The Medical Annual" and, according to Ward, the x-ray dose employed in that method is so near being a dangerous one that, unless the radiologist has an intimate knowledge of the apparatus, the technic and the principles upon which the method is based, harm rather than good may result. There is danger of delayed reaction taking place some time after the treatment.

In an address on otitis media, Sharpe states that, for chronic otorrhea limited to the tympanic cavity, no method gives results comparable with zinc ionization. It is not unusual, he says, to see the ear of an adult, which has suppurated continuously from childhood, cease to do so after a single application.

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In the article Varicose Veins and Ulcers, attention is called to the remarkable results of parathyroid gland substance, in doses of 1/8 gr. given by mouth. The ionized calcium of the serum rose rapidly to the normal figure, and improvement took place. This looks as if parathyroid gland influenced the liberation or assimilation of calcium.

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The value of emetine in amebiasis has incidentally shown that the active principle of ipecacuanha, when given in too large and repeated doses, can cause congestion of the lungs as well as the intestines. It is found in such doses to cause tonic contraction of the intestines, but some relaxation of the uterus.

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The articles on skin diseases contributed by Dr. Graham Little are very practical and instructive. Thus, under alopecia, we have no less than twenty valuable formulæ given for our guidance. We are also told that resorcin and beta-naphthol must never be used when the hair is white or light in color; white hair may be changed into a yellow or green color; light brown or golden hair changes more slowly into a yellowish-green or, more commonly, auburn color. He also mentions a tradition that sexually active men become bald sooner.

A recent treatment for furunculosis is by injecting the boil with a 5-percent solution of camphor in oil, and dressing with a phenol, ergot, and resorcin ointment, of which the formula is given. Granuloma Venereum has yielded rapidly to intravenous injections of tartar emetic, which appears to act as a specific. We doubt if the value of tartar emetic as a bactericidal agent is yet fully explored.

In the article, Nails, Diseases of, the use of thyroid extract is suggested in cases where there is deformity of the nails. In the case recorded, the cure resulted in a patient who gave the Wassermann reaction.

In the article, Skin Diseases, General, there are some very interesting remarks on the bacterial theory and focal infection. Leslie Roberts considers that the common flora of the tonsils and mouth (the hemolytic and nonhemolytic streptococci and staphylococci) may serve a useful purpose in digestion, in much the same way that intestinal bacilli act. He

points out that our food consists of foreign proteins, carbohydrates, and fats, and it is essential for the welfare of the body that these should not be allowed to pass the wall of the intestine into the interior without first being deprived of their toxicity. There exists in the body an organized system of defense against foreign proteins. The first line is taken by the cells of the mucosa of the stomach and higher intestines, the second line by the bacteria of the colon, and the third line by the free-moving cells of the lymphoid tissues. The remarks made on the rationale of the action of foreign proteins are worth reading.

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There is only one way of curing a patient with brain tumor, and that is by its complete removal. Dr. Ramsay Hunt tells us in his contribution on Brain Surgery that drugs, x-rays, and radium are utterly ineffectual. He describes the methods by which the exact localization of these tumors has become possible. A point of interest to the general practitioner is the fact that intracranial pressure can be reduced by the administration of large doses of salt. The "pressure headaches" associated with hydrocephalus can thus be relieved. Of course, this treatment only applies where the intracranial pressure is due to fluid.

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Dr. Langmead's article on Rickets is a valuable addition to our knowledge of the subject. The most recent observations do not encourage the belief that it is due to defective feeding; it is regarded more as the result of too limited air space and lack of exercise. It appears to be due less to the absence of lime than to the deficiency of phosphates. Excess of carbohydrates favors the condition, especially if there is lack of sunlight and exercise. Codliver oil and sun-baths appear to have a great curative influence.

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Dr. Hutchison points out (Gastric and Duodenal Ulcer) that x-ray diagnosis of ulcer is not yet infallible, and the evidence of the radiologist has to be considered in its relation to the clinical history and symptoms. After all has been done, it may be necessary to resort to laparotomy to come to a definite decision. The use of caustic soda in the treatment of both, gastric and duodenal ulcer appears to be an important advance in therapeutics. It acts not only as an antacid, but by arresting the action of ferments and also by slightly cauterizing the ulcer. Glaessner gives 2 oz. of a 0.2 to 0.4 percent solution of NaOH in peppermint water every two hours. He obtained good results, although no special diet was observed and the patients were not kept at rest. (A solution of 0.4 percent represents 35 gr. to the pint.)

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In the article Eye, General Therapeutics of, attention is called to the harm which results from the too frequent repetition of local remedies. This is in keeping with the line of thought which is gaining ground in reference to the action of most therapeutic agents, especially vaccines. The time for repetition appears to be when the remedy has exhausted its effects; otherwise the natural processes which make for recovery are not able to take place. There is much in this view to commend it. In the case of the eye, the prolonged use of atropine may set up a conjunctivitis, and the conjunctiva can be rendered black by the prolonged use of silver salts. Even dionin may increase the corneal opacities and thickening of the conjunctiva if it is given too frequently. In the treatment of trachoma, acriflavine appears to give the most satisfactory results. The technic of its use is explained in the above article.

We all know that headaches are frequently caused by ocular defects, but it is rather a novelty to use the form of the headache as a means of diagnosing the ocular error. J. A. Kearney tells us that frontal or supraorbital headache indicates hypermetropia, occipital headache an imbalance of the external ocular muscles, and temporal headache an astigmatic error.

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The article Pregnancy, Disorders of, contains some valuable suggestions respecting the treatment of puerperal eclampsia. It is pointed out that it is easier to prevent than to cure this condition, and that when it occurs prompt removal to a hospital is desirable. One elementary point in treatment is starvation, nothing being given except water. The vomiting of pregnancy is regarded by Oldfield and others as a neurosis rather than a toxemia, and is treated on this line by giving the patient ordinary diet, aperients alone being used as remedies. Such patients are best treated in a nursing home.

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In the treatment of measles, calcium sulphide in ½-grain doses has been recommended by E. Rice, who finds it gives prompt relief to the catarrhal and cutaneous symptoms.

USES OF PARAFFIN-WAX DRESSINGS

From the *Journal A. M. A.* (Aug. 18, p. 548), we reproduce the following case histories reported by L. D. McMillan, Onaway, Mich.

Case 1.—V. R., a girl, aged 8, was scalded by boiling water during the spring of 1922. The wound had healed with much cicatrization of the elbow and the adjacent portions of the arm, and with almost complete fixation in flexion of the elbow. May 7, 1923, I removed about a square of scar tissue contiguous to the healthy skin, and dressed the wound daily with surgical paraffin (Parresine—Abbott), after the usual method used for burns. The defect filled in and became smoothly epithelialized in two weeks. Under general anesthesia, I then removed the main portion of the scar over an area of 20 square inches, including the anterior surface of the elbow, thus severing the tissue fixing the elbow and allowing the arm to be straightened and splinted in full extension. In two weeks, most of the defect was filled in and epithelialized. The splint was then removed and the same treatment applied on alternate days without the use of splints. In three weeks, healing was completed. Although the area treated was discolored, the surface was smooth, there was no contracture, and the child had recovered full use of the arm.

Case 2.—W. P., a man, aged 50, had five varicose ulcers of the leg, varying in diameter from 3 mm. to 2 cm. The anterior surface of the lower leg was erythematous and oozing in two places. There was a systolic murmur at the cardiac apex, not transmitted, and slight cardiac hypertrophy. The Wassermann reaction was negative. The blood pressure was 115. Treatment consisted of rest in bed, a preparation of digitalis, graduated exercises, and daily application of surgical paraffin to the leg, after the method used for burns. The largest ulcer was filled in and epithelialized in two weeks, the others in three weeks, at which time erythema and oozing was nearly absent. The patient was then furnished with an elastic bandage and discharged with directions to refrain from work or other than the lightest exercise, for several weeks. He again returned after four weeks, having resumed light farm work immediately following discharge. Erythema and oozing were completely absent, and the leg, aside from slight discoloration, was entirely healed. This case is notable, as the patient reported that the erythema was of twenty years' duration, and that several physicians had failed to clear up the ulcers by the classical methods of treatment.

I have used this dressing with remarkable cosmetic effect after a large abscess and subsequent sloughing of the face.

ALIMENTARY GLYCOSURIA AND THE NEUROVEGETATIVE SYSTEM

At a recent meeting of the French Biological Society (*Gaz. des Hôp.*, July 3 and 5, p. 854), Doctors Santenoise and J. Tinel referred to numerous tests for alimentary glycosuria which they had made on subjects whose kidneys and livers were normal and who did not present any functional symptoms that might be referred to the thyroid. They have condensed their observations in the following conclusions:

1.—Patients with marked vagotonia tolerated glucose remarkably well, while the hypovagotonics showed glycosuria after relatively small doses.

2.—If the quantities of glucose that are ingested are varied, it appears that a certain parallelism is noticeable between the intensity of the oculocardiac reflex and the appearance of the alimentary clycosuria.

3.—In subjects like maniacs, *les anxieux*, and in epileptics, who showed rhythmical variations in their vagosympathetic tonus, one observes parallel and evident variations in the glucose toleration.

4.—The variations in the vagosympathetic tonus, which are produced artificially by pharmacodynamic agents, give rise to like results. The authors have produced glycosuria in twelve subjects by injections of atropine (atropine glycosuria).

5.—Inversely, by exciting the vagus with eserine, they have seen the level of glucose toleration frankly elevated.

6.—Having observed in animals that insulin is an excitant of the parasympathetics, the authors raise the question whether the action of insulin does not, in a certain measure, stand in relation to this effect upon the neurovegetative system.

Among the Books

ABDERHALDEN: "ARBEITS-METHODEN"

Handbuch der biologischen Arbeitsmethoden. Unter Mitarbeit von 500 bedeutenden Fachmännern herausgegeben von Geh. Med.-Rat Prof. Dr. Emil Abderhalden. Berlin und Wien. Urban & Schwarzenburg. 1923.

Abt. V, Methoden zum Studium der Funktionen der einzelnen Organe des tierischen Organismus, Teil 5 B, Heft 1.

Zentralnervensystem. Viktor Kafka, Technik der Lumbalpunktion. Viktor Kafka, Methoden zur Untersuchung des Liquor cerebrospinalis. Mit einem Beitrag von Otto Schumm, Spezielle chemische Methoden. Ernest B. H. Waser, Methodik des Wärmestiches.

Kafka's discussion of the technic of lumbar punction and also of the examination of the cerebrospinal fluid includes everything of value that has been determined to date. In addition to technic and methods, the various substances for the presence of which the cerebrospinal fluid is examined, find consideration. Thus, we have tests for hemoglobin, bilirubin, nitrogen, urea, grape sugar, acetone, acetic acid, ethyl alcohol, acetaldehyde, chlorine, phosphoric acid, sulphuric acid, potassium and sodium. Naturally, these methods interest particularly the laboratory technician. However, the student-physician will also be interested in looking up these methods, at least in a medical library, even though the purchase of the entire work may entail too great an expense to be justified for the general practitioner.

Abt. V, Teil 5 B, Heft 2. Wilhelm Trendelenburg. Methodik der Physiologie des Zentralnervensystems von Wirbeltieren.

Trendelenburg's physiology of the central nervous system of vertebrates describes the methods and technics employed for determining the mechanism of the special senses and functions. It is extremely interesting for those who desire to understand normal physiology thoroughly in order to appreciate its deviation which are studied in pathology.

Abt. V, Teil 7, Heft 3. Untersuchung der Sinnesorganne. Jakob Katzenstein (✝), Methoden zur Erforschung der Tätigkeit des Kehlkopfes sowie der Stimme und Sprache. Erich M. v. Hornbostel, Phonographische Methoden. H. Zwaardenmaker, Methoden der Untersuchung des Geschmackes und der Geschmackstoffe.—Prüfung des Geruchsinnes und der Gerüche. Adolf Basler, Methoden zur Untersuchung der Hautsinne.—Karl L. Schaefer, Untersuchungsmethodik der physiologischen Schallübertragung aus der Luft auf das innere Ohr.

The contributions of the investigation of sensory organs which are contained in this fascicle are the following: Jacob Katzenstein (deceased): Methods for the Investigation of the Function of Larnyx, also Voice and Speech. Erich M. v. Hornbostel, "Phonographic Methods. H. Zwaardenmaker, Methods for the Investigation of Taste and Flavors. —Examination of the Sense of Smell and of Odors. Adolf Basler, Methods for the Examination of Cutaneous Senses. Karl L. Schaefer, Methods for the Investigation of Physiological Transmission of Sound From the Air to the Inner Ear."

These titles will give a sufficient idea of the scope of this fine book.

BRUGSCH UND SCHITTENHELM: "LABORATORIUMSTECHNIK"

Klinische Laboratoriumstechnik. von Prof. Dr. Theodor Brugsch und Prof. Dr. Alfred Schittenhelm. Zweite, vollständig neu bearbeitete Auflage. "Technik der Speziellen Klinischen Untersuchungsmethoden". 1 Band. Mit 310 Abbildungen im Text. Berlin und Wien: Urban & Schwarzenberg. 1923.

The contents of this first volume of the "clinical methods" comprise mensuration; determination of the total quantity of blood, of hemoglobin and of the volume of cardiac activity; kymography; pneumography; Roentgenologic methods; bacteriologic methods and immuno-diagnosis; the most important pathological histologic examinations; optic methods of examination; study of metabolism.

It will readily be seen that this treatise is very complete and that the clinician, as well as the laboratory technician, will find in it information on the latest methods that have been proved of service for the investigation of disease and the study of patients. There is a great amount of information collected in this volume, most of which, to be sure, is in too great detail for the general practitioner. The clinician and the student will find this work indispensable.

LIEBESNY: "PHYSIOLOGISCH-KLINISCHE METHODIK"

Einführung in die physiologisch-klinische Methodik für Studierende der Medizin. Von Dr. Paul Liebesny, Wien. Mit 79 Abbildungen im Text und einer farbigen Tafel. Berlin und Wien: Urban & Schwarzenberg. 1923.

In contrast to the large treatises announced in the foregoing paragraphs, the little book by Liebesny and the one by Kloss and Hahn (to be mentioned later) constitute condensed statements of the various methods to be employed in a form in which they are of service to the practitioner. Liebesny's book deals with the examination of the blood; of the circulation; of heart and lungs; of the digestion, including gastric juice and test meal; the urine; the modalities of electric apparatus employed in electrotherapy; physiological demonstration on the frog; the nervous system; the senses of hearing and of equilibrium; the sense of sight. The book is small and handy and suitable for the general practitioner who reads German.

KLOSS & HAHN: "KLINISCHE LABORATORIUM"

Taschen-Lexikon für das klinische Laboratorium. Von Dr. Karl Kloss und Dr. Leo Hahn. Zweite, erweiterte und verbesserte Auflage. Mit 18 Textfiguren. Berlin und Wien: Urban & Schwarzenberg. 1923.

This little compendium is intended for rapid reference giving concise and brief information on various methods of laboratory investigation. It is undoubtedly very useful.

PATTEE: "PRACTICAL DIETETICS"

Practical Dietetics with reference to Diet in Health and Disease. By Alida Frances Pattee. Fourteenth Edition. Completely Revised. Mount Vernon, New York: A. F. Pattee, Publisher. 1923. Price $2.60.

Any book that makes its appearance in a fourteenth edition has proved its right to exist. Pattee's "Practical Dietetics" is in constant use, not only as a textbook in nurses' training schools, in medical services of armies elsewhere, but also with physicians. Its teachings are those that have been found most serviceable. A full index makes reference to the text easy.

With each volume, a separate "Teachers Dietetic Guide" is given gratis. This contains the state board requirements in dietetics and state board examination question. It will be useful for those preparing for state board examinations.

"TUBERCULOSIS DIRECTORY"

A Directory of Sanatoria, Hospitals, Day Camps and Preventoria for the Treatment of Tuberculosis in the United States. Compiled by the National Tuberculosis Association. 370 Seventh Avenue, New York. June 1, 1923.

In 1904, when the first tuberculosis directory was published by the Committee on the Prevention of Tuberculosis, of the New York Charity Organization Society, there were, in this country, three state sanatoria. The present directory lists 58. In 1914, there were available less than 8,000 beds for tuberculosis patients. Today, there are over 66,000.

The present edition of the directory contains a list of tuberculosis sanatoria, hospitals, day camps and preventoria. It is useful not only to the tuberculosis physician but also to the general practitioner who frequently has occasion to inquire into the existence of sanatoria in certain parts of the country.

The little book is distributed to the members of the National Tuberculosis Association to which all medical practitioners should belong.

"MATERNITY CENTER ASSOCIATION"

Maternity Center Association of the City of New York. A report on the work that it has accomplished from April 1918 to December 1921, in the matter of prenatal care.

We may have our very definite ideas about prenatal care which physicians claim as coming within their own province. This is very fine and true, theoretically. Practically, however, it does not work out—for the simple reason that but very few women consult a physician as soon as they know that they are pregnant and still fewer can be induced to remain under the physician's supervision during the entire period of pregnancy. All these naturally belong to those strata of society that are financially able to remunerate their physicians.

Prenatal care is just as important among the socalled lower classes, among people to whom a visit to the physician entails a financial sacrifice that they can not make often. Unfortunately, it is among them that pregnancies are relatively far more frequent than in the other classes. It is here that social service organizations have to step in and provide those facilities for care that the pregnant women and the new-born babies need. The service that is necessary can not, in fact, be given by physicians alone or by physicians with the aid of nurses. In its practical work-

ings, several agencies are required, namely, lay organizations, public health official, public health nurses and the great body of private practitioners of medicine. These four main groups should first of all thoroughly understand each other and then they should pull together strongly. The result of such cooperation would be a triumph of public health effort over preventable disease; in this particular case over the hazards of pregnancy and childbirth.

"INTERNATIONAL MEDICAL ANNUAL"

The International Medical. A Year Book of Treatment and Practitioner's Index. Forty-First Year. 1923. New York: William Wood and Company.

The Reviewer ventures to say that, out of any number of physicians who will take half an hour or an hour to examine this latest volume of the "International Medical Annual," or one of the preceding volumes, for that matter, there will hardly be one in ten who will not want to own the book for constant reference. It is an annually recurring surprise and pleasure. The reviews of the preceding year's publications, the statements of currently-accepted opinions, the presentations of facts, and many other things—all combine to make this single volume a source of information that it would be hard to duplicate.

In order to offer to our readers a few specimens of the mass of information contained in this book, we have prepared an excerpt of the editor's introduction which will be found on page 000 of this issue of CLINICAL MEDICINE.

FINCK: "GIRTH CONTROL"

Girth Control. For Womanly Beauty, Manly Strength, Health and a Long Life for Everybody. By Henry T. Finck. New York and London: Harper & Brothers. 1923. Price $1.75.

The author offers as a basic proposition, which can be accepted without discussion, that correct eating will not only prevent obesity but will also cure it. The question is only what constitutes correct eating. The answer to that, it may be submitted, includes not only the kind, quality and quantity of food but also the manner in which the food is ingested. Indeed, the author impresses it upon his readers' minds that the manner in which the food is ingested is really the most important part of eating.

According to the author, modified fletcherziation of food is correct, but it isn't the only thing. You must not be content with getting the enjoyable taste out of your food by proper mastication and insalivation, but you must get the flavor as well as the fragrance of the food, and this is far more important than the mere taste. In fact, the olfactory enjoyment of food and, in consequence, the olfactory benefit are of greater moment than the taste. According to the author, people whose sense of smell is impaired are deprived of nine-tenths of their possible pleasures of the table. People very often are indifferent to food, possibly owing to ill health, worry, blues, overfatigue, bad cooking; but, when the person is normal and, nevertheless, indifferent to food; the reason why is that he is anosmic, or smell-blind, so to speak.

The author calls flavor the odor of a substance as perceived in breathing *out* through the nose, while we are eating, and usually accompanied by a sweet, salt, sour or bitter taste. Flavor is distinguished from fragrance, which is perceived in breathing *in* through the nose and the sensation of fragrance is not accompanied by the taste (sweet, salt, sour, bitter).

Mr. Finck's book is quite readable and contains much, very much, that is excellent. Sometimes he overdoes his attempts to attract by using popular language and occasionally he is guilty of what the Germans call *Effekthascherei*, a word that it is difficult to translate, meaning, literally, straining after or grasping for effect.

Perhaps the most reassuring thing for those who wish to control their girth downward is the chapter headed (p. 96) "Eat Anything You Like" and also the subhead (p. 99) "Verboten is not necessary". It is gradually coming to our consciousness that the distressful, cumbersome and vain "dieting" for curing obesity or its reverse are useless for several reasons. For one thing, the dietary orders are never obeyed conscientiously. For another, they do not accomplish their purpose, inasmuch as it is not so much the kind of food that determines obesity or leanness as rather the manner in which food is partaken of. To be sure, there are other etiological factors at work, among which the normal or abnormal function of the endocrines must be enumerated as a matter of course.

As a whole, we have enjoyed reading the book. It contains many sensible and excellent lessons and much wholesome advice. Doctors can not fail to derive benefit from

reading it and many of them will find some things that are new to them, even as did the Reviewer.

HIRSCH: "KURZSICHTIGKEIT"

Die Kurzsichtigkeit. Das Tuberkulin und Seine Anwendung. Von Dr. George Hirsch in Halberstadt. 2nd edition. Published by the author.

Doctor Hirsch informs us, in a letter, of his long-continued daily observations to the effect that a considerable portion of diseases of unknown nature is caused by tuberculotoxins that are developed in a latent focus. These ailments may assume the characteristics of definite diseases and usually resist therapeutic measures, unless the connection of the etiology with a tubercle-bacillus infection and a corresponding intoxication be taken into account.

Cases of "clinical rheumatism," of some forms of obscure digestive disorders, even of epilepsy and numerous other nervous disturbances are on record in which treatment with a tubercle-bacillus vaccine brought prompt relief.

According to Doctor Hirsch, myopia and other eye diseases, for instance, strabismus, may be due to a tubercle-bacillus intoxication. He has succeeded frequently to cause amelioration and even cure by treating his patients with a tuberculin preparation, especially with the Tuberculin Acoin which he has developed. Acoin is dipara-anisyl-monophenetyl-guanidin. It is a local anesthetic and an effective antitoxic. He employs it in combination with cyanate of mercury in order to prevent suppuration or inflammation after cataract operation.

His combination of tuberculin and Acoin is, according to Doctor Hirsch, eminently useful. It has received the approval of many prominent tuberculosis physicians in Germany.

WAGGONER: "ELECTROTHERAPIST"

The Note Book of an Electrotherapist. By Mel. M. Waggoner, M. D. Illustrated, Chicago: McIntosh Electrical Corporation. Price $5.00.

Doctor Waggoner claims that there is hardly a disease condition in which electricity is not indicated, either as an adjunct or an actual curative measure, for the reason that with it we can produce mechanical, chemical and thermal changes. These, he continues, are the three main weapons that nature uses in her attempt to maintain function. First, she must raise the temperature of the affected parts. If it is local, we call it inflammation; if general, fever. By so doing, she increases chemical activity. She then hastens the circulation (mechanical) in order to drain the decomposed product away.

Waggoner refers to the enormous development of the last few years of electrotherapeutic technic which is responsible for the fact that present-day literature is hopelessly behind and, yet, real technic spells the difference between success and failure.

The author has attempted to remove the cloak of mystery from the application of electricity so that this can be undertaken rationally and, therefore, successfully. He discusses fundamentals of electricity—naturally, a basic study without which electrotherapeutics is impossible. The bulk of the book is taken up by the practical application of the electric modalities. It is freely illustrated and impresses us as a useful guide.

[*Concluded from page 752.*]

not allow the head to come in contact with a lighted gas jet or flame of any kind. Let the head remain covered over night. In the morning, wash the scalp well with hot, soapy water. Rinse the hot water and dry thoroughly. When dry, wet the hair with hot vinegar and comb with a fine tooth comb wet in hot vinegar. This latter may remove some of the nits, but the best way is to go over the hair an strip the nits from the hair, using the thumb and finger. This treatment should be repeated every day for three days.

It will be necessary to clean up the hats or caps of the children; also the bedding they have been in contact with. This prevents further infection.

Of course, it goes without saying that regular scrubbing of the head with hot soap and water is the best preventive for this condition.

We believe that the last bit of advice given by the *Bulletin*, namely, regular scrubbing of the best way is to go over the hair and strip useful that can be given. Absolutely clean heads may become temporary visiting grounds for lice. However, these will not stay there, providing that the heads are kept clean.