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The War On the Quacks

THE *Chicago Tribune* has just been publishing an exposé of the methods and practices of some of the more prominent of the quack doctors that infest this big city. One of its reporters, holding himself out as a patient, visited the offices of these medical frauds, and gave to the public an unvarnished account of his experiences, through the columns of the paper.

The gist of this investigator's report in each case was about the same; namely, that the charlatan had put him through a more or less cut-and-dried routine of questions, and, without making any physical examination, had informed him that he was suffering from some serious disease (usually one of the genitourinary diseases, most often syphilis, being named) and of which, he had assured him, he could cure him, for a consideration.

The consideration, of course, was the main issue. As the reporter said, in one of his typical narratives, when he (the putative prospective patient) hesitated on the possibility of raising the necessary amount of money for treatment, each little hair on the quack's head flattened down, like the feathers on a damp duck; but as soon as he pretended recalling a friend from whom he was sure he could borrow the required sum the doctor's golden furze again glistened and bristled with interest and animation.

To me, the reports themselves are not so significant as the comments which I heard made on them—which, indeed, I purposely elicited by questioning both laymen and physicians. The former, almost to a man, made light of the matter, rather admired the

business shrewdness of the quack, and laid most of the blame on the victim.

"Oh well," they said, "if anyone is fool enough to put himself in the lion's claws, he must expect to get fleeced. You know what P. T. Barnum thought about the American people. The folks that go to these quacks would be disappointed if they were not buncoed, and would go the rounds until they found someone kind enough to 'soak' them."

The comment of the physician is still more significant. He laughs a cynical laugh, and winks the other eye.

"Shucks!" he says, confidentially, "you and I know that the quack is doing just about what the regular physician does—in a little ranker, coarser way, that's all. If the reporter were to pay similar visits to reputable physicians' offices, his experience would be a good deal the same, in kind, although perhaps not in degree. We all aim to get a fee out of a patient before he gets away from us, don't we?"

That is the actual substance of the remarks made to me by most of the medical men whom I questioned.

What does this mean? Is there such a rotten, unscrupulous, grafting state of affairs in the ranks of real medicine as those comments would seem to indicate? I do not think so. Their answers simply express, in rather extravagant fashion, the doctor's keen perception of a certain paradoxical condition that constitutes the weakest spot in the whole fabric of medicine, the rock of stumbling in medical economics.

This overreaching rapacity of the quack, in practice, of course, is an outrage upon decency; but, considered psychologically, philosophically, it is an overgrowth, a lopsided excrescence, from this same organic weakness. The trouble is, that in medicine the interests of the physician and those of his patient run counter to each other. To reduce it to terms of the physician alone, his professional obligations and his economic interests run counter to each other.

In no other calling is that true as it is in medicine. In a certain sense and degree, it obtains in law; but not in the same sense or degree; for it is well established that to keep one's client out of court is just as valuable a service as to win his suit, and is paid for just as highly, and many lawyers are engaged by the year for the express purpose of avoiding legal trouble.

But when and where can a physician collect the same fee for preventing an attack of typhoid fever or obviating a surgical operation that he can get for several weeks' attendance upon a typhoid case or for performing an appendectomy?

This is an unnatural state of affairs, a psychologic and economic anomaly, against which the human nature of the doctor is obliged to make a constant unnatural fight. In every other line of industry this attitude and conduct of the quack, which rightly provokes the exhortation of the public press, is, in kind at least, not only legitimate but commendable. It is simply shrewd business, good salesmanship.

If a man enters a store, when he has no need of an inkstand, doesn't want to buy an inkstand, and in fact resents the suggestion of purchasing such a commodity, there is absolutely nothing immoral in persuading him that an inkstand is the one thing in life that he cannot do without and to induce him to give up his money for one. That is good salesmanship, excellent salesmanship. And to the greater extent that he can be induced to go on spending his money in that establishment, the better the salesmanship.

But the physician may not only not induce his patient to spend his money with him, confining himself to the actual necessity of the situation, but must positively cut short that necessity as quickly and effectually as possible, applying the skill and learning which are his economic stock in trade to that end. Yet, the physician is exactly as human as is the business man, and is equally seeking a livelihood through the practice of his honorable calling.

I repeat, this condition is a weak spot in the economics of medicine and one which I am inclined to think cannot much longer endure. It imposes a greater strain on human nature than the physician, alone of all classes of workers, should be called upon to bear. That he has hitherto borne and outridden it nobly does not make it the less hard and unjust. Besides, it is against public policy.

Just how this injustice is to be remedied I am not quite prepared to say. Perhaps it will work itself out under the growing influence of preventive medicine. Already the big rewards in medicine are being diverted from the men who cure to the men who prevent sickness. Possibly this principle will eventually extend itself all down the line, so that the value of medical service and the grading of the fee will ultimately not only be in accordance with the pleasantness and safety with which we cure diseases, but with the quickness—the quickest way being, of course, to head sickness off altogether, the next to jugulate it, and so on.

The real revolution will come, I suppose, when the public awakens to its interest in the question, and takes a hand in it.

It is tragic how few people ever "possess their souls before they die." "Nothing is more rare in any man," says Emerson, "than an act of his own." It is quite true. Most people are other people.—Oscar Wilde. It is true. How few men there are who are brave enough to let the narrow current of restricted thought sweep by while they battle against the stream; strong enough to be masters of their own souls.

THE ANNUAL TEST-RIDE FOR ARMY OFFICERS

Honorable Lindley M. Garrison, Secretary of War, has shown such commendable common sense in many of his orders for the Government and guidance of the Army that we earnestly hope he will shortly recall or modify the executive order, which requires all staff-officers ranking as major or above to take a test-ride, each year, of ninety miles, thirty miles per day on three successive days, under specified conditions as to gaits, time allowed for completion of test, etc.

This order, the issuance of which showed a marked ignorance of the first principle of human physiology and the conservation of valuable human effort, is said to have followed the refusal of a high ranking cavalry officer, much his senior in age, to keep up with the then President on one of his break-neck rides from Fort Myer, Va.—rides one does not care to contemplate either from the rider's or the mount's viewpoint—on a par

with the automobile fiend we all fear.

The announced object of this test-ride was for the purpose of compelling staff officers to keep in constant physical trim, to be always on a par with line officers engaged actively with the troops. They were detailed to spend long arduous hours at clerical work requiring high technical skill and exhausting mental effort; and, yet, notwithstanding this, they must, forsooth, not grow old or gain in weight, or allow muscle to soften in the least. From the physiologist's viewpoint, the order is, in reality, simply a cruel and inhuman method of elimination and forcing the retirement of aged or physically disabled officers.

Without question, this test fills the bill to perfection, in many cases its severity bringing to light physical ailments; conditions which under ordinary care would permit of many years of usefulness and enjoyment, but which after being subjected to the severities of this test are lighted up and the life of the affected individual in many cases shortened; or conditions of ill health or invalidism are established that rob the officer of his few remaining years of retirement, which he has every right to expect to be pleasurable or at least comfortable.

The service would be vastly improved by the forced retirement of many incapacitated or inefficient officers, but, in the name of humanity and decency, a method of elimination can, and should be established that is not positively cruel and one which so often is followed by disabled organs and ill health.

The brain of a highly trained army officer is incomparably more valuable to the service than his ability to sit in the saddle for ninety miles—something that only the most remote contingency of modern warfare might require of him; and, were it required, he would undoubtedly be able, under the necessity and excitement, to carry it out just as well as he now does as a test.

By all means, let us have a physically efficient staff, but as midlife is reached—and especially in the strenuous calling of the soldier—those who have the welfare of our military officers in their keeping should not forget that many organic changes take place, especially in the circulatory and excretory organs, which demand less violent exercise.

Severe criticism would be the lot of any physician in private life who would uphold such strenuous activity for men of fifty or above. Our officers who have no say in the matter deserve the same thoughtful consideration.

We hope our clear-headed and practical Secretary of War will arrange a more humane method of elimination.

I look forward to the time, which has indeed already partially come, when the family doctor will be engaged in advising as to means of preventing disease, in dissuading from habits inimical to health in preventing overwork or laziness—both serious enemies of mankind—in reporting external conditions, whether of work or leisure needing to be amended, and still more often in discovering the early symptoms of illness which if neglected, may produce serious disease, and in securing the removal of their cause.—Right Hon. John Burns.

A MONOLOG ON "GERMS"

The World yawned, and from every seismograph flashed the warning of an earthquake. He fell to meditating.

"Yes, I must be growing old. I'm getting very bald, alopecia areata Doc calls it and says it's parasitic. Wonder if he is right. He generally is. Told me once to take a bath and kill off the pesky creatures. I did so. Sure enough, my hair grew out again and the dry spots got moist. Never felt like repeating that bath, though. Too wet. Wonder if this itching is due to those bugs."

Old World scratched himself, and next day's journal told of the terrible tornado.

"Just feels as if something were burrowing in my skin. Doc says it's all outside: they never get down to where I live—too hot for that sort of bugs there. Funny, how the little codgers can't stand heat. That last boil that busted, Aetna they call it, killed swarms of them. Thought one of 'em got to my head the other day when I had taken off my ice-cap for a moment. If so, he didn't stay.

"If there are germs, they surely are pestiferous. They have run me bald in patches, criss-crossed with all sorts of little lines and tracks, big lumps of scales and scabs here and there, and any number of little hot pimples all over me. Now and then there is a red fiery flush goes over part of my skin—erysipelas Doc calls it, and he says that's due to bugs also. I suppose these black crusts that collect about one of my blackheads are germs, too. They dig in my skin and bring all that out!

"Doc's nutty on germs. He thinks every time I shake myself that stuff that collects along my sleeves is germ debris. Probably the *Germ Gazette* would say there was a storm! Once, quite a while ago, Doc let me look at one of my pimples through his microscope. How funny! There was a place full of little germs, and all about it another

lot were trying to get in. Turkey, I believe they called it. Those inside tried to keep the others out. Little shoots of red showed where something was thrown from one at the other and then some germs would be literally blown to pieces. At last the outsiders got in and killed the others. Then a touch of erysipelas set in and destroyed the pimple.

"I have watched the little things for hours through the glass. At first they seem to just wiggle about, but if you watch closely you will find they really seem to be animated by a purpose.

"Do such atoms think? Are they really conscious beings?"

Glorious your aim—to ease the laboring heart,
 To war with Death, and stop his flying dart;
 To trace the source whence the fierce contest grew,
 And life's short lease on easier terms renew;
 To calm the frenzy of the burning brain,
 And heal the tortures of imploring pain;
 Or, when more powerful ills all efforts brave,
 To ease the victim no device can save,
 And smooth the stormy passage to the grave.
 —George Crabbe.

STICK TO THE FEE-BILLS

The Greene County Medical Society has issued a fee-bill in pamphlet form. Each member, says *The Leader*, has been furnished a copy, "and will govern himself accordingly."

Will he! We fear *The Leader* is unduly optimistic. Fee-bills many have we known, duly and unanimsly adopted by the membership; but one that the members respected have we not known.

The doctor, after all, is a man. He is governed by the same rules, needs, impulses, motives, weaknesses as other men. When the august assemblage of working-men resolved that the day should be divided into eight hours for labor, eight for sleep, and eight for their amusement, they came very near the position actually assumed by the men who vote for fee-bills.

Stick to a fee-bill? Huh! A fee-bill is a good club to sway over the head of the man who knows no better; but let any good patient kick, and his kick goes.

"Twenty-five dollars for a confinement? Doctor Smith will attend for fifteen."

"Well, I'll do it for ten, then."

And there goes your fee-bill.

How we'd like to say: "Smith asks fifteen? Well, my charge is thirty." But we never do it—at least not more than once. The plain truth is, that we go for what we can get; and

whenever we really try to uphold the fee-bill there are always so many to cut under that we run, too.

The whole miserable fee business is a relic of antiquity, and so long as we look on it with superstitious awe, as our fathers did look at the lightning, and as theirs looked at epidemics, so long we stay in the slough.

Here is something different—*The Dallas News* tells us that the physicians of that enterprising Texas city are considering a rearrangement along the lines advocated first in the columns of this journal—the prevention of disease. Dr. Bernard is thus quoted: "Many physicians have come to the conclusion that the profession can do more good for the human race by teaching it how to keep well, instead of getting it well after it has become afflicted. We have gathered data which shows the system can be put in effect upon a scale of prices ranging from 40 cents to \$1.00 per month for each patient The physician is interested in keeping the patient well, for his fee is not increased by a difficult operation. By preventive methods, the United States reduced the mortality at Panama from 41 to 9 per 1000. Germany, where they have in vogue such a system, has extended the average human life 27 years."

Well, how long is it going to take for you to see the truth of this matter?

PHYSIOLOGIC BALANCE

Anybody can give a dose of medicine. Nothing is easier than to buy and take a dose of castor oil; there is a free evacuation of the bowels, an artificial diarrhea, the patient feels vastly relieved, and jubilates that he has saved the expense of consulting a doctor. Very simple.

But the overstimulation is followed by relaxation, the bowel is more sluggish than before, and unconsciously the "attention" the patient is giving his digestion results in the formation of the cathartic habit, and his bowel loses the power of physiologic function.

The non-drug fanatic says, "Do not use drugs, but rely upon nature's remedies—fruit, bran, and similar dietary irritants, to keep the bowel clear." But, an irritant is an irritant, and there is no reason whatever for believing that the food laxatives act any less injuriously as habit-formers and bowel-weakeners than do the drugs. I never could comprehend the reasoning (?) that assumed the foods and other non-drugs to be any more "nature's remedies" than the medicinal prin-

ciples. Who made the latter, if not the Universal Creator?

Bran, molasses, prunes, massage of the abdomen, all these and every other remedy that afford an artificial or extra stimulus to the bowels will in time become habitual and without them the organ loses its power of function. Massage becomes an onerous task; the dietary laxatives get to be nauseating by repetition; the daily colonic flushing is an unmitigated nuisance in time.

Do the bowels really need extra stimulation? The Perfectionist will deny this, claiming that the human body is made perfect to begin with and that all its weaknesses are the result of abuse or neglect. Metchnikoff and many other practitioners deny this perfection and assert that a study of the fact shows the large bowel to be one of the imperfect parts of the mechanism, and that, as a rule, it needs aid in the performance of its expulsive function. That such a need appears with advancing age and grows greater with years, nobody pretends to deny.

With younger individuals, it is an individual affair; with the evidence preponderating on Metchnikoff's side—there are few persons who do not feel decidedly relieved by a free catharsis. Relieved of what, if not of evils resulting from sluggish bowels?

Here is a little evidence: One man has taken a small dose of saline laxative, containing about 15 grains of magnesium sulphate, every morning for twenty years. In all that time the dose has never failed to liquefy the stools and promote an easy evacuation. The dose has never been increased from the first day.

Another has taken a few drops of cascara thrice daily for five years—a bedridden woman this—and never has it failed or has required an increased dose.

A third has taken for years, a very small dose of a combination, known rather widely as a laxative, reducing the dose to a small fragment of that at first found requisite, but never quite discontinuing it; what he now is taking daily possibly containing 1-100 grain of aloin. Fifteen years has this been continued—quite a habit.

In all these cases and many hundreds like them, there has been a drug-habit induced by a physiologic defect that necessitated it. No ill effect of any description has been detected in any case.

Could any better results have been obtained by paying a masseur for a daily rubbing, or by doing it oneself, or by spending five minutes rolling a cannon-ball over the

abdomen, or by using an enema, or by eating foods regardless of their cloying the satiated stomach? Count the cost of time spent in taking a daily enema for twenty years; the cost of the apparatus used, the bother of getting water just right in temperature, the trouble of toting the stuff about, and compare.

There is just one easy lesson to be learned, in order to insure success in the application of drugs—realization of the meaning of dosage to effect. Learn to give exactly enough to correct the defect, and no more. The layman takes his cathartic, gets an artificial diarrhea, feels immensely relieved, and lets it go at that. Even with many physicians, it is not such a general thing for them so to gauge their doses as to get a physiologic, and not a pathologic, action. It takes practice and watchfulness, as well as the triple knowings of physiology, pathology, and therapeutics.

I know of no single aid in this study of therapeutic action equal to a combination devised by the writer some years ago as a "peristaltic persuader." It contains berberine, strychnine, capsicum, physostigmine, and a little extract from the butternut, which latter acts much as does rhubarb. No known preparation of aloes could be found the bulk of which was not too great for the granule form.

So perfectly is the combination in question adapted to its purpose that it seems impossible to overdose it. Take a granule three times a day, and one is simply conscious of regular bowel movements; sufficient, not diarrhetic or griping. Take eight granules, and the effect is rather accentuated. Rarely does one need more than three a day after the first week. The effect is not manifest for two or three days after beginning their use. Unless one is really accustomed to study function and drug action, he may be tempted to undervalue the activity of the granules—but, if one has just enough action, what more does he want?

This combination is better fitted to the elderly than the young; it is well suited for those who can not take aloin because of the latter's awaking a sleeping tendency to hemorrhoids, or because it arouses undue uterine activity. It is a useful succedaneum to the aloetic laxatives, after under their use the peristalsis has grown stronger.

In aging men, when the lower bowel grows sluggish and the vesical detrusor weak, this combination gives tone and power to both weakening organs. But the object of this is rather to call attention to its value as aiding the study of drug action and the securing of

physiologic balance than its specific applicabilities to morbid conditions.

I say to the student, study anatomy and physiology on the living man. Observe him closely with your eyes, until you learn his various expressions. See him walk, sit, lie, work, eat, breathe, talk, etc. Feel of him, and see how he is made, and what he feels like in different parts. Learn every prominence of bone in the body, and its relations to articulations, blood-vessels, nerves, organs, etc. Hear every sound he makes, and learn to recognize its character. And, lastly, learn to recognize all of the many smells of which he is the base. Learn him from the crown of his head to the soles of his feet, and analyze him with your own senses, and you will have the foundation for a good physician.

—Dr. John M. Scudder.

DEATH—OR MERE LYING?

Sitting behind two men in a Pullman the other day, I was compelled to overhear a by no means confidential conversation. They were men passing sixty, one a banker, the other head of an important business; both men whose names would instantly be recognized by many a reader of the newspapers published in their home city.

They were not discussing Roosevelt or Woodrow Wilson, the new tariff or the Japanese, Mexican or Balkan imbroglios, nor matters of finance, business, politics, literature, art, the wave of crime or the grafting political healers. No, none of these fertile topics seemed to have attracted their interest. The effect of the drought on crop prospects and the far-reaching influence on transportation, credit, and the cost of living? The pay of employees and its relation to their morality, and of that to their efficiency? Science, anthropology, archeology, music, drama, tango, picture shows? None of these. What then? They were simply bragging of their sexual prowess, unusual for men of their age!

Had these men realized the true significance of their statements, if true, they would assuredly have exhibited caution about making them public. For nothing in our science is more certain than that that unusual sexual vigor in a man of advanced years is pathologic.

Any marked aberration from the average is abnormal. Mediocrity is healthy, genius is disease. The well-balanced development of the faculties makes for health and longevity; the exaggeration of any one of them, with corresponding shrinking of the rest, offers little chance for long, healthy, and happy life.

"The world must have geniuses" said poor

Jennie Welsh Carlyle, "but it's pretty hard on those who have to live with them."

In the retention of sexual potency as age comes on, men differ widely. Some enjoy a brief and stormy period of excess, and their sexual history closes early. Others observe with equanimity a gradual decline, which occasions few regrets, as their mental maturity brings a preference for more worthy pursuits. With many, there is an unwillingness to acknowledge the infirmity of age, and this may lead to the strangest manifestations of senile puerility. Such men dye their beard, wear wigs, employ the arts of the toilet, in the vain hope of concealing what is the more glaringly made evident thereby, the progress of years.

Men of this type may resort to the physician to arouse their failing powers, and insist upon the supply of aphrodisiacs, even though their own common sense must tell them that these stimulants are useless, that they cannot really add an atom to the store of sexual power, but merely hurry up the reserve forces and accelerate that complete exhaustion that is bound to come. Few of these listen to the wise counsels, few that seek to conserve and prolong their remaining forces by judicious management and moderation.

The man who really finds himself at sixty capable, and eager, to keep pace with a youth of twenty needs the attention of his friends, for he presents a recognized symptom of incipient brain softening. He is an unsafe business man if his abnormality is thus marked, and he needs a doctor. The sources of this undue sexual irritability should be sought and removed. No man of sixty has such a surplus of vitality that he can afford such a drain.

Do not flatter yourself that you are the exception—there are no exceptions, and abnormality is disease. You may sacrifice the best years of your life vainly trying to prove that you are not as old as you are. Does not the fact that a man should attempt this bespeak the beginnings of imbecility?

Why should any man be ashamed of his years? Why not say frankly: "I have completed my three-score years and feel every day of them. I cannot work as hard as I did a year ago, I see that I must be less active with each passing year. I must keep up and retain the ability to counsel the younger men, adding my experience to their vigor. But I must leave the doing of things to the young."

Is the lesson a bitter one? Why should it be? By this time you have learned many things; among them, to expect less of your-

self. Looking back over the sixty years of your life, you can easily see what a fool you have been, and you may wonder how you have acquitted yourself as well as you have. You see where you could have done better; but, then, our hindsight is always better than our foresight. You learn to admit that you have had all the good that was coming to you; that you have made of yourself more than your stock of gray matter entitled you to; and, on the whole, you "have no kick coming."

But of all the fools on this demented earth, the biggest fool is an old man posing as a young rake and imagining he is deceiving everybody. Why, the house dog and family cat know his mustache is dyed, his hair is a wig, his color is paint, his wrinkles are plastered out with cosmetic, his boasts of virility are lies.

Say not the struggle nought availeth,
The labor and the wounds are vain,
The enemy faints not, nor faileth,
And as things have been they remain.

If hopes were dupes, fears may be liars;
It may be, in yon smoke concealed,
Your comrades chase e'en now the fiends
And but for you possess the field.

—Arthur H. Clough.

TOO MUCH JOHNSON?

Many years ago Malthus called attention to the rapid increase in the population of the world, an increase far more rapid than that of the food supply; and he advised that pains be taken to limit the rise of the human flood, lest we reach the point where the world can no longer produce food to support its population.

Now the question has again been raised—this time as an objection to the system of precise, scientific therapeutics advocated by this journal, since, by breaking up disease attacks in their incipiency by the direct and powerful intervention made possible by the alkaloids and other modern remedies, lives are saved and the constitution of patients is not impaired by prolonged suffering. Hence comes a distinct prolongation of the average term of human life. Add to this the improvement secured by the spread of a knowledge of sanitation, the regulation of many matters by governmental authority, the growing favor shown to the proposed system of prevention as substituted for the worn-out fee-per-visit absurdity, and there is good reason for the expectation that this growth of longevity will vastly increase the earth's burdens.

To say that we need not cross the bridge until we come to it, is a witty way of dodging the difficulty. Man is a reasoning being, if not a reasonable one; and the fact that the doctrine of Malthus has been adopted in most objectionable ways, with disastrous effects, shows that free discussion is advisable.

How near are we to the world's limit of possible food production? In conquering the West, we did not proceed by the slow accretion of new land at the edges of cultivation, but by leaps and bounds went through the wide spaces, settling here and there where an attractive bit took our fancy. We reached the Pacific, and were thrown back by its waves. Vast tracts still await examination.

Go through any of the older states, and you find vacant lands that could at least pasture sheep. Even into New England is filtering a new population that finds soils it seizes greedily. Go through the lower peninsula of Michigan to Mackinac and note the many miles of cut-over timber-lands that might easily be transformed into productive homesteads.

We may safely say that with present methods of cultivation there are vacant lands in the United States capable of supporting three times the present population. Take Louisiana, with 28,000,000 acres, of which about 4,000,000 are under cultivation, much of the rest the richest bottom land on the face of the globe, needing only drainage to make it rival ancient Mesopotamia with its yield of a hundredfold. Draining swamps and watering arid tracts may easily add an empire to our food-producing areas.

Attention is but just being directed to improved methods of farming. That our average yield of wheat is about fifteen bushels to the acre can only be excused by the prodigal plenty of our lands—it has been easier to take up new acreage than to give attention to increasing fertility of the old. We know that the yield of corn may be raised to over 100 bushels; that potatoes may yield 400 or 600 bushels; that every acre of farm-land in the country may be made to double or quadruple its yield by easy, well-known methods.

The productive capacity of the tropics has never been estimated. The now unoccupied valley of the Amazon could easily support twice the present population of the globe. This immense alluvial area is bursting with riches; its soil, climate, natural productions form the greatest asset of the world today—and this vast region is peopled by just a few thousand wandering Indians, with a fringe of little settlements along the rivers where the

wildlings are brought to market. On a quarter acre 175 valuable woods for the cabinet-maker were counted. Today this section exports a little timber, a few nuts, and some rubber from the forests.

The two greatest mechanical forces in existence have never received enough attention from our Edisons—the heat of the sun's rays and the rise and fall of the tides. Beside these sources of power Niagara is dwarfed into insignificance. By the time our coal-beds and oil-streams are exhausted, we shall have learned to utilize these exhaustless sources of energy.

Altogether, it seems as if we could welcome a few more babies without worrying about their bottles.

The whole world now insists upon exactness—the day of glittering generalities is gone forever. Why does the doctor not demand exactness also—drugs without dirt: definite principles instead of the crude plant; alkaloids, glucosides, resins, chemicals—medicinal forms that act in the same way always?

CLINICAL USES OF HYDRASTININE

Golden-seal is a great favorite with the physicians of Germany, more particularly in gynecologic practice, but, when prescribed in the form of the fluid extract, the women patients "hate" it for its "horrid" taste, and so it is that hydrastinine—now made more available since being produced synthetically—is hailed as a deliverance from evil; this the more so, in that it can be administered hypodermatically.

As long ago as 1892 Dr. H. Walther began to experiment, in the clinics at Giessen, with hydrastinine as a substitute; but at that time the price was prohibitive. Now, however, he has taken up the problem again and, after a year's extensive trial, has reported his results, together with those of other investigators, in the April 1 issue of the *Muenchener Medizinische Wochenschrift*.

Doctor Walther affirms that in its action upon the uterine musculature as a hemostatic hydrastinine exactly parallels that of the fluid extract, minus the objection of bad taste, uncertain composition, and the presence of the cardiotoxic hydrastine; in addition to supplying a hypodermic agent. He predicts the early displacement of the extract.

One thing, however, he points out—the cases must be properly selected (wherein many physicians go wrong); and when the drug seems to have failed it is because of surgical reasons, such as the presence of

neoplasms or easily bleeding erosions, where the best of hemostatics cannot avail.

Hydrastinine should be used when a direct contractive action upon the arteries of the walls of the womb is required, and when there are no gross lesions and no newgrowths; in such cases failures may be looked for uniformly. It is especially valuable in the menorrhagias, the remedy being taken prophylactically before the menstrual period, twice daily, in small dosage, up to the period; and in larger amount three times daily during menstruation. The period of bleeding is shortened, while tendency to clot formation is overcome.

Hydrastinine also has been found particularly adapted to the treatment of the excessive monthly flow of girls entering upon their menstrual life, although here stypticin gives good results. Still, the latter being an opium alkaloid, it is not free from objections, especially at that age. However, in girls of from 13 to 16 years the menses became more regular.

Further, hydrastinine proved serviceable in correcting the too profuse menstruation consequent upon endometritis, uterine displacement, myomatosis, and the like. Here the drug was given in ascending doses, from week to week, up to the appearance of the catamenia. While the final dosage was quite large, no bad symptoms were felt by the young women, except in the case of just one nervous individual, who complained of a peculiar sensation about her heart.

One particular field of usefulness for hydrastinine appears to be where there obtains a tendency to bleeding in diseased adnexa. And in this connection the author points out once more how very carefully the practitioner must guard against indiscriminate curetment when the adnexa are involved—be the trouble an undiagnosed pyosalpinx, an unrecognized tubal pregnancy or a resulting tubal blood-mole, tubal abortion, et cetera.

It is exactly in the bleedings of the foregoing nature (where ergotin is out of question, while the stypticin of opium might possibly be considered) that hydrastinine becomes helpful because of its contractile action upon the arteries rather than the muscles; at least temporarily, until the true nature of the trouble can be ascertained. So, also, Duehrssen found this alkaloid beneficial, as a palliative, in chronic conditions of the adnexa.

Dysmenorrhea and menorrhagia have both yielded to this remedy in the majority of instances, although Walther suggests that the association of an opiate might prove helpful.

A particular indication for hydrastinine, we are told, is after minor gynecologic operative procedures, including, for instance, excisions, polyp removal, abrasions, fixation, correction of displacements, and other intervention of this kind.

Preeminently, however, should this drug be freely prescribed after uterine curetment for the purpose of curing recurrent hemorrhages; this the more so, since it not infrequently happens that—to the patient's chagrin, when she expected the reverse—at the first few subsequent menstrual periods the flow will be, perhaps, extremely profuse. Here hydrastinine acts beautifully as a prophylactic if taken, in goodly dosage, during four, five, or so, days, and also for several days preceding the expected date. If, for some reason, an action upon the uterine musculature is desired, the drug may be alternated with a good preparation of ergotin.

Of unusual interest is Dr. Walther's success obtained from the subcutaneous employment of hydrastinine, especially after operations of the character enumerated. It was thus used in some 30 cases. Still more convincing were his hemorrhagic cases—for instance, old hematocele, and chronic endometritis and myometritis in which operation was not resorted to, and in which results from hypodermic injections were prompt; the usual dose being 0.0175 Gram (2.7 grains). No local irritation ever was observed. Giving it by the mouth, Walther's dosage ranged from 3-4 grain to 3 grains, sometimes reaching 4 grains, repeated twice a day. Ordinarily we have given it in much smaller dosage, finding, here in America, that 1-6 to 1-4 grain repeated at half-hour to one-hour intervals will usually elicit the desired action.

In hydrastinine the gynecologist now seems to have at command another hypodermic agent to place alongside of ergot, from which quick results may be expected in genital hemorrhage. Furthermore, Doctor Walther is hopeful that this agent yet will be proven useful in general practice, as, for example, in diseases of the lung, the kidneys, and others.

In this connection, though, it should be stated that Walther thus far has not dared to give hydrastinine to pregnant women, because a certain degree of contractile influence upon the uterine wall-muscles cannot be denied.

To sum up the field of usefulness of hydrastinine, the following synoptical presentation may serve as a guide; viz.: menorrhagias, especially those depending upon functional disturbances of the ovaries and

chronic adnexal derangements, without serious anatomical alteration of the uterine mucosa (dysmenorrhea, complicated with menorrhagia); displacement of the womb and of the vagina; secondary bleeding in organic disease (heart, liver, lung, e. g. emphysema); chronic endometritis in which there is a tendency to menorrhagia; even in atypical hemorrhage, in so far as not determined by any suspicious anatomical changes; in myomatosis of the uterus, especially of the subserous and intramural description.

To these tried-out conditions, there may be added, inferentially, hemoptysis, epistaxis, renal and intestinal bleeding.

The author closes with an unreserved recommendation of this remedy, calling it an important addition to our remedial treasure.

A lot of us save for somebody else's rainy days.

—David Gibson.

DIETETIC VAGARIES A LA METCHNIKOFF

Even great men, it appears, have their weaknesses and whims and oddities, their absurdities even, especially "those whose greatness lies mainly in one direction; and these foibles are usually an excrescence upon their particular form of greatness. Great scientists are not more exempt than other men. Thus, we find the great Metchnikoff gravely giving currency to the following hyper-scrupulous directions for evading the lively and ubiquitous cancer germ—a microbe which, by the way, has not yet been shown to exist:

"Never eat uncooked fruit. Take bananas, for instance. People think that because they have a thick skin [the bananas or the people?] they are protected from microbes. Nothing of the sort. I plunge them into boiling water [again, the bananas or the people?] before eating. I always pass my knives and forks and spoons through a Bunsen burner before using. All dishes are cooked. [Roast tureen must be a toothsome morsel!] Water is filtered and then boiled. I never eat uncooked fruit. Strawberries ought to be plunged into boiling water a few minutes before consuming. It sounds troublesome, doesn't it? But it helps to avoid the cancer germ."

Sounds troublesome? We are afraid it would take a "shorter and uglier" word to express our opinion of it. Metchnikoff seems to be passionately obsessed by the thought of boiling water as Gilbert's Mikado was for

that of boiling oil. We are wondering how he surmounts the difficulty presented by his own body as a possible source of infection. Does he plunge that in boiling water, too? Or, perhaps, he passes his fingers through a Bunsen burner? It would be interesting to get a view of Metchnikoff's dining-room—or does he eat in his laboratory? A Bunsen burner and a sterilizing outfit must make an artistic and appetizing decoration for a buffet.

Oh, well, we should worry! If Metchnikoff gets any satisfaction out of that sort of thing, he is welcome to it, and his personal habits need not disturb us. Like the old Scotchman who declined to pay the doctor for his prescription, we don't have to take his advice. We shall continue to munch our bananas unscalded, use our dishes uncremated (they break enough of them in the kitchen, as it is), and eat with knives and forks that the hired girl has pretended to have washed (varying the game at times by eating with our fingers), and pick and chew apples straight from the orchard, whenever we are lucky enough to get the chance.

The serious side of the matter is, though, that this attitude of Metchnikoff represents just the type of morbid psychology in regard to health and disease and everyday living that is pervading the entire civilized world at the present time, and is creating a universal phobia against this, that and the other kind.

Every individual and every movement has the faults of its virtues. During the past twenty-five years medical science has been making wonderful advances in hygiene and prophylaxis, and antiseptics and asepsis, and all of those phases of applied medicine which go to the protection of life and health; and has come into wide and intimate touch with the daily life of the people. All of which is very well and good.

No doubt at all that conditions of living have been enormously improved. But there is no doubt, either, that there is a tendency to run the thing to absurd extremes; that is the inevitable running to seed of any good thing. Bless my soul, when you and I were youngsters, we ate green apples and red mulberries, and nobody knew anything about it (I rather suspect the youngsters do more of it nowadays than *we* know anything about), and we bumped and cut ourselves and never even thought to stop and go into the house; and even when we did go in with a rather unusually bad gash, the most we got was a piece of salt pork bound on the wound. But now the least scratch calls for a solemn con-

sultation and a rite-like application of bichloride or peroxide, and an anxious taking of temperature for the next week, in anticipation of septicemia.

Now, all of that, so far as it goes, is most commendable. It is a great deal better that a bruise or a cut, no matter how slight, should be cleaned and disinfected than that it should be left to fester and give trouble; and corrosive sublimate is a much more desirable application than salt pork.

So far, therefore, as modern science instills into the public mind ordinary prophylactic care and teaches modern prophylactic methods, it is admirable. But, unfortunately, that is not the extent of the present-day tendency. By such extreme teachings as that which we have quoted from Metchnikoff modern medicine is overshooting the mark and creating in the public mind a morbid, nagging fear of everything and everybody, the apprehensive idea that wherever one turns and whatever one is doing there lurks the specter of disease and possible death.

Happily, the public mind, in the last analysis, is pretty sane and sensible; and we do not anticipate its being very seriously unbalanced by these extravagant views. By the same token, the great rank and file of the medical profession are similarly normal and rational and will not give currency to such extreme fads. But the condition, nevertheless, for the present is a real one—a sort of prophylactic hysteria—and calls for determined counteraction, and even for the wholesome corrective of ridicule, if necessary.

FOOD THERAPY

In this day of running after everything that can be brought under the designation of "nature therapy," how is it that nobody seems to think of the therapeutic possibilities revealed by a study of the chemistry of the commoner foods? What a chance for the quack seeking some new method of devouring the substance of credulous dupes. There's quite enough in the thing to hang thereon a new fad. For instance—

When there is, in any person, evidence of a deficiency in the stock of lime, why resort to the inert, dead, unassimilable product of the kiln, when in the asparagus we may secure a supply of vitalized, actually living calcic combinations? Are we faced by a case of giant urticaria, or of hemorrhagic tendencies, of chilblains, of that tissue fragility we associate with the children of the tuberculosis—instead of prescribing the dull, gross, lifeless products

of the laboratory, we order a diet of the succulent shoots that, properly adjuvanted with salt, corrigented with pepper, and expicanted—no, not men—with butter, and so gratefully titillate the palate, perfume the excretions, and dissipate the ailment?

Why do we not avail ourselves of the rich content of remedial salines in the bean or of the magnesia in Brussels sprouts? Must we pay extortionate prices for the iodine of sea-water, when in the delicious pineapple we obtain this halogen in far more agreeable form? Why not prescribe one banana t. i. d., cum saccharo q. s. et spiritu sacchari jamaicaensis, glaciati fortiter? Try it on the rascal who blows in with evidences of a swift youth, not wholly scatheless in the campaigns of the Cyprian goddess. And, if his blood has lost its crasis and the red corpuscles have become enfeebled, before administering such antiquated dope as Blaud's or Basham's, just add spinach to your prescription, and get real live iron.

Take any recent work on surgery, practice or therapeutics and turn to the suggestions on the treatment of ascites—will you find reference in either to the surprising efficacy of the onion? Yet, break the record and open some old volumes of Transactions, and read of the many, many patients presented to the learned medical societies as cases cured of ascites—yes, cured *tuto, cito et jucunde*—by the sole use of this grief-compelling fruit—or bulb. Read of how magically the liquid disappeared and the patient, despite his cirrhotic liver, resumed the life of the well. Really, the statistics given are better than those now claimed for serotherapy. All that was required was onions—onion soup, onion fried, onion stewed, onion broiled, onion fritters, onions for dessert. Yes, it was also suggested that the patient should like onions—and be single.

To this list, a French observer has made an important addition, in urging the black radish for biliary lithiasis. Precedence is allowed to the carrot here, but recent observers give preference to the radish. The juice is expressed and administered in doses of 100 to 400 Cc., daily for two to three weeks; then gradually lessen the dose. Under this treatment the colics cease; and, whether the calculi vanish or not, the patient seems well satisfied. I myself have heard of several Chicago cures!

To this might be added that in cinnamon we have an effective remedy against menorrhagia and metrorrhagia; in its closely allied oil of cassia an effective germicide; in summer-

savory one of the most powerful and safe of emmenagoges; in nutmeg an anodyne and hypnotic of no mean power—not to mention aging lettuce; in capsicum one of the most effective remedies for shock, chill, vasomotor cutaneous spasm, and a host of afflictions; in black pepper an efficient discourager of alcohol craving; and in the common resources of the kitchen an arsenal of remedies the value of which would astonish those who never gave them thought.

The doctor's failure to collect a reasonable bill for service rendered is generally due to the doctor himself. Does he put a proper estimate upon the value of his work? Does his patient understand it? Supposing when he were called to pull a little boy out of the clutches of diphtheria he should say to the father: "I'll fight hard for the little chap. I've saved many a life when the chances were all against us. Surely the Great Judge will favor our side in this case. Yes, I'll work my head off to bring the little fellow around—but we'll need money of course. My retainer is \$100, if you please." Would the father hesitate for one moment—or would he hunt up a cheaper doctor? Not on your life!

MANAGEMENT OF PUERPERAL ECLAMPSIA

Paul Zweifel, an obstetrician of wide experience, after practicing the various methods of combating puerperal eclampsia, is inclined, with reservation, to favor a return to the former method of bloodletting, as against forced delivery of the fetus; indeed, the satisfactory results in 84 cases have determined him to give it a thorough trial in a very much larger number. His report was published in the *Monatschrift fuer Geburtshilfe*, 1913, No. 37.

In a brief historical survey, Dr. Zweifel points out how formerly the treatment was purely symptomatic, and consisted mainly in abstracting blood and applying cold to the head; while in anemic women narcotics (opiates and chloroform) were resorted to. Later, Schroeder recommended the substitution of diaphoresis for the venesection, but continuing the narcotics. The Duerens introduced the method of operative interference by immediate emptying of the gravid womb at the first seizure, or at least upon the accoucheur's arrival. While this is the most generally accepted idea at present, Dr. Zweifel, on the ground of his experience extending over some twenty-five years, now takes a stand against the same, as well as doubting the hypothesis that the eclampsia results from toxins originating either in the fetus or the placenta.

The author then adduces statistics, in disapproval of those presented by Liepmann and Freund, of the Clinic of Bumm and Franz, who advocate instant induced abortion. Thus, he finds, that during the period of 1892 to 1895 the mortality among 80 eclamptic women, after induced abortion, was 15 percent; from 1895 to 1901 the mortality among 143 patients, under similar conditions, was 17.2 percent; while for 400 women thus treated in the years 1901 to 1910 the death rate was 18.5 percent.

Then it became known that the blood of eclamptic pregnant women is relatively thick because of a diminished water-content, and this induced Dr. Zweifel, starting with the year 1911, to begin using bloodletting again, but in conjunction with Stroganoff's treatment; the amount of blood withdrawn mostly being about 500 Cc., or 15 to 16 fluidounces. It is pointed out, when employing this method, that instillation of medicaments into the mouth must be desisted from for fear of aspiration-pneumonia; under certain circumstances, also, the stomach-pump must be employed. Venesection may have to be repeated.

As a result of his new procedure, only 5 deaths occurred among the 84 eclamptic women thus treated, this representing the extraordinarily low figure of 5.9 percent. Of the deaths, only 2 were the direct result of the condition, 2 dying from aspiration-pneumonia, and 1 from septic peritonitis. Moreover, the cases ending fatally fell within the first 20, the 64 patients last treated all recovering without a break. There also was a slight favorable difference in the death rate of the infants, comparing as 34.5 percent among the 84 deliveries against 39 percent under the former methods.

The Stroganoff treatment is defined in Stedman's Medical Dictionary as "The treatment of puerperal exlampsia by narcotics, shielding the patient from all external sources of irritation; and rapid delivery."

The technic was given in the *Association Journal*, some years ago, as follows: "In moderately severe cases first morphine, about 0.015 Gm. (1-4 grain); in one hour or sooner 2 Gm. (30 grains) chloral; morphine again the third hour; chloral the seventh, and 1.5 Gm. (45 grains) chloral again the thirteenth and twenty-first hour. Delivery is hastened as necessary and fluids are supplied by the rectum or mouth, from 150 to 250 Cc. four or five times a day. The aim is to prevent the convulsions, even if as much as 4 or 5 Gm.

of chloral and 0.03 or 0.04 morphine plus chloroform occasionally are required in the course of five or six hours. If the convulsions keep up obstinately, delivery is hastened."

This is slugging the patient into unconsciousness with a vengeance! How much better to administer veratrine hydrochloride (preferably hypodermatically) repeating half-hourly to full physiologic effect, shown by slowing of the pulse, with nausea or vomiting as a sign of drug sufficiency. Complete control of the convulsions may be secured with hyoscine, morphine and cactoid. Eliminate thoroughly—bowels, bladder and skin.

Poverty and ignorance are the chief destroyers of child life and child health, and from these two sources flow, in swelling streams, the injurious conditions which sweep the young to destruction.—Adolf Baginsky.

PILOCARPINE IN SCIATICA

Chilling of the skin, says G. Alexander Young (*Interstate Med. Jour.*, June, 1913, p. 526), is one of the most frequent and important causes of sciatica. Accordingly, treatment should primarily be diaphoretic, sweating being secured by means of hot drinks and small repeated doses of tincture of aconite [better, aconitine], with complete rest in bed. Aspirin or full doses of the salicylates may also be given; while the bowels must be thoroughly flushed with saline laxatives. Hot applications, frequently changed, afford temporary relief.

After the first diaphoretic measures have been carried out, Young advocates the administration of pilocarpine nitrate, which he finds of great value in sciatica as also in the various forms of interstitial neuritis. The pilocarpine is given hypodermically in daily doses of 1-6 to 1-10 grain, according to the patient's reaction. It stimulates all the secretions and probably exerts a derivative influence upon the morbid processes of the nerves. The pilocarpine should be given daily for ten days or two weeks, to be discontinued then if no improvement has taken place, or to be continued if the patient is getting well. In one chronic case Doctor Young has used it for a whole month, with benefit.

In the more chronic cases, the remedy is given in the evening. The patient is allowed to sweat well between blankets, then rubbed down and placed in a warm bed for the night. Signs of pilocarpine overdosage are symptoms of vesical irritation and rectal tenesmus.

Leading Articles



Surgical Sex-Sterilization

Its Value as a Eugenic Measure

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EDITORIAL NOTE.—We are just beginning to realize that idiots, imbeciles, the insane, epileptics, alcoholics, many cripples, many who are diseased, and many who are sexually immoral or perverted owe their defects to no edict of the Almighty, and to no deliberate "sin" of the individual, but rather to the inheritance of physical or other weaknesses from which there is, for them, no escape. This truth brings responsibility—a responsibility which belongs to society as a whole. How shall it be met? Let Professor Jordan answer.

EUGENICS is the science of good birth. It deals with parents and offspring. Its chief immediate concern is, to discover the principles that govern human heredity and variation. It desires to influence human matings in the interests of future generations in accordance with well-established facts of inheritance. It aims to produce a better race through better breeding. It does not aspire to create; it seeks merely to prevent subtraction and contamination, and, by appropriate combinations of the best hereditary traits now in existence or in future to arise, to produce a race of human thoroughbreds, considered physically, mentally, and morally.

To this end, eugenics seeks "the civilizing of the "reproductive instinct," which, in the words of Dr. Adolphe Pinard, of Paris, "alone has remained in a barbarous state among all the so-called civilized nations, from earliest times." Eugenics is applied evolution in the interests of humankind.

Ideal Love the First Element of Eugenic Mating

The word "eugenics" was first employed by Sir Francis Galton, the founder of the science, in his book, "Inquiries Into the Human Faculty," which was published in 1883. Present activities indicate that Galton's hope, "that the concept of eugenics may enter the national consciousness like a new religion," may soon be realized.

With reference to all matings made in the

interests of eugenics, love of the purest and noblest quality is assumed. Matings not compelled by love are uneugenical, regardless of what the scientific prognosis may be. The success of eugenic efforts is largely conditioned by the environment. Heredity needs suitable environment for full expression. An environment void of parental love is inadequate for the full and proper unfolding of the innate mental and moral qualities of the child. A prime eugenic factor in marriage is love. The converse, however, is not necessarily true; not all "love-matches," so called, are eugenic; from the standpoint of racial interest many matings should be disallowed. Eugenics would have love intelligent.

The eugenics propaganda should attempt to disseminate the knowledge that will potently appeal to the altruistic instincts and thus move to voluntary celibacy or at least abstinence from parenthood on the part of those genetically seriously deficient. Ultimately, for the protection of society against distressing economic and moral burdens and racial decay, some external repressive methods must be instituted against those unwilling or incapable of response to internal appeals.

Separating the Fit From the Unfit

Viewed in the mass, mankind may be divided into two great classes; namely, the racially superior and the racially inferior; the fit and the unfit; or, the civically worthy

and the civically unworthy, as Dr. Saleeby, of London, prefers to designate the two divisions. Trouble arises, however, when an attempt is made to draw the line in the effort to "separate the sheep from the goats"; and it may as well be admitted at once that it is impossible to draw such a distinction sharply. Moreover, many of those fit intellectually and of high civic worth may be quite unfit physically; and conversely. Likewise with respect to the moral side of man.

Still, there is almost universal unanimity of opinion with respect to the grossly and obviously unfit. Few will seriously contend that the neurotically diseased, i. e., the feeble-minded, imbeciles, idiots, insane, epileptics, as also confirmed criminals, inebriates, vagrants, and paupers are either racially fit or civically worthy. The scientific evidence leaves little further doubt regarding the inheritance of the characteristics of these and other defectives. Probably no all-round great man or woman has ever come from such stock. Their offspring is of practically the same type and can do naught to abet—although much to hinder—human progress.

Thus, then, the line can be drawn sharply, and with perfect agreement and safety, between the grossly unfit and the remaining body of mankind.

Our knowledge probably is not as yet full and definite enough to warrant considerable procreative restraint or even discouragement of certain physically and morally inherently inferior types among this larger mass. Possibly the congenitally deformed, the tuberculous, cancerous, nephritic, and syphilitic should be discouraged from reproducing their type. At any rate, it may with much reason be confidently assumed that, if individuals of these types could be made to remain childless from reasons of internal moral and intellectual restraint, nothing would be vitally and irretrievably lost to the race. Indeed, the scientific harvest of the coming decade may clearly indicate the unfitness for parenthood of some or all of this latter, pathologic, group.

The unfit portion of our population, which at present does not constitute more than ten percent at the most, might perhaps be disregarded with impunity by the remaining ninety percent, were it not that its fecundity is greater than that of the average of the latter, and desirable, portion. But the reproductive proportion, between the two portions is easily as one to two. The unrestrained productivity of the defective and

delinquent classes is appalling; abnormally large families among them are the rule.

The economic burden of these dependent classes may well become unbearable. Already it is exerting a measurable effect upon the supporting classes, in terms of retardation to potentially easily possible intellectual attainments. Furthermore, the social contamination from this source is a very real menace.

Intelligent Voluntary and Legal Control of Procreation

In human matings, intelligent love should be the motive. In stock-breeding, the breeder's notions of what constitute points of value determine what matings shall be made. The two processes thus far have nothing in common. But, if a breeder of fancy Jersey cattle, for example, discovered among his herd a defective or deformed animal, he would not hesitate one moment to prevent matings with such an individual. The purity and strength of the herd demands the reproductive elimination of such undesirable material. The breeder would think of it in no other sense than one of danger of contamination.

Under analogous human conditions, the individuals involved should find a deterrent to bring forth progeny in an internal appeal based upon a knowledge of scientific facts. Only when such appeal fails, as in the racially far more serious cases of mental deficiency, do the two conditions assume similar aspects. Under such circumstances, certainly, in the extreme cases enumerated, some outside legal restriction should be possible of enforcement for the protection of the race against contamination from weakness and disease. Our knowledge now is sufficiently complete to warrant discouragement of mating between individuals characterized by the same serious pathological condition or defect.

Sterilization and Isolation the Two Available Means

It being granted, then, that certain seriously defective types should not be allowed procreative liberty, and, it being further granted that in these cases appeal can not effectively be made upon any moral or civic basis, what is the rational, legitimate, and humane restrictive procedure?

There are two answers to this question: (1) effective isolation during the procreative life of the genetically tainted individual;

(2) sterilization. If possible of attainment the method first named is almost incomparably the preferable one. The latter end, sterilization, may be accomplished by either one of two methods: (1) by castration or (2) by vasectomy and salpingectomy, respectively. Furthermore, in specific instances, either the one or the other of the two methods may be thought more desirable or efficacious. For example, in the case of hereditarily epileptic or tuberculous males, vasectomy would answer all eugenic requirements; in the case of sexual perverts and rapists, castration alone would suffice; while, assuredly, the feeble-minded, the idiotic, and other mentally deficient types, all confirmed and incurable vicious criminals, and also syphilitics should be isolated under custodial care.

The desired results could be obtained in certain instances as well as the whole movement for greater racial efficiency and worth assisted by the enactment and strict enforcement of more rigid marriage laws. Moreover, as an additional safeguard, it would seem that in all institutional cases, both state and federal, of serious deficiency, the individuals might be legally compelled to submit to the operation of vasectomy.

A sterilization-law must, of course, provide for a thorough scientific and complete investigation-calculated to determine the fact whether the exhibited defect is hereditary.

Taking it for granted that all future laws will make adequate provision for such determination (and that the individuals indicated for operation are eugenically unfit), in brief, granting that all scientific and rational requirements are fulfilled, what then are the moot objections to sterilization?

Personal Benefits From Vasectomy Doubtful

Preliminary to this further discussion, I wish to assert my skepticism regarding the reputed therapeutic effect of sterilization by vasectomy. Recently there was shown me a sexual pervert upon whom this operation had been performed. According to statements by the director and the doctor in charge, this male had gained in weight, had largely ceased from his foul practices, had become more cheerful and more tractable. I can only say that the patient still looked very abnormal when I saw him several months later.

There is no physiological basis for such physical, mental, and moral change consequent upon this simple operation. Probably no decided improvement really does take place; but if in fact it does, while the evidence

is as yet far from definite and conclusive, the improvement may be owing either to mental suggestion or to some indirect effect of the operation upon the sex-glands. If the latter, then the operation is open to all the objections of castration—with the exception of being a very much less serious operation, entailing practically no risk or inconvenience. To be sure, this gain of being able to castrate indirectly (if indeed this is the case) by such a simple method is enormous.

Some of the Objections to Sterilization Considered

Castration, though, must always be viewed as a mixed achievement. If the eugenic gain is not at least equal to the personal and social loss consequent to the removal of a sex-gland with a concurrent internal secretory function powerfully influencing the nervous system, the operation generally is unjustifiable. But there are extreme instances where the operation clearly seems justifiable, whether it results in the destruction of the secretory as well as the reproductive function of the sex-gland or not; and further investigation will soon clear up those cases about which there is doubt. Moreover, we are possibly at a crisis, and even such theoretical objection cannot now be heeded. Such clear cases for the present are all those in which the subjects ought, under the circumstances, to be confined during the reproductive period but for whom there is no provision for detention.

An effective method of procedure further presupposes an adequate method of universal detection of the antieugenic members of society, and adequate laws to compel institutional confinement. Such is yet far from being the case. It should be very clear, however, that relatively little can be accomplished until such condition prevails.

For one thing, universal application of the Binet-Simon mental tests to all school entrants would be a substantial approach to an effective treatment of feeble-mindedness.

Professor C. B. Davenport's recent studies of epilepsy in New Jersey seem to show that under present conditions the number of epileptics doubles every thirty years. Certain other classes of defectives probably would show no lessened rate of increase. It is altogether likely that the number afflicted with feeble-mindedness or with syphilis, for instance, doubles in an equally short period of time.

Something radical, then, must be done; and it must be done quickly. Not rapidly

enough does it seem can provision be made adequately to isolate and care for all our defective classes, comprising probably ten percent of our population, of which only about one percent is now in institutions.

Hence, sterilization seems to be our only hope. Sterilization by vasectomy is a minor operation, practically painless, and entails no real inconvenience. Why, then, is this eugenically prophylactic measure not more extensively exercised?

About the Laws in this Country

Eight states now have sterilization-laws authorizing or requiring surgical sterilizing of certain classes of defectives and degenerates, namely: Indiana (1907), Connecticut, Washington, California (1909), Iowa, Nevada, New Jersey (1911), and New York (1912). The types of persons upon whom these operations may be performed as prescribed in the various statutes include as follows: confirmed criminals, in all; rapists, in five; idiots, imbeciles, and feeble-minded, in six; insane, in four; epileptics, in two.

"In Iowa, habitual drunkards, drug-fiends, syphilitics, and certain prostitutes and procurers are included. In New Jersey and New York, the words 'and other defectives' are added. In Connecticut and California, the inmates of certain specified state institutions are those prescribed. In all the laws, the determination of the individual to be operated upon is committed to a commission or a board. In New York and New Jersey, provision is made for a review of the commissioners' decision by a county court or the Supreme Court, with appointment, by the court, of counsel to represent at a hearing the person affected. New York, New Jersey, Indiana, and California leave the character of the operation to be determined by the board, or commission. Both Connecticut and Iowa specify vasectomy; Washington and Nevada specifically prohibit castration.

"Except in California and Indiana, little or nothing has been done to carry out these laws—their constitutionality is in question. Also, attorneys-general for the several states do not seem anxious to defend suits and rather appear to encourage delay in putting the laws into operation; while in Indiana, where for seven or eight years vasectomy was practiced without law and exclusively at the request or with the consent of the person operated upon, and for two years thereafter under the law of 1907 compulsorily, there have been no operations since 1909, barring a very few, and these at the persons' own request.

"In New Jersey, a suit is now pending in the Supreme court relative to the state's right to sterilize certain types of defectives. The Supreme court of the state of Washington has recently decided, in a test case, that the law is constitutional. Here, however, and in Nevada, the operation is specifically prescribed as a penalty, in addition to prison sentences." (Van Wagenen.)

The Rights of Society

Sterilization has not been proved to have any real therapeutic value. As a punitive measure it probably can never be defended on grounds of constitutionality. The "Bill of Rights" would seem to be violated. But as a eugenic measure protecting against racial contamination and injury the question of constitutionality does not seem properly to arise. Surely, society has a right, even an obligation, to protect itself against harm.

Exactly as society has a right to protect itself by most rigid safeguards—little recognizing individual and personal comforts and wishes—against smallpox, cholera, and so on, so it would seem to have an equal right to protect itself by adequate methods against idiocy, syphilis, and pauperism. Man does not have an inalienable right to personal or reproductive freedom, if such freedom is a menace to society. Viewed as a means of racial conservation, there probably remains no question of constitutionality.

Furthermore, what logical position can those who argue for the unconstitutionality of surgical sterilization take with respect to sterilization through gonococcus infection? They must either stultify themselves, or account all forms of sterilizing criminal and subject to penal measures.

If a man sterilized against his will, as a eugenic measure in some institution, can properly have recourse to law for damages, what legal restitution will we consistently accord to a trusting wife rendered permanently sterile and robbed of the sacred right of motherhood through a gonococcus infection? The thousand or more defectives who have suffered surgical sterilization have had neither personal inconvenience, nor has the loss of their possible progeny been aught but racial gain. But how can we adequately estimate the sum of personal misery and racial loss of the many thousands of noble women permanently rendered infertile by a gonorrheal or syphilitic husband!

This simply suggests that we probably shall have to look to the women for help in these matters. The suffragist movement is

one of the greatest allies of the eugenics propaganda. Just as woman will seek legislation, once she gets the ballot—as has already been done in certain of the states where she is admitted to full suffrage—to protect herself and the race against wanton infection, by requiring medical certificates showing freedom from infectious disease as a prerequisite to the granting of marriage licenses, and by enacting legislation providing for the notification and detention during the infective stages of all syphilitic and gonorrheal patients, so she will originate and help enforce laws providing for surgical sterilization as a eugenic measure.

Of course it were greatly to be preferred if all action here outlined, as the result of proper legislation, could result spontaneously, unconsciously as an instinct, or from motives of internal appeal. But such millennial times are not yet—indeed, may never come unless rigid legal measures are quickly adopted. Meanwhile, our most important and insistent problem is to bring about a steady reduction of the great army of the unfit, who constitute a heavy economic and moral burden, and a racial menace. Sterilization is an effective, quick, humane, and legal eugenic procedure. It should not be regarded as a punitive or therapeutic measure; it is peculiarly a racial health measure, and as such should be a portion of the health-regulation code administered under the state police powers. The only fundamental question involved in its practice is the scientific one of determining what are racially inimical characters, which of these are hereditary and by what law, and who are the bearers of these undesirable qualities.

The Scope of Suggested Legislation

The Committee on Sterilization (Mr. Bleeker Van Wagenen, chairman) of the Eugenics Section of the American Breeders Association in its recent Preliminary Report suggests well-advised "experimental" state and federal sterilization laws. The former is recommended to apply to "inmates of all state and municipal hospitals for the insane; institutions for the feeble-minded, epileptic and inebriate; reformatories, charitable and penal institutions;" the latter to "inmates of all federal hospitals, reformatories, and charitable and penal institutions; to defective immigrants and immigrants with defective heredity."

The interests of the persons in question

would seem to be adequately guaranteed by the requirement that the operation be inadmissible except in cases of "every inmate or immigrant just prior to release provided it can be shown to the satisfaction of the court of justice by the board of eugenics—representing expert knowledge of psychiatry, psychology, social work and heredity—that the candidate for release is a person with a defective germ-plasm." ("Problems in Eugenics," p. 466.)

There is nothing more certain than this: that to be permanently rid of defectives we must somehow cut off the source of supply. And unless some eliminating mechanism be installed the Anglo-Saxon race surely is doomed to the fate of the Greeks and Romans. Detention under custodial care during the procreative period would be effective and the least objectionable method; but present provision for such care is lamentably inadequate. Moreover, if steps were immediately taken—a course not probable, nor perhaps economically possible—by the time present inadequacies were met, the supply of defectives would, under present conditions, have probably doubled. For example, for proper institutional care of the conservatively estimated 15,000 feeble-minded children in the New York city public schools, thirty institutions or colonies of 500 individuals each (the number giving best results) would be demanded, whereas the city now has only one institution with about 2000 inmates (Goddard). Institutional care alone, then, seems no longer adequate to meet the demands of the situation. Only by the aid of extensive surgical intervention does any hope of success seem possible, and only through this means can our national salvation be assured.

Racially we seem to be at the point of a crisis. National crises render admissible and, indeed, demand, most stringent measures. It is to be hoped that discussions as to the constitutionality of eugenic (not punitive) sterilization laws—less pertinent in the case of public health measures—will no longer delay the further enactment and strict enforcement, of the only apparent immediate means of racial conservation. Not that this is the sole means; present and prospective eugenic measures are still essential; but all measures at this juncture seem to be inadequate to the situation, unless aided by statutes authorizing sterilization of anti-eugenic defectives.

Eugenics: An Entirely Unscientific Consideration

By A. L. BENEDICT, A. M., M. D., Buffalo, New York

Editor of "The Buffalo Medical Journal"

EDITORIAL NOTE.—In connection with this article, be sure to read the contribution by Professor Jordan, of the University of Virginia, which precedes this paper. These two articles give an excellent idea of the present status of the new science of eugenics.

THIS article was suggested by an experience at a social function, when a lady plunged, from the formal introduction, into a discussion of abortions, premarital certification of freedom from syphilis, single standard of morality, and all that; also, by the somewhat old-fashioned squeamishness shown, the next day, by a much younger woman, in avoiding the very frank illustrations of luetic lesions, the natural method of nourishing infants, certain phases of the Mendelian law, and so on, placed on public view by various philanthropic institutions. Indeed, under present conditions, sex-problems are so frankly discussed in conversation, lectures, published articles, that they tend to distract the attention from matters in which one is supposed to be more especially interested. And this is the only apology that the writer has for entering into the discussion.

Consanguinity in the Light of History and Experience

The calm way in which the majority of those interested in sex-problems assume that the subject is a novel one is somewhat exasperating. The Bible, especially the Old Testament, is full of eugenics. The Jewish race owes its present vigor, its relative integrity of blood and commercial dominance, almost entirely to an adherence to eugenic ideals and to a system of dietetic, sexual and other hygiene that, if originally lacking in formal scientific explanation, has stood the test of practical experience to a degree almost if not quite unsurpassed.

A study of primitive races shows very different views of morality, of the relative merits of inbreeding and of seeking foreign strains, of social customs generally; but, in almost every instance the eugenic ideal is plain. If this ideal was not measurably fulfilled, the race gradually died out; and we note the survival and progress of various races under such different conceptions of eugenics that it is worth while to question whether

widely different principles may not be equally appropriate to the building up of a sturdy race.

For example, in time and places indifferently widely separated or closely approaching each other, we observe the opposite ideals of in-breeding and of out-breeding. Marriage must not cross color lines, caste lines, political boundaries; it must be confined to the same little village or tribe consisting of families that had intermarried for generations; a man must raise issue to his dead brother; marriage of near-cousins is commonly practice; even what we consider actual incest is allowed or favored. Or, in other races opposite ways are insisted upon with equal strenuousness.

Naturally, all sorts of inconsistencies are encountered. For example, in our own country, a strain of Indian blood is boasted of, while the most remote crossing with an African is considered a disgrace and, until comparatively recently, has been a matter of social ostracism and political disfranchisement. The considerable strength developed by the "Know-nothing" party, less than a century ago, expressed an even stronger sentiment against marriage across race lines no broader than those scarcely effaced in the home country, England, at the time of the colonization of America. Orators, bidding for this or that foreign political support, grow eloquent over the blending of the various strains which have emigrated to the United States, the reason for their eloquence being that those strains have not blended to any appreciable degree, except that the pre-Revolutionary Americans have, in shrinking from foreign alliances, forgotten their own original racial differences.

Then, again, the intermarriage of cousins is denounced, as contrary to the principles of eugenics, by persons who, if they would take the pains to look up their own ancestry for five or six generations, would find that their own country was established by the offspring of second, first, and even "double"

EUGENICS: AN ENTIRELY UNSCIENTIFIC CONSIDERATION

cousins; who would find, indeed, that there were not ancestors enough in the colonies, before means of rapid transit were available, to furnish a race that was not pretty closely inbred.

Bearing in mind the same lack of transportation and the social and local barriers existing in Europe during the Middle Ages, we must even conclude that almost every little community was a sub-race resulting from inbreeding. The press reiterates the statement that the nobility, and especially the royalty of Europe, consists of perverts and imbeciles, owing to inbreeding of a few families; then, side by side with literature of this kind, is printed evidence of the strength of character and physical development of at least a large number of the members of the same families.

Furthermore, it has been taught that the miscegenation of whites and negroes will result in race extinction within a few generations, while, on the other hand, it has been shown recently that this was by no means necessarily true and that the high death rate and lack of virility of such mixed breeds was the result almost entirely of social and sanitary factors, and dependent upon race mixture only in a recondite sense. Ancient history even shows that degrees of inbreeding now universally abhorrent to all civilized and most of the uncivilized peoples, consisting of actual incest, were not incompatible with strong mental and physical offspring.

Results of Breeding Among Animals and Plants Are Not a Guide

These facts, the merest skimming of ethnic evidence, warrant a considerable degree of agnosticism regarding certain tenets of present-day eugenic science. They call for a still more careful study of eugenic principles with regard to the opposite ideals of pure and mongrel breeding; and they can not be settled offhand by expressions of prejudice, nor by analogy from experiment with plants and lower animals.

Thus, certain physical characteristics highly prized in pure breeds of the lower animals are of the most absurd triviality—such, for instance, as color and texture of hair or feathers, facial conformation, length and droop of ears, and the like. Even such characteristics as speed or draft-power in horses, size of swine, fat content of milk in cows, development of varieties in wool, not to mention the modifications of vegetables

to produce some special flavor or exaggerated size of the edible portion, in almost every instance are accompanied by sacrifices of reproductive power, resistance to infection, symmetric strength and conformation, and other vital qualities.

It is conceivable that in the remote future it may be possible, and desirable, to produce special strains of human beings for special purposes. At present, it scarcely can be desired that this should take place, even to the degree of existing tendencies to produce strong muscle in one family or mentality at the expense of physique in others.

In other words, the present ideal of eugenics is, to produce a healthy, intelligent, and even pleasing type of humanity but without marked specialization, and to ignore color of hair, eyes, texture of skin, tendency to deposition of fat, and so on, or even exceptional muscular development, however useful such specialized breeding may be in the lower animals.

It has been remarked that the conceptions of the desirability of inbreeding and of outbreeding seem to be indifferently supported by experience. It is not at all impossible, however, that, while there seems to be no reason for racially pure blood on the one hand or a definite attempt to secure a mongrel race on the other, closer study may show reasons why certain races should, by preference, be mated with certain others; and conversely.

However, a very important fallacy exists in regard to race, in the sense of a national subdivision of one of the great color-branches of humanity or a well-established primary subdivision of one of these branches as, for example, the Semitic. National political designations do not necessarily imply race. European royalty, for example, is much more a race, in the ethnic sense, than are the subjects of any one monarch.

The same tendencies to mixture of population by immigration which confront the United States are common to many other countries of recent rapid growth. They probably were continuously operative among the American Indians, because of conquest and adoption. England (not the British Empire) is only a few centuries ahead of the United States in the process of assimilation; and historic and archeologic study shows that similar processes have occurred very generally and to a much higher degree than is usually imagined. Indeed, the best examples of race, in a physical sense, are local communities in various countries, where the popula-

tion has remained stationary for many generations.

**Uncertainty of So-called Family Characteristics.
The Mendelian Law**

It may be worth our while to discuss the word family. If by it we mean a husband and wife and their children, ordinary experience shows that there is no certainty of a conformation to type, either physically or psychically, although the influence of habit and close association may be observed; on the other hand, actual marked similarity in various ways may be apparent.

It is possible that a careful study on a large scale might show an illustration of Mendel's law, explaining by the law of chance the beautiful support of extreme notions as to heredity in some cases and equally marked exceptions in others. Theoretically it is plain that no fixed heredity can have become established in passing from one generation to the next.

Using the term in the broader, genologic, sense—unless we assign a dominance to the male element not compatible with the spirit of the times, and which appears to be a ridiculous interpretation of the custom of using the surname of the male parent—it is questionable whether the word "family" represents a scientific concept.

Ignoring step-relationships and the intermarriage of cousins of different degrees, and supposing that heredity is appreciable for only six generations, covering a space of about two hundred years, each individual represents not one but 64 "families," and, although these are the same for brothers and sisters, 25 percent of them are different for even first cousins, while for distant cousins there may be only one common strain in all of the 64. Thus, the usual eulogistic descriptions of family traits, with which most genealogies begin, are obviously mere aethermia, equally applicable to several hundred allied families, or, rather, to the desirable members of them.

This skeptic statement by no means conflicts with the published statistics of the Jukes and the Edwards families. It may be remarked in passing that the Edwards record differs from that of quite a number of other

"families" largely on account of the enterprise of the press-agent. Birds of a feather flock together, and it is quite natural that, mating with approximate equals, environment and social influences should determine a like career for the majority of the descendants of any particular propositus.

Thus far eugenics has been considered without reference to pathologic conditions that may be supposed to transmit taints to offspring. But there is one further point that might be suggested before passing to the consideration of disease.

Mendel's Law Does Not Answer All

While Mendel's law appears to be too well supported to be questioned, it does not cover the entire problem. For example, in the mating of essentially different colored races, whether in the half and half, or in any other fractional proportion arising, when, after one ancestor, the line is continued in one race alone, we do not see a proportionate distribution of unit characteristics, but an almost mathematic dilution in each of the offspring of a given generation, of what may be considered the foreign ancestral characteristics, further diluted in the next; and so on. However, when the mixture becomes very dilute, say, in the fourth or fifth generation, then, many claim, the Mendelian law becomes exemplified by the occasional occurrence of a throwback among a family of brothers and sisters who, otherwise, do not show the ancestral characteristic.

Again, as in the eastern reservation Indians, who, after considerable dilution with white blood, have intermarried mainly among themselves for several generations, the Indian characteristics seem to be recovering their original strength, although obviously without opportunity for actually increasing the proportion of Indian blood.

Further study certainly is required to elucidate the relation of uniform dilution of ancestral characteristics and the distribution of unit-characteristics by the law of chance in a certain proportion of offspring, and especially in regard to the point as to whether the former type of heredity is replaced by the latter after a certain degree of dilution is attained.



Making Good in Emergencies

Article II.—How Can I Increase My Income?

By GEORGE H. CANDLER, M. D., Chicago, Illinois

EDITORIAL NOTE.—The ability to "make good in a pinch" is so indispensable to success, that there must be a place for a number of papers on emergency-practice. Believing this, we have arranged for several articles of this nature, of which this one is the introduction. Following, Doctor Candler will discuss the medical emergencies and Dr. Ralph St. J. Perry will write about various surgical emergencies.

IT IS axiomatic that in a true emergency no two ordinary men will act the same way. The moment a man is trained (as for instance are firemen, the police, and so forth) to meet certain suddenly arising requirements in the most effective manner, emergency ceases to exist and for him the entire procedure becomes a matter of routine. A lifesaver at the beach is not disturbed when the cry "Man drowning" reaches his ears; he loses not an instant in rowing or swimming to the spot, and proceeds to save the grasping, kicking, fear-crazed individual in a perfectly matter-of-fact manner. If the drowning person clutches at him and refuses to follow instructions, the rescuer does not hesitate to "knock him senseless" before towing him to the shore and safety; thus rationally meeting a second emergency which, less effectually dealt with, might cost two lives.

The highly trained ambulance-surgeon is not rattled when some dark night he finds lying beside the track a human being so mangled as to be almost beyond recognition. The rays from the headlight of the switch-engine and the dim lanterns of the train-crew illuminate a ghastly crimson pool and a chalk-white face; but the radial artery still pulsates and every second the crimson pool grows larger. There is at the moment just one rational thing to do, and that is, stop further hemorrhage. Therefore quickly and deftly the tourniquet is applied, the crushed extremities are protected, and the exsanguinated victim of the steel horse is rushed to the ambulance.

Then a further emergency presents itself. The hemorrhage has been terrific and unless the heart is sustained and the veins are filled the man inevitably will die before he reaches the operating-table. Strychnine and digitalin or adrenalin are injected, several ounces of normal saline solution is thrown into the cellular tissue (intravenous injection is not possible in a swaying ambulance), and the upper part of the body depressed in order to

diminish the flow of blood to the injured extremities.

It is true that even when the patient reaches the hospital he remains an "emergency case," but the crucial requirements were met on the cinders of the yard and in the flying ambulance. Now the surgeon doing the operation of election has but to use good surgical sense and avail himself to the full of the perfect life-saving equipment at his disposal. Naturally, after some experience, he, too, works unruffled and with precision. But let us confront him or his confrère of the ambulance with a drowning man, or the heroic lifesaver of the beach with a severe traumatic hemorrhage, and nine times out of ten we shall get a splendid illustration of how that particular emergency should *not* be met.

Great emergencies involving numbers of human lives and scenes of heart-rending anguish unfortunately are not infrequent, and now, as always, men suddenly hurled into such maelstroms will acquit themselves nobly or, palsied with horror and fear, become drivelling nonentities, exaggerating their own trivial injuries and demanding sympathy from anyone who will listen.

A Deed of Cool Heroism

The writer recalls a wreck on the Grand Trunk railroad in Canada, some years ago, in which an obscure country physician revealed the mettle he was made of. A rear-end collision occurred in the dead of night and the occupants of the last car—a combined baggage- and smoking-car—were all killed or injured. One man was able to drag himself to the side of the track and there, supported by a pile of ties, he squatted, giving first aid to half a dozen fellow passengers who yet had life left in them.

Twice after bending over the forms brought to him this man shook his head and the bearers turned away with their burden, but usually his hands worked surely and rapidly, and with the few instruments from his pocket-

case and strips of linen obtained from the wardrobes of uninjured individuals he dressed wounds and stopped hemorrhages which, less promptly and efficiently treated, would have proved fatal or crippling. Only when the last cut had received attention and the rescuers from the surrounding country were pouring in was it known that the doctor himself had sustained a compound fracture of the left leg.

Those who have received a similar injury alone can realize the amount of fortitude it required to minister to the needs of others—many of them less seriously hurt—while suffering himself the agonies which attend fracture of the long bones and laceration of the overlying tissues.

But time and time again it has been proven that in the ranks of the profession are many such men, and not a single day passes that some doctor somewhere does not display the rare courage and intelligence necessary to meet a dire emergency as it should be met—sometimes, indeed, at the cost of his own life.

Emergencies in Ordinary Practice

We hear of great deeds publicly performed, but only few know of the thousand life-or-death emergencies that confront physicians in ordinary practice every day. A deep artery is severed, a child falls into a tub of scalding water, someone is torn by a savage dog or swallows poison. There comes a hurry-call for the doctor and unprepared, as a rule, he has to meet the most trying conditions intelligently.

Having once confronted and controlled any particular danger, the doctor feels able to fight it again later with equanimity, but his very next call may be to a case of placenta praevia, with an almost moribund woman and no assistance; or to revive a young woman who, tired of trying to live decently upon six dollars a week, has "turned on the gas."

Hair bleaching as some of these experiences are, they do not try the conscientious doctor as do less spectacular emergencies. The necessity for deciding whether it is possible to deliver a living child through a contracted pelvis without unduly risking the life of the mother; the advisability of immediate tracheotomy in a severe case of croup; the differentiation between diphtheria and a severe catarrhal angina in a large family; these and a hundred other emergencies of practice arise to try the soul and make a "real doctor" of the general practitioner.

And, unfortunately, even modern medical training does not adequately prepare him to

meet many of the most urgent situations. Only observation, incessant study, and an abundant use of good common sense will enable the average man to acquit himself creditably. He must never cease learning. Just a few days ago I overheard a conversation between two men at Ochsner's clinic.

"You're a student, are you not?" enquired one of the other.

"No," was the reply, "I'm a full-fledged M. D."

"So am I," said the interrogator, "but I'm studying all the time, and the more I learn, the greater my conviction of ignorance becomes."

It would not be difficult to tell which of these two "full-fledged physicians" would best meet an emergency.

Naturally, it would be impossible in an article of this character even to mention a type of the various procedures that may advantageously be followed in the commoner emergencies. The doctor desiring to do his full duty under any and all conditions, if necessary, even will go without a new suit in order to obtain books which will give him the necessary information. Moreover, he will not wait until the crucial moment to acquire the dexterity which, when required, can alone avert death.

It is a simple matter to learn the pelvic measurements and recognize the various presentations. Daily manipulation of the joints and observation of the course of great vessels in patients under examination will aid materially in doing the right thing when suddenly confronted with fracture, dislocation or traumatic hemorrhage. The commoner poisons and their antidotes may easily be memorized, and, if called to a case of even suspected poisoning, the physician should go prepared, not alone to evacuate the stomach, but to administer the indicated remedies.

Quiz Yourself During Leisure Hours

It is an excellent plan to quiz oneself during leisure hours: "What shall I do if confronted with a severe case of poisoning by such and such a drug?"

"How shall I proceed in a case of impending suffocation from the lodgement of a foreign body in the trachea?"

"Am I really able to handle properly a brow or shoulder presentation, and have I a working-conception of pelvimetry?"

These and very many similar questions the average practitioner can ask himself with advantage—provided he be not content with any but a thoroughly satisfactory answer.

He must remember also that the procedure which sufficed yesterday is obsolete today and that lives "unavoidably lost" five years ago are saved as a matter of course in this year of grace. Moreover, the "real doctor" will not be satisfied merely to do what everyone else has done; he will ever be trying to excel his fellows and his own past performances. It is such men that will save lives tomorrow that

are lost today. In order to make this contribution as generally helpful as possible, I have endeavored to classify the more exigent emergencies every practitioner is likely to encounter as follows: (1) Surgical emergencies, including those of anesthesia. (2) Obstetrical emergencies. (3) Therapeutic emergencies, including poisoning.

(To be continued)

The X-Ray Treatment of Skin Cancer

By EMIL H. GRUBBE, B. S. M. D., Chicago, Illinois

EDITORIAL NOTE.—Little has been written recently about the treatment of carcinoma with the x-ray, perhaps because radium, thorium, and other of the newly discovered radioactive metals have the center of the stage just now. But if you think the x-ray has gone out you are mistaken. Dr. Grubbe can convince you of the value of this modality.

IT IS now about seventeen years since a report about several well-authenticated cures of skin-cancer attracted widespread attention among the medical profession, and among the laity as well, not only because of the striking results obtained, but also because of the peculiar nature of the curative agent used. The remedy that cured these patients was a physical therapeutic agent—the x-ray.

This report was the beginning of a movement in therapeutics that has constantly grown, until today it is accepted by the whole world as one of the established facts of scientific medicine; namely, that the x-ray is the best single remedy for skin-cancer. No therapeutic fact stands out with greater prominence; none has more adherents nor more successful users. Hardly a page of what is probably the most interesting part of medical history can be turned which does not recount some of the good qualities of the x-ray in therapeutics.

At one of the earliest meetings of the American Roentgen-Ray Society, I read a paper detailing my experience with the x-ray treatment of epithelioma. In the years that have passed and during which I have continued using this agent, I have become more and more convinced that we have in the x-ray the best single therapeutic aid in the treatment of skin-cancer. The opinions expressed in that paper have been substantiated many times, not only by myself, but by hundreds of others, so that I feel warranted at present in emphasizing certain features of this treatment.

In the pioneer days, I well remember this treatment was considered a "personal-equation" treatment. Those who had thoroughly

qualified themselves obtained results which the tyro could not duplicate. Even today there remains room for improvement. There still are too many failures with this treatment, but most of which could be avoided by a more perfect mastery of all the conditions which confront the operator.

Causes of Failure

Many practitioners fail to get the full therapeutic worth of this remedy, because they use inefficient apparatus; some fail because of inefficient technic; still others fail for lack of both. Inefficiency is the reef upon which many x-ray workers' hopes have been wrecked. The extraordinary zeal with which many practitioners undertook this treatment, and which caused them to apply the ray without studying it or knowing how to use it, was responsible for many failures.

Some have been disappointed, because they thought the treatment so very simple and easy, requiring no particular skill or knowledge in its application, that they simply bought apparatus and allowed office-girls, nurses, and other nonmedical assistants (all of whom knew less about the subject than did the doctor) to give the treatments. We should not expect ideal results to follow applications made by those whose training has not qualified them to undertake such work. Failure could have been predicted from the start.

Very naturally, the value of this treatment cannot be very accurately determined by such unscientific work. In the bitterness of their disappointment, however, these careless x-ray users are apt to say that the treatment is not good, and some even go so far

as to denounce those who dare contradict them.

If those unskilled in the use of x-rays have failures, they should study and learn how to apply them properly. The x-rays should not be discredited; they will continue to do their useful work if properly directed. I also realize more and more another difficulty in the x-ray treatment of cancer, namely: that the practitioner who might be a good dermatologist is not always well versed in electric matters; while, on the other hand, the "radiographer" who knows how to make very good x-ray pictures may know little or nothing about pathology and dermatology.

The truth is being pressed home constantly that the days of careless or haphazard applications of the ray are numbered. The common practice of giving patients x-ray treatments, without considering the quality and quantity of the agency, must be abandoned.

Having grown up with this subject and being a teacher of x-rayology from the very beginning, I realize probably more than most x-ray workers do what a large variety of generators, tubes, interrupters, and currents are used today for obtaining x-rays, and the consequent confusion and handicaps which the average operator contends with in his daily work.

Such things as delicate meters and other current and x-ray unit or measuring devices are, and always will be, too unreliable and impracticable for the average practitioner to use with satisfaction. In proof of my contention of the unreliability in-exactness and impracticability of these unit devices I need only state that there are at present about a dozen of these. The fact that there are so many alone is sufficient to condemn them. If one or two were really scientific, we should not need the others. Therefore, we must supply the x-ray operator with a technic that he can use, and which will be fairly accurate, yet flexible, and the use of which will not necessitate the purchase of expensive and ephemeral unit devices.

What Does the Work?

To understand this matter of the proper handling of x-rays in the treatment of skin-cancer it is necessary to know what it is in the x-ray that produces the results that we are after. I will go briefly into the question of the physics and action-of the ray as it pertains to therapeutics.

I believe that the actinic, or chemical, rays, which come with the x-ray, are the most

valuable of all the rays in the treatment of skin-cancer, and for that matter in the treatment of practically all other surface, or skin, diseases, and, therefore, these rays should be utilized to the limit by exposing the lesion as directly as possible to their direct influence.

It has been proven that these chemical rays have a direct influence on the oxidation-ferments of tissues. If used excessively, they bring about a breaking down, or splitting up, of the complex chemicals composing cancer-cells, and in that manner destruction of a malignant growth is ultimately brought about. Pathologists tell us that it is an established fact that the efforts of nature to throw off cancerous disease are always along the lines of establishing hyperemia, hyperleukocytosis, and abnormally intense proliferation of connective-tissue cells. In this matter, the x-ray may be said to follow nature, for that is exactly the effect the x-ray produces in the tissues.

If this assumption is true, it follows that the lesion should always be exposed to the direct influence of the x-ray, i. e., the skin-cancer should be uncovered, freed from dressings and protectives of all kinds during the seance. It probably is needless for me to add that metal, leather or other so-called "filters" must not be used during the treatment.

My Modus Operandi in Procedure

The method of treatment adopted by me in cases of skin-cancer is as follows:

There are five factors that must enter into consideration in devising a system or technic for treating with x-rays, and these are: (1) the vacuum of the tube; (2) the distance of the tube from the part to be treated; (3) the nature of the light or fluorescence in the luminous hemisphere of the tube during its excitation; (4) the duration of each treatment; (5) the frequency of applications.

I believe that when we consider these five factors relatively, then our control of the x-ray can be made fairly accurate, safe, and still be flexible. I am even willing to affirm that our control will be more accurate than with the ephemeral unit measuring devices that are becoming more and more numerous.

Skin-cancers, in my opinion, demand large doses of x-rays from the very beginning. There should be no hesitation in using the ray so as to get the most energetic action. The patient's life may depend upon such treatment. Since it is desired to produce localized irritative effects and since no penetrative rays are needed, the lesion being superficial, and, also, since a comparatively low

vacuum-tub produces soft rays, which are most irritative, a tube offering 1 to 2 inches of air-resistance is used in the treatment of these cases.

The tube must be kept at this low vacuum throughout the sitting. For this purpose, automatic regulating vacuum-tubes are best. I believe that this matter of vacuum in the tube is a very important one. Most operators use too high vacua for this work.

We must keep in mind that where the rays stop, there is where we get the greatest benefit. The tube should be excited with a steady current, so as to produce a constant light in the luminous hemisphere. Flickering or "flashing" of the light, as Cook has pointed out, produces a stimulating, i. e., physiological, effect upon tissue-cells, and, therefore, treatments given with an intermittent current are worse than useless, as they may stimulate rather than retard the cancer. There must not be any spark-gaps in series between the generator and the tube.

The interrupter, also, is of important consideration if an induction-coil is used to excite the tube. In my opinion, the best interrupter for this purpose is the mercury-turbine. All other types of interrupters work too irregularly to be considered ideal. The fluorescence in the luminous hemisphere should be bright—nearly as bright as when exciting the tube for radiography.

In this connection, it might be in order to say that the amount of electricity which comes from the generator cuts comparatively little figure, for it is a well-known fact that the curative effects of the x-ray are the same whether a weak current (for instance a static-machine current) or a strong current (transformer current) be used.

My plan is, to give short treatments—ten minutes at a sitting. I also give them often, so as to be able to judge the susceptibility of the individual. I think the oftener the dose is repeated, in judiciously small doses, the better the results, as compared with larger doses less frequently given. I am not a believer in the three or four large-dose treatments, i. e., 30- or 40-minute exposures. I am sure the shorter exposures and more frequent treatments give us more control, and, therefore, more safety.

Treatments are kept up daily until a reaction comes on. This is shown by the development of dermatitis. When the dermatitis appears, I stop to wait for it to subside. After the parts become normal again, the treatment may be resumed, if it is found necessary.

We must remember that skin-cancer is a chronic disease and, therefore, is not susceptible of a cure, under the most favorable conditions, within weeks, and sometimes months, of time. Consequently, considerable time may be needed in a given case. Many operators fail to get results from this treatment because they do not ask for enough time in which to produce results.

It is not unusual in my practice to have cases referred to me in which the patient has been under the care of an x-ray operator for only a short time during which but a few treatments were given. After I assume charge of the case and give a few additional x-ray applications, a reaction comes on. The patient is now pleased, for he sees a change in his condition, and I get all the credit. I seem to have achieved without difficulty that which another, struggled in vain to accomplish. Yes, the patient should be told in advance that time is necessary for a cure, and if he is not able or willing to give us the proper amount of time then we ought not to undertake to treat him.

I also wish to lay emphasis on the fact that technically we wish to utilize the destructive properties of the ray in cancer cases and, therefore, these particular properties should be brought to bear upon the lesion as directly and vigorously as it is possible to do. I hope to encourage vigorous raying of these cases, as by so doing we shall get the limit of value from the x-ray.

Occasionally it has been found that when the mucous membranes of the eye, nose or mouth are involved the good effects of the ray are but transient. When this is the case, we should not be discouraged; on the contrary, the patient should be given another series of sittings, and this time the remedy ought to be given vigorously enough to produce a sloughing x-ray ulcer. By this heroic method, I have cured several cases which at first, under the simpler method, received only temporary benefit.

As to Protective Masking

The rays should always be localized by means of metal cylinders, specula or lead masks, which localize their action, thereby destroying the diseased parts without needless injury to the healthy tissue.

My own method (one which I suggested fourteen years ago, and which I have used with but slight modification ever since) is, to cover the body for a considerable distance around the lesion with Grubbe's x-ray foil (a thin foil, only the 1-1000 of an inch thick, containing 95 percent of lead and 5 percent of

tin), to protect the healthy parts. A hole is cut in this mask about 1-8 inch larger than the area it is desired to treat. In this way I expose a small area of normal tissue to the ray, and when cumulative inflammatory signs appear I am able to detect them, for the diseased area may be normally so inflamed that x-ray dermatitis could not be recognized.

I believe in raying a small border of healthy tissue for another reason, namely: the x-ray irritation causes a dilatation of the blood-vessels at the very edge of the healthy tissue where it blends into the lesion. It is usually from this irritated edge of healthy tissue that the healing proceeds.

In cases where the glands or lymph-nodes are involved, I also expose these channels to the x-ray at each sitting; but here I use a weaker ray—a physiologic rather than a toxic ray, as it is my object to stimulate these parts, not to destroy them.

We must never forget that success of any treatment does not necessarily depend upon the treatment *per se*, but to a very great extent upon adjunct treatment, which may be needed from time to time. In this connection, it should be realized that cancerous tissues are very liable to become infected, and when this occurs the inflammatory and ulcerated conditions are magnified.

For these reasons, it is very essential to keep a cancerous ulcer clean and free from infection. The physician must carefully instruct the patient or his attendant as to the right way to keep the lesion clean. In addition, whenever the patient comes to the office the physician should inspect and then himself dress the sore. I use as a cleansing agent a saturated solution of potassium permanganate made with hot distilled water. This is used as frequently as seems indicated. Once or twice a day, if needed. Drainage must always be perfect. If there is a tendency to scab or crust formation, these should be soaked in water as hot as can be borne and removed. Other therapeutic adjuncts, either local or systemic, should be used if indicated.

In concluding, I will refer briefly to the results of this treatment. I believe I had the honor of applying some of the first x-ray treatments that were given in skin-cancer, and in the many years since I began this work I have treated a large number of cases.

At present, I will concern myself with 216 cases, most of which are old enough to allow me to form a definite opinion concerning the ultimate outcome of the treatment. This does not include many whom I still have under observation, neither does it include some

whom I now have under treatment. This series includes a large number of hopelessly incurable cases (patients who utilized the x-ray as a last-resort treatment) which I was more or less compelled to take for treatment during the earlier years of this work and, as I should now say, against my better judgment. These would be considered undesirable cases for showing the possibilities of any method of treatment. The cases consist of lesions on practically every part of the body and include epithelioma, rodent ulcer, and carcinoma; primary as well as secondary or metastatic growths.

Analysis of my records shows that in 16 cases involving the eye results were considered good in 11; beneficial in 3; failure in 2. In 10 cases involving the tongue, roof of mouth, and fauces, results good in 6; beneficial in 1; failure in 3. In 12 cases involving the labia, vagina, urethra, and uterus, results were good in 8; beneficial in 2; failure in 2. In 36 cases involving the nose, cheek, and ear, results were good in 29; beneficial in 3; failure in 4. In 38 cases involving the lip, mouth, and chin, results were good in 27; beneficial in 6; failure in 5. In 13 cases involving the rectum and anus, results were good in 10; beneficial in 1; failure in 2. In 5 cases involving the penis, bladder, and scrotum, results were good in 3; beneficial in 1; failure in 1. In 22 cases involving the forehead, temples, and scalp, results were good in 15; beneficial in 4; failure in 3. In 29 cases involving the fingers, hand, arm, foot, and leg, results were good in 22; beneficial in 5; failure in 2. In 24 cases involving the breast and neck, results were good in 14; beneficial in 5; failure in 5. In 11 cases involving parts of the body not included in the above classifications, results were good in 7; beneficial in 1; failure in 3.

It can be seen that the results which I have been able to obtain by this method of treatment are certainly very satisfactory, and when you remember that many of my cases in this list were considered hopeless—the x-ray being the "*dernier ressort*"—you will conclude with me that no other treatment known today could make so good a showing.

I feel justified, by reason of my many favorable results, in stating that 80 percent of cases of uncomplicated skin-cancer can be cured by x-ray treatment. I am also of the opinion that all cutaneous cancers should be treated with the x-ray exclusively, for it has earned the right to be considered the most valuable single remedy in this form of malignant disease.

Some Accuracies of Practice

The Correlation of Precise Methods of Diagnosis and Treatment

By B. G. R. WILLIAMS, M. D., Paris, Illinois

EDITORIAL NOTE.—*This is the second in Doctor Williams' new series of articles. In these articles he is telling how to apply the knowledge given by the clinical laboratory. You have learned that there are certain abnormalities in the urine, for instance. Now, what shall you do to correct the trouble? By reading carefully the instructions given in these papers, we believe your task will be made a little less difficult.*

IN APPROACHING the subject of albuminuria and its therapeutic indications, I feel justified in proposing a classification which, though scarcely satisfactory from an etiological standpoint, in our present state of knowledge of clinical albuminuria is the best that can be submitted.

The Nucleoproteids

To a dram of the filtered urine, is added 4 drams of cold distilled water and then a drop of glacial acetic acid. The mixture is well shaken, but not heated. Controls with normal urine should be set up alongside. In some urines thus treated, we shall note, after a short time, a cloudiness due to nucleoproteids. The chemical consideration of these may be found in most texts upon physiological chemistry and cannot be undertaken here.

Suffice it to say that this is a specific form of albuminuria, and is not without a diagnostic importance. For an albuminuria (as shown by the heat and nitric-acid test) which proves to be a nucleoproteiduria (as shown by the reaction indicated above) is very strong evidence that we are dealing with substances other than true serum-albumin; viz., combinations of neutralizing proteins with acids (nucleinic, sulphuric, taurocholic, etc.), fibrinogen, euglobulin, etc. In other words, I am inclined to regard any of the so-called albuminurias unassociated with renal lesions as *benign albuminurias*, quite easy of identification and of themselves demanding no special treatment, being indication of body defenses. Thus, we may dispose of many of the so-called functional albuminurias which have perplexed some of our most astute diagnosticians.

This test cannot well be carried out when pathological conditions of the kidney-pelvis, bladder, and urethra are present, because then nucleoproteids are invariably found (destruction of nuclei of cells); but must

serve rather in persons not having such lesions to eliminate nephrosis. It goes without saying that such albuminurias are usually transient, being commonly seen as the orthostatic, adolescent, epileptic, and neurotic albuminurias. About the worst they may do is, to beat a man out of a life-insurance policy.

Serum-Albumin

We are now ready to deal with true albumin (not "albumen," a term too generalizing). When a slight heat and nitric-acid precipitate cannot be explained by a nucleoproteid reaction or by the presence of calcium phosphate, or when such precipitate is marked or persistent, or both, we are dealing with true serum-albumin, a finding which is never physiological.

Serum-albumin may be derived in part from the blood, escaping through the glomerulus by virtue of general or local alterations in blood pressure, injury to the endothelium or secreting epithelium, or for unknown reasons. It may be derived from the kidney-tissue (retrograde changes).

Here we must halt; for it is presumed that the reader will examine or have examined the urinary specimen in the question of pus: I cannot undertake the study of the albuminuria of pyuria, microscopy being sufficient for the distinction. An exception is sometimes cited—renal phthisis, where the albumin precedes pus; but in these cases the secreting parenchyma is invariably involved and we are at least justified in diagnosing a nephrosis. It is, however, very mortifying for an albuminuria to turn out to be a pyuria as soon as another physician is called. Parenthetically, it "cuts some ice" in the treatment. Do not neglect the microscope when dealing with albuminurias; do not neglect the microscope when not dealing with albuminurias.

Renal Albuminuria

First of all we have to deal with the true renal albuminurias. To prove a true renal

albuminuria, several points must be kept in mind, to wit:

1. The albumin must be serum-albumin; not nucleoproteid and not calcium phosphate. The identification of the former we have considered above. The latter does not usually confuse in filtered urines; but in case of question we may apply the suggestion of Winternitz, as follows: Wash the precipitate with hot distilled water until washings cease to give a marked cloudiness with silver nitrate; then pour over the precipitate, on the filter, a few drops of boiling Millon's reagent. A red coloration shows the protein nature of the unknown. Copaiba also may confuse; but the patient should leave off this drug while the tests are being carried out; or, the precipitate may be tested for alcohol solubility.

2. The albumin must be persistent or almost so.

3. The other serum-albuminurias noted below should be ruled out if possible.

4. Cylinder casts (other than an occasional hyaline), cells from the uriniferous tubules, red blood-cells (especially in casts), decreased urea, any or all of these are to be expected in an actual nephrosis.

Keeping in mind these points, we should rarely fail to put a renal albuminuria into the proper class.

Treating Renal Albuminuria

How shall we treat a true renal albuminuria? Unfortunately certain of these cases have become progressive by the time they have reached us; and treatment which a few months before would have cured the patient is less likely to do so. Ofttimes, however, cases which are apparently hopeless may still be aided or cured; and a few principles are here suggested.

All of this serum-albumin does not come from the kidney, but much of it from the blood; and it is probable that the patient does not have this albumin to spare. It is in just such cases that lecithin and nuclein, administered for prolonged periods, prove peculiarly efficacious. In acceptable form they provide exactly the reconstructive material demanded by the "discouraged" cells; and, the remote metabolic wrong being corrected, the drain ceases.

There is abundance of clinical proof that an active preparation of cactus grandiflorus, through its influence upon the heart and circulation, materially improves nutrition and reduces the output of albumin. Many well informed and observant therapeutists prefer cactus to any preparation of digitalis in such

cases, deeming it indicated whenever cardiac irregularities and renal congestion exist.

It may then be advantageous to treat the albuminuria by aiming our efforts at the blood pressure; investigate the heart and arteries, and give digitalin (or cactus) or glonoin, with elaterin or some milder laxative, as indicated; and the albumin of circulatory origin will be held back except in so far as released by diseased kidney-tissue. I know of no way to prevent the escape of circulating albumin when the renal substance is already destroyed; we can merely check it by attention to the heart and arteries.

Can we decrease the serum-albumin resulting from cloudy swelling of renal cells and the ultimate plasmolysis consequent upon it? I think that we can; in fact, Martin Fischer apparently proves that this process is directly due (at least in many cases) to a storing up of acids in these cells and injury to the protoplasm. Thus, the indications are clear for dilution and alkalization. In other words, we must prescribe water and alkalis freely (see the preceding paper) if we expect to decrease the albumin from this source. This will explain why alkaline remedies given with copious draughts of water, often produce such marked benefit in the earlier stages of nephritis.

One other suggestion: There is no lack of evidence that injury to the kidney cells depends to a considerable extent upon the presence of harmful substances in the intestinal canal, whether taken with the food or resulting from its decomposition. Hence, these patients should receive special care as regards alimentary housecleaning. They usually benefit when drinking purgative waters at some health resort; give them a course of "waters"—saline drainage—at home; and use suitable intestinal antiseptics to check any tendency to fermentation.

But as yet we are clutching only at the fringes of knowledge, for how may we successfully treat a disease until we know its cause? Who knows all concerning these nephritides and their albuminurias? In the absence of such information, are we not justified in the use of certain remedies now regarded as empirical but which tomorrow, when our research-workers have cleared up this baffling field, stand best chance of a place in our rational list? Of these, special mention is to be made of arbutin from *uva ursi*—bear-berry—a grain an hour being administered if necessary to make the desired impression. Gr. 1 every 3 or 4 hours thereafter usually proves sufficient. In a surprising

number of cases cactus and arbutin, given alternately in fairly full doses, meet the requirements fully. It is hardly necessary to call attention to the necessity of stimulating dermal elimination. Sponge baths of solutions of common salt—better, epsom salt—should be ordered, followed invariably by a brisk rub-down with a rough towel.

This is all I shall have to say concerning the medical treatment of the renal albuminurias as such. "Not enough," criticize my readers? Perhaps; but I have learned that one line of treatment persistently followed often accomplishes much more than a "running hither and thither." I have seen tuberculosis cured by a monotonous routine of months; I have seen leukemia held in check and apparently cured by pushing one drug for a year; I have seen whooping-cough, the disease of a thousand remedies, cut down to three weeks, from discouraged Osler's "six weeks and—," by a bottle of something better than paregoric.

The textbook tells you to try a little of this for a short time, and, if you don't succeed, you might try a little of something else. Bah! Give each remedy a fair trial; albuminuria does not appear in a day, nor can it be cured as quickly as that. The treatment suggested above is not claimed by me to be the best. You may know of a much better way of treating albuminuria of the renal type; but do not be discouraged if spectacular results are not witnessed within a few days—aye, a few weeks.

Hints About the Diet in Renal Albuminuria

Just a word as to the diet. At this point I cannot well undertake the dietetic consideration of the various nephritides as suggested by other laboratory findings, by symptoms and by signs, but rather from the standpoint of albuminuria. What effect, if any, does diet have upon the albuminuria?

I am told that *excessive* ingestion of proteids may increase the serum-albumin in the urine; and a study of several cases leads me to believe that this may be true.

What of it? Must we in consequence take from our patient proteid foods when he needs them to make up for those albuminous bodies passing away in his urine? Certainly not. There are extremes in either direction. Entirely distinct from the alimentary proteiduria following the heavy proteid meal, are the renal albuminurias.

Scalia has shown that when egg-albumin is injected *subcutaneously* there may be an induced albuminuria in nephritics; but I

doubt very much whether upon a mixed diet including eggs precipitin tests would show egg-albumin in such a urine. Krasnogorski has shown that the albuminurias of infancy contain no specific groups characteristic of the dietetic proteids, but that the bodies are derived entirely from the tissue-albumins.

In chronic albuminuria, the indications are much different from acute nephritis. In the latter, the fight is short and dietetic measures may be rigid. But how may we expect to lengthen the lives of our chronic nephritics by starvation? I have seen these patients who were taught by some quack or shortsighted physician, test their own urine for albumin day after day, cut short their own miserable existence and make life almost unbearable for their friends. Elsewhere I have shown that quantitative estimations of serum-albumin are of almost no prognostic importance and rarely of diagnostic worth.

A mixed diet is to be advised, and this must contain proper proteids; milk, eggs, even meats (especially the white meat of chicken, according to von Noorden), and vegetables. An absolute milk diet may be advisable for a few days in acute Bright's disease; but it is never desirable in chronic nephritis, inasmuch as it contains too much albumin, and for the twenty-four hours may contribute much more of these substances than does a mixed diet.

Albuminuria may be better treated from a dietetic standpoint; not, indeed, by special attention to the proteid foods, but by eliminating irritating substances—alcoholic beverages, red meats (kreatin), condiments. Of the latter, sodium chloride holds first place; and for this reason milk diets (not exclusive) are advisable, as we shall see in a later chapter. Beans and other foods which lead to fermentation obviously are unfit for the nephritic.

Toxic Albuminuria

Toxic albuminuria has proven itself a very elusive subject, mainly for the reason that it is difficult to tell just when a toxic albuminuria becomes a renal one. In certain cases, undesirable albumins may be elaborated in the tissues and be actively excreted by the kidney without damage to the renal parenchyma. Thus, the blood may not be able to use lymph-albumin in large amounts.

However, it is not unreasonable to suppose that in certain infectious diseases (where toxins are present in the blood), in the intestinal intoxications, and where poisons have been taken, a slight albuminuria depends upon the fact that the endothelial cells of the

capillary tufts or the epithelial cells of the Bowman capsules suffer for a short time disturbances in nutrition, thereby permitting the escape of true serum-albumin and perhaps globulin from the blood, although there may be no permanent injury to these cells.

This question is an interesting one from the therapeutic standpoint. How shall we treat such an albuminuria? Shall we treat this condition at all? I do not think we should do so, except in so far as we direct our attention to the specific poison responsible. This does not mean that I should thus dismiss such an albuminuria as unimportant, for we know, of course, that at any time it may become a true renal albuminuria.

Thus, in syphilis, scarlet-fever, and to a less extent in other infectious diseases, we have to face this perplexing question. In the protracted intestinal intoxications, for instance, we are unable to locate the exact point at which the albuminuria becomes nephric. In case of question, apply the principles of treatment already indicated; however, if possible, first prove a renal lesion present by the four rules which I have advised.

Mechanical or Obstructive Albuminuria

The obstructive or mechanical albuminurias present a great field for study, not alone for the therapist, but for the diagnostician as well. I have seen urines almost viscid with serum-albumin, when it was fairly certain that there was but slight if any renal damage. Thus, in the liver cirrhoses and allied conditions, we often note putty-like precipitates when the urine is treated with heat and nitric acid. Here urobilinogen may or may not be present, depending (as will be shown later) upon the extent rather than the character of the hepatic injury. Certain of these cases will be associated with ascites.

Once having shown that the albuminuria is not renal, but mechanical, we are ready to look into the treatment.

Digitalin is indicated in any venous engorgement of the kidney, especially if there are indications of cardiac dilatation. But we must remember that digitalin will aid the heart for but a short time and will not cure. Cactus may replace it with advantage. If the liver lesion be a syphilitic one, mercury and especially the iodides are called for, and the results often will be startling. The ascites and albumin will vanish in a large number of these cases. Now and then the interstitial changes in the liver will have proceeded so far that antisyphilitic treatment

will avail nothing. Then do the indications become identical with those of any hepatic cirrhosis.

The treatment of the *albuminuria* (and ascites) of *cirrhosis* in general, from a medical standpoint, is that proposed for any edema, namely: (1) purgation by means of saline cathartics or elaterin, or both, in dosage sufficient to produce free watery stools; (2) diaphoresis, especially by the aid of the hot-air bath and of pilocarpine.

The more severe cases call for Talma's operation, whether ascites is present or not; for this treatment is more likely to be effective before ascites is marked and it will relieve the venous engorgement of the kidney before permanent injury results. In other words, it seems to me that the operation promises more in the early cases diagnosed mainly by the uranalysis. In the late cases, where we also have to deal with ascites, repeatedappings are necessary to make the Talma's operation successful. Unfortunately the operation has been advised only in the late cases.

Digitalin is strictly indicated in those mechanical albuminurias associated with valvular lesion. Here the area of cardiac dulness is great and evidences of renal involvement are not forthcoming. Combine rest in bed, elaterin, and diaphoresis with the use of digitalin. Failure of these methods to clear the urine of albumin will raise the question, Is this, after all, a heart albuminuria, or have we also to deal with renal or hepatic lesions? Uncommon examples of mechanical albuminurias due to renal engorgement are those of venous thrombosis, and so on.

Cryptogenic Albuminurias

Especially baffling is the treatment of the cryptogenic albuminurias where the blame cannot be definitely located upon renal, toxic or mechanical causes, though any or all of these may play a part. Unless symptoms are pressing, we are not justified in diagnosing cryptogenic (clinical) albuminuria by merely a single urine test, for we may be dealing with an albuminuria of an alimentary or other temporary form. We may be deceived even in the pressing cases, and this applies, as I have found, in the case of meningitis, where fever is not present and, so, the toxic nature is overlooked. I have seen these cases diagnosed as acute nephritis, upon the basis of an improper study of the case, especially of the urine.

Because we do not appreciate the nature of a given cryptogenic albuminuria, we can-

not apply to its simple therapeutic principles, but must approach it as though we were dealing with a combination of the other forms. Thus, in puerperal eclampsia, we must assume the possibility of toxic, renal, and mechanical factors, although we believe that of these the first-named is, perhaps, the most important.

The Albuminuric Kidney of Pregnancy

Shall we treat the kidney of pregnancy? No. Shall we treat the albuminuria of pregnancy? That depends upon what is meant by the albuminuria of pregnancy.

In about 10 percent of all pregnant women, urine tests by heat and nitric acid will show various degrees of cloudiness. A few of these may be explained by nucleoproteids, and many by contamination with vaginal secretion—a frequent occurrence among pregnant women. (Fresh specimens taken without special cautions show many miscellaneous bacteria and vaginal cells.)

In perhaps about 3 percent of pregnant women where specimens are properly collected (use a sterile catheter, if there is question), we may find serum-albumin that is persistent or almost persistent. By all means, treat such an albuminuria. How? First determine whether this is a true renal or a mechanical albuminuria; or, if this is impossible, assume it to be toxic or at least cryptogenic, and then make the treatment as rational as possible.

For example, serum-albumin is found without evidences of renal or mechanical causes: do not assume these to be absent (because of the importance of these cases from a clinical standpoint; knowing, as we do, that symptoms are likely to develop very abruptly). Continue a diagnostic study of the case, but lay special stress upon the treatment of any toxemic conditions likely to be present.

First apply those principles known to be efficient in any toxemia; which are:

First, prevent waste.

Second, eliminate waste.

Moran has ventured the opinion that milk is the food *par excellence* for threatened eclampsia; but I would not advise a rigid milk diet unless it is certain that nephric factors play no part, and for the reasons I have detailed above. Better use milk as a nucleus and build up a suitable diet about this. Use buttermilk in part (this for the sake of the colon), unless diarrhea is present. Prohibit foods likely to be broken up into toxic substances—black meats, cheese, beans, and so on. Avoid sodium chloride unless you are assured that nephric factors play no part. Begin with a saline cathartic, and keep the bowels open.

If the urine is highly acid, exhibit alkalis or alkaline salines. If diacetic acid or acetone is present, push the alkaline treatment. Push the sulphocarbolates for three days, then follow with galactenzyne for three weeks, to aid in solving the bacteriological problems of the colon. If the urine is concentrated, prescribe water (see the preceding paper). Increased cardiac dulness and blood-pressure alterations provide indications in certain patients that will aid in the successful treatment of the albuminuria.

Do you carry out or have carried out prophylactic urine examinations in your pregnancy cases? No? Then I will not tell you what I think of you. Certainly the albuminuria of pregnancy demands treatment. *Do not treat eclampsia. AVOID IT!* If I were to enter upon the treatment of eclampsia, I should not only desert my subject, but I might leave room for the belief that, after all, the prophylactic urinalysis and treatment of albuminuria of pregnancy was uncalled for.

(To be continued)

THE TORCH

By ALBION FELLOWS JOHNSTON

Make me to be a torch, for feet that grope
Down Truth's dim trail; to bear for wistful eyes
Comfort of light; to bid great beacons blaze,
And kindle altar fires of sacrifice.

Let me set souls aflame with quenchless zeal
For great endeavors, causes true and high.
So would I live to quicken and inspire,
So would I, thus consumed, burn out and die.

—THE SURVEY

The Conflict of Conscience*

I. Disturbing Emotions

By CHARLES GILBERT DAVIS, M. D., Chicago, Illinois

EDITORIAL NOTE.—In this address, which was delivered at the last meeting of the Tri-State Medical Society, held in Hannibal, Missouri, Doctor Davis discusses certain vital emotional factors in disease. The investigations of Freud and Jung have intensified their interest, and this paper points out the line of duty for the physician. It will be continued in several future issues of *Clinical Medicine*.

. . . . I feel within me
A peace above all earthly dignities,
A still and quiet conscience.

—Shakespeare.

THE progress of human thought is the most wonderful theme that can occupy the mind of man. Not only is this study of interest in revealing the long evolutionary struggle of conscious sensuous life, through eons of time, to realize its environment, but we find it also prophetic as to what we may expect and hope for the future.

No branch of science claims our attention in either of these directions with greater enthusiasm than the healing art. To write the story of the development, progress, and growth of medicine, would be practically to relate the history of mankind. However, three great periods of development are readily distinguished.

1. In the early twilight of knowledge, we note the physical interpretation of disease. The morbid manifestations were attributed to the presence of an entity. The practice was very simple: the entity by harsh physical means or superstitious incantations was to be scourged and driven from the body.

2. Then came the *renaissance*, when the struggling mind, freed from the bonds of ecclesiastical oppression, began to listen to the voice of reason and to search through the treasure-vaults of nature for the cause of things. The human body was dissected, the circulation of the blood was demonstrated, and physiology became a recognized branch of knowledge.

Bacon established his inductive philosophy and Emanuel Kant followed with his "Critique of Pure Reason." All other branches of science were called upon to contribute to the wisdom accumulated for the cure of disease. This period may be said to have closed with the wonderful discoveries in bacteriology and pathology. It has been the *triumph of the objective mind*.

*Delivered before the Tri-State Medical Society at Hannibal, Mo., September 24, 1913.

3. Today we may be said to have entered upon the third, and last, developmental period. It is the age of mind, and we appeal to the psyche.

As in all great movements, there has been resistance. Any radical change occurring in the tide of long-established thought always is accompanied by a tempestuous storm of protest. In no field of human thought or action has the contest been more severe than that waged between the various adherents of the mechanistic and of the vitalistic theories of evolution.

But science is becoming more consistent and dreamers more rational. The victory is won—and, behold, a new *renaissance*. It is the *triumph of the subjective mind*.

Man is as a tripod—a body, a mind, and a soul. Man manifests himself through these three avenues of life. In the normal functioning of these three phases, he lives and evolves toward perfection. A morbid manifestation of any or all produces disease and tends toward degeneracy. He may experience a traumatism in either sufficiently severe to prove destructive to life.

It is along these three respective avenues that medicine has sought, and is seeking today, to cure disease.

In entering this realm of mind, it is evident that we shall be called upon to deal with dynamic forces of far more wonderful scope and influence than have been dreamed of while we were dealing with other known physical laws.

Psychology—the soul of things—is the latest measuring-rod of truth, and by its correct application we are making headway rapidly in a new and more satisfactory explanation of many of the mysteries of life.

I am confident that along this line of research are to be demonstrated some of the

most startling truths relative to man and his future destiny. When once the light of science is thrown down this pathway, it will reveal a new interpretation of many mysteries and enable us to solve many of the political and economical problems that are now bearing heavily on the conscience of modern civilization.

The Influence of the Mind over the Body

The question as to the effect of thought upon the bodily functions and the immediate or remote consequences of such thought or emotion has long been a subject discussed in almost every stratum of human intelligence, and, while long held *sub judice* by scientific men, it never has received the attention of scientific investigation which it deserves.

Mind, there can be no doubt, is the dynamic expression behind all cosmic movement. Man, as the crystalized center of this intellectual and moral force, through generations of his race has more and more struggled to make himself master of his environment. Not only has he sought to conquer the antagonistic influence of his surroundings, but, through autosuggestion, has been able to shape, mold, and modify his own physical nature.

We are now only on the threshold of the knowledge leading us to a thorough understanding of the influence of emotion upon the various organs of the body, but already sufficient scientific data have been gathered to enable the fact of such action to be demonstrated and to give intimation of our ability to utilize such action for the progress and happiness of mankind.

We are able to discern from our everyday observation of life the truth of the assertion that thought—and especially emotional, or disturbing, thought—is capable of manifesting itself through the functions of the various organs of the body.

The lachrymal gland, through fear, anger or joy, may be stimulated to increased activity and be made to secrete and discharge the tears in large quantities for hours at a time.

When the body is in need of nourishment, the thought of savory dishes that in the past have pleased the palate will cause the salivary glands to become active, and soon the mouth is moistened with the flow of digestive saliva.

Under the stress of any sudden and deep emotion, the blood pressure is increased, the action of the heart becomes rapid, and the whole vascular system responds to the flow of tempestuous thoughts generated in the area of consciousness.

In a similar way, a thought may disturb the vasomotor centers and tinge the hue of the cheek with the modest blush of the maiden. Then, again, under the stress of fear, we have the ashen hue of death; while in the height of anger the countenance is purple from the distended vessels.

Respiration is another function that may be stimulated or inhibited, according to the nature and intensity of the emotion. In a moment of great danger, when the mind is overwhelmed with fear and anger, the respirations are deep, the nostrils distend, and the breast heaves with the effort to increase the oxidation necessary for increased power in the effort at defense or rescue. So, from sudden shock on the receipt of news of a great calamity, respiration is stimulated, or for many seconds it may be inhibited entirely.

Many times soldiers have told me that when first entering battle soldiers are seized with the desire to evacuate the bowels and bladder. The child of sensitive nervous system, while standing by the flowing brook and listening to the ripple of the water, receives the suggestion and at once feels a desire to urinate.

When I was a boy I often mischievously amused myself by watching my younger brother till he had finished eating his piece of bread and butter, and then, as the last mouthful disappeared, suddenly shouted at the top of my voice that he had swallowed a fly. The suggestion was almost instantaneously followed by emesis, and he gave up his dinner. I remember this quite well, for on several occasions the facts were deeply impressed upon me by coming into vigorous contact with my mother's slipper.

A thousand instances might be related convincing us of the marvelous influence of the mind upon the functions of the body.

Corroborative Scientific Examples

We have not only these observed facts of everyday life, but numerous scientific laboratory experiments bearing additional and conclusive evidence of our contention are now before us.

Thus, for instance, Hornberg¹ demonstrated that the mere chewing of agreeable food caused a flow of the gastric juices, while the mastication of some tasteless substance had no effect.

Pawlow introduced a tube into the stomach of a dog and proved that the gastric juice flowed copiously when the meat was simply held before the animal's eyes.

These experiments have been verified by Bryan and others. Numerous observations have also practically confirmed the belief that emotional states materially effect the secretions and the peristalsis of the intestinal canal.

A series of interesting experiments by W. B. Cannon and D. de La Paz² indicate the marked influence the emotion of fear exerts over the secretion of the suprarenal glands. These experiments were made on animals, and they show conclusively that the adrenal secretion can be augmented through fright and continued fear.

An interesting hypothesis by George W. Crile,³ relating to fear in its action upon the thyroid gland as a cause of Graves' disease, is worthy of consideration.

It has been proven beyond the question of a doubt that diabetes may be produced by rage or fear.

Numerous cases are on record in medical literature where sudden shock from fright has been followed by acromegaly.⁴

Forbes Winslow⁵ mentions the case of a young peasant whose hair turned gray in a few hours from fright when he was suspended by a slight cord over the edge of a precipice.

Instances are presented daily before every busy practitioner where there are evidences of morbid conditions arising from the disturbance of the internal secretions, consequent upon shock from great emotional activity.

How frequently do we hear, "She returned from the funeral, was taken ill, and lived only three days." What killed her? Emotion—deep grief. Fear paralyzed the centers of nutrition, lowered the resisting power, and the bacilli did the rest.

The sensitive girl is engaged to be married. The lover fails to return. We have all witnessed the tragedy! Day by day the color fades from her cheeks, the once animated life grows listless, the eyes lose their brightness, smiles are replaced by tears; the strength fails, hope is followed by despair, and then—there is anemia, disease, death.

This is no picture of the imagination, but one familiar to all the world. Grief, worry, fear are the dark angels that are reaping a harvest from the ranks of mankind.

P. K. Pel⁶ reports a case of acromegaly, in a servant-girl, from fright.

Says Ernesto Lugaro⁷: "The injurious influence which protracted depressing emotions have on the appetite, on the digestive processes and on nutrition generally are well recognized. And it is not at all improbable

that they can determine some autointoxications through the production of these disturbances of nutrition."

It is clear these injurious effects must react upon the nervous system, must diminish its powers of resistance to shocks of every kind and morbid influence, and must also lower the general resistance of the organism to disease.

Leopold Levi and H. de Rothchild⁸ cite numerous instances where the emotions, acting upon the various ductless glands, have produced disease; depending upon the nature of the emotion, the previous state of the nervous system, and the age of the patient.

The sympathetic nervous system is the centripetal pathway of the emotional disturbance, and the thyroid gland plays an important part.

⁹Stokes, Groves, Trousseau, and Dieulafoy cite numerous instances of Basedow's disease caused by emotion.

Myxedema may be brought on by great sorrow. Also, through instability of the thyroid gland, we may have asthma, gout, and rheumatism. These diseases yield to treatment of the thyroid gland, and they may also be improved by an improvement of the emotional state of the patient.

Münzer¹⁰ believes that all intense morbid emotion, such as anger, fear, and worry disturb the glands having internal secretions.

I often have seen amenorrhoea result from some painful emotion. Gout frequently follows an emotional state. Time and again I have observed hemorrhoids to follow a long period of worry.

Laycock¹¹ many times has observed temporary diabetes to be owing to emotion.

Rubel¹² has mentioned the frequency of diabetes after the bombardment of Strassburg.

Cancer is said to have increased noticeably after the siege of Paris.

Desormeux, Duges, Stork, Bracket, Underwood,¹³ and others have cited cases showing that convulsions in a nursing infant may be caused by violent anger on the part of the mother.

Unhappy emotional experiences have been known to produce various nervous symptoms, as fixed ideas,¹⁴ obsessions, phobias, and so on.

Bickel¹⁵ verified the experiments of Pawlow and demonstrated that the flow of gastric juice is inhibited by anger.

Experiments by W. B. Cannon,¹⁶ A. T. Shohl, and W. S. Wright on animals prove that glycosuria may be produced by rage or fright.

Surely, we have sufficient evidence to convince us that the emotions play an important part in the determination of man's health and happiness.

The body has its pathological enemies in the various forms of bacilli, and the soul has its destroying agents in the morbid emotions of fear, envy, hate, and anger.

Harmony is essential to all life. Harmony with physical law is necessary to physical health. Logical thought is necessary to mental equilibrium, and equally so is harmony of the moral nature with the highest ideals of man.

All morbid emotions are destructive, but the greatest destructive agent of the race is man's warfare with himself, and the one that

is most frequently the cause of all others. It is the constant violation of conscience going on in the world today that gives rise to most of the deterioration, this resulting in disease, poverty and unhappiness, leading to that degeneracy from which arises our great flood of vice, crime, and insanity.

Man, in his conduct, is at war with his highest ideals. Through this conflict of conscience, humanity is crushed to earth with fear.

It may well be named the tragedy of the world. The agonizing cry of this multitude of struggling souls surely is the most pathetic scene that ever has greeted the eyes of the universe.

(To be continued.)

More Special Stunts For General Men

A Series of Brief But Practical Therapeutic Suggestions

By C. ELTON BLANCHARD, M. D., Youngstown, Ohio

THIS short paper is to continue my plea for the family doctor, for the hard-working, poorly paid general practitioner. I am urging this brother of mine to be strong and to do things—not foolhardy, fools-rush-in-where-angels-fear-to-tread things, but the run of cases that have been sent hitherto, as a rule, to those who call themselves specialists. To him I say, Buy the tools for your office-work and learn to use them, on the learn-to-do-by-doing plan.

There are two good reasons why this attitude of the family doctor is a good one. First, it shows people generally that the doctor is progressive, competent, and a thoroughly up to the minute physician; and, second, it enables him to collect a goodly number of much needed fees. It is not my purpose to discuss the business side of the subject, still, just a word may not be out of place.

To begin with, have your fees agreed upon before the work is begun, and have the people bring the cash to pay when the operation or treatment is finished.

If by chance, now and then, you come across a case which you do not care to undertake to operate, either resign from it or arrange with a friendly specialist to do it for you, and not for the patient. The patient comes to you, and you take him to your specialist, and ought to be present when the operation is done; then attend your patient to his home or at the hospital, as the case

may be. Make out your bill as agreed for the work, and pay your specialist yourself, letting the people you serve understand that your bill covers the whole service.

In this way, the specialist is your hired man, instead of you being his trade-drummer—for nothing or, perhaps, a commission. Possibly, after you have seen the operation done in a few of the cases you did not feel like undertaking, you will tackle those coming next, and do as well or maybe better.

About Nasal Polypi

Therefore, to this end, I want to say a few words about nasal polypi.

If you do not already know how to diagnose these very common neoplasms, I shall not be able to help you much in such a short paper as this; however, nothing in nature do they resemble more than oysters or grape pulps. Most of these growths are attached to the mucous membrane covering the middle turbinated bones. In long-standing and greatly neglected cases, they may grow to such size that complete nasal obstruction results and, hanging down into the postnasal pharynx, with long pedicles, may be seen through the mouth.

There is no treatment other than complete removal, although recently I had a patient who said the family doctor had given him a kind of snuff that was a "sure cure" for his trouble!

How to remove these growths and make them stay removed, is your problem, for they are prone to return and they grow rapidly after a little pruning by some careless operators. And this reminds me to say: Don't make a bluff at this work. There are already many doctors slicing off a little of the tonsil or starting a little blood from the nostril and calling it an operation; and most of them actually collect fees for this sort of practice!

I have long ago left off using or trying to use any kind of nasal snare. Your tools should be several sorts and sizes of curved and long-shanked scissors, two or three sizes of nasal cutting-forceps, sharp nasal curette, and also a nasal speculum that gives you perfect dilation of the nostril and good illumination.

Under local anesthesia with cocaine, anesthetic or quinine and urea hydrochloride, not only applied superficially but injected with a long-tubed syringe, you may cut, curette and clean out to your satisfaction without causing your patient much pain or distress.

At the first sitting, cut off the pedicles of such masses as you can easily reach and with your forceps pull out the growths. If the hemorrhage is free, you may have to pack and wait a few days for the finishing touches. The condition obtaining, both nasal and general, will be your guide as to whether to do both sides at the same sitting or not.

Often it is necessary to cut or scrape down to the bone, to prevent the return of the growth. For the last few years I have used silver nitrate as a caustic on the base-cells of such polypi, with good results. Some workers have employed injection of a saturated solution of potassium bichromate in the base-cells, to stop the renewal of growths.

Your patient should be seen twice a month for several months after the work is done, and any points that seem to be lighting up can be nipped right then and there.

Sometimes the growths involve the ethmoid cells, and, if so, your sharp curette must be wielded vigorously in order to reach the deeper portions of the neoplasm.

Sometimes it happens that you have a diverted septum from a large polyp or you may wish to correct such a diversion caused by anything else. It is a simple operation to break the septum over with your septum-forceps and to use the hollow nasal splint until the bone is fixed by healing in its natural position.

These patients should pay liberal fees,

and when well done each will make you many new friends.

The Hypertrophied Tonsil

One more stunt—enlarged tonsils—then I have a word to say about the other end of the human machine.

Removal of the tonsils is the most frequent bluff that the family doctor has made at special work. After a case or two that gave him alarming hemorrhage, he has been more inclined to send these persons to the special man!

The important point is, to have the tonsil free from all adhesions, for until so freed any attempt to excise will lacerate the pillars of the fauces, the thing that causes most of the excessive hemorrhages.

With a blunt curved bistoury, the tonsil may easily be separated from the pillars. I usually choose the Mathieu tonsillotome, and pull the free tonsil into this to the proper extent with a grasping-forceps. If the one clip of this instrument does not bring away all of the tonsil, I then take the cutting-forceps to remove the remainder.

Good sense and judgment must be exercised in this little operation. When I say, to pull into your tonsillotome the tonsil to be excised, I cannot tell you how much or how little. Surely, you will know the danger that lies in pulling too much.

Be prepared for hemorrhage. Have ready your long hemostats and your pressure-hemostats, though you may never find use for them.

Now and then you will strike a "bleeder," and, if so, your nitroglycerin, atropine, and adrenalin generally will stop the flow of blood. Locally, compresses wet with solution of chloride of iron pressed over the bleeding capillaries will help. I have never met a case where one or two hypodermics of glonoin and atropine did not stop hemorrhage within a half hour.

In the case of very young children, you may have to call an assistant and give a general anesthetic; and the procedure under these circumstances is different. If your patient is young—ten to fifteen years of age and very nervous—an injection of the H-M-C will make him brave as a lion and docile as a lamb. Use the same local anesthetic as described for nasal work, above.

You must have good light, good tools, and be something of a mechanic. If you cannot meet these requirements, stay out of the game. Most family doctors can do this work

as well as any specialist, and the twenty-five or fifty will feel very good in your own pocket, because you have rightly earned it by being competent and doing good work.

Relieving Anal Fissure

It may be a long jump from the tonsils to the anus, but it is of fissure in ano I wish to say a word. Many patients have told me that this condition is as true a foretaste of the tortures of hell as anything they could imagine. In any event, you will make a very grateful friend if you can cure this trouble in one afflicted; and you can, if you will follow the plan here outlined.

Never mind the causes, the pathology, symptoms, and all that. Read it up, if you need to. Here is your patient; he says he has piles; bleeds at times; and the pain, smarting, and so on, are killing him. Examine him carefully. Many family doctors are so shy, they will not look at a man's anus, to say nothing of a woman's. Get in there with good light and proper speculums, and find out the real state of affairs.

All right; it is fissure, one or two; usually one, for one is enough for any decent man. Frequently dilation of the sphincter, gentle curetting, and local antiseptics will cause complete healing, especially if the fissure is first touched with nitrate of silver.

If this does not succeed, you may have to resort to making an incision in the floor of the fissure and curetting thoroughly. Then, with proper after-dressing, you will get a healthy granulation and complete healing.

I get made up for me an ointment contain-

ing menthol, thymol, camphor, eucalyptol, thymol iodide, resorcin, and the quinine and urea hydrochloride anesthetic. This applied to the part before and after the operation makes it almost painless.

What we wish to accomplish is, to change an indolent ulceration into an active granulation and as far as possible to prevent post-operative infection. This ointment seems to fill the bill exactly. Care of the anal toilet must be taken and, if the condition demands, pledgets of gauze with this ointment incorporated may be kept in position.

Some writers make a long story out of this thing and advocate some foolish and uncalled-for surgery, it seems to me, after some years of personal experience with many cases.

The treatment I have outlined may be done under local anesthesia and with no loss of time from business or work to the sufferer. In making your first examination, you should see to the anesthesia, for you are apt to cause your patient great discomfort otherwise, and he might not return.

I need not tell you that mild laxation, intestinal antiseptics, and all other help your patient may need should receive your attention.

Have your fee agreed upon for the work, and get it cash. It may surprise you when I tell you that for the past five years my loss from bad accounts will not average five dollars a year.

It was my purpose to mention fistulas and hemorrhoids, but these must go over until a subsequent issue, when I shall also discuss my treatment for gonorrhea.

WRITE down the thought that comes to you —the idea that seems worthy of communicating to others. Said Schopenhauer: "The presence of a thought is like the presence of a woman we love. We fancy we shall never forget the thought nor become indifferent to the dear one. But out of sight, out of mind! The finest thought runs the risk of being irrevocably forgotten if we do not write it down."

The Treatment of Urethritis*

The Use of Bisulphate of Quinine by Cataphoresis

By C. S. NEISWANGER, M. D., Chicago, Illinois

A RECENT monograph by Albert E. Mowry, M. D., on the treatment of acute gonorrheal urethritis with irrigations of solution of bisulphate of quinine, interested me so much that I determined to make some observations with the same medicament upon the sequelæ of acute urethritis.

The essayist states in this monograph that the technic he employs does not apply to chronic cases, probably for the reason that the medicament does not reach the gonococci that have lain in the deeper folds of the epithelium for years.

Electrotherapeutists, however, are well aware that any medicament may be employed in treating the deeper tissues by utilizing the cataphoric action of a continuous current.

In using medicinal solutions for this cataphoric effect, we must keep in mind the fact that the basic constituent always moves toward the cathode (and this is true whether it be a metallic or an alkaloidal base), while the acid has just as strong an affinity for the anode.

If, then, the base is the part we wish to utilize, as is the case with the bisulphate of quinine, we must place the medicament upon the anode, when, by cataphoric action, in its endeavor to reach the cathode, the quinine is carried into the deeper tissues.

It has been my custom for some years to treat this class of patients by cupric cataphoresis, and, while my results have been better than those claimed for any other method, the process has certain serious objections. For instance, the copper salts are styptic and irritating, and, although they undoubtedly destroy the gonococci when these are reached, the effect of the irritation produced frequently is not easily combated.

The electrode, which I devised some years ago, for making cataphoric applications within the urethra consisted of a hard-rubber tube closed at the distal end, and had perforations through which the circuit was completed. These perforations caused the mucous surface to become irritated, and, if great care was not taken, sometimes to be seriously injured, especially in inexperienced

hands. This fault has been obviated by using a soft-rubber applicator very much the same as a soft-rubber catheter with perforations. This catheter is furnished with an applicator made of twisted copper wire, and has a receptacle for the cord-tip fastened to the proximal end.

The technic of use is simple. Wind some absorbent cotton on the twisted wire loose enough to permit being introduced into the soft-rubber electrode, then, after saturating it with a solution of quinine bisulphate—1 dram in 2 ounces—introduce it into the electrode. The applicator may also be introduced into the electrode before the cotton is wet, the instrument being held in the solution long enough to wet the cotton through the holes. The electrode now is thoroughly lubricated with a mixture of tragacanth or any lubricant that is a conductor of electricity—never vaseline or any oil.

After the patient has urinated, pass the lubricated electrode into the urethra. If the disease is in the acute stage, never pass the electrode beyond the pendulous urethra. The electrode is attached to the anode of a continuous current, the cathode being the usual abdominal pad. The current is now turned on gradually until 10 milliamperes is reached, which flow is maintained for ten minutes. The treatment may be repeated every second day.

For years it has been my rule not to treat or prescribe for acute urethritis, but during the past year, or since I have been using the procedure outlined in this paper, I have accepted a number of such patients for clinical observation. The most of my work of this nature, however, has been with chronic cases, the "morning-drop" and prostatorrhœa.

I almost fear to go into detail as to my results, lest you might call me an enthusiast; so, I will just say, "almost universally good," and leave the proving of the assertion to those who will try it, firmly believing that their results will be as good as my own.

I am thankful for this opportunity of presenting to you a simple means of combating conditions more serious and far-reaching than the great "white plague," because so intimately related to that strongest natural

*Read before the Tri-State Medical Society at Hannibal, Mo., Sept. 23, 1913.

passion, sexuality. I am also pleased to be able to prove, at least in part, an assertion I have made many times in public and in private, to the effect that the rational meth-

od of curing gonorrhea must be by the cathartic use of some germicide capable of reaching the gonococci that have lain in the deeper folds of the epithelium for years.

Pellagra and its Treatment

By E. H. BOWLING, B. S., M. D., Durham, North Carolina

THE cause of pellagra is still one of the unsettled questions of medicine. Each successive theory has had its champions, only to be discarded with the increased knowledge gained about the disease. I have no theory that can be proven, it being only upon circumstantial evidence that I have been convinced that the cause of pellagra is a specific organism, one which has not yet been discovered. When we remember how the spirocheta for years and years evaded the most diligent search, we need not despair of the pathogenic germ of pellagra yet being cornered and forced to reveal its identity.

My theory, then, as to the cause of pellagra—based, as I say, entirely upon observation and circumstantial evidence—is, that the germ first finds lodgment in the stomach—that is, the patient becomes infected—and though the great majority of observers believe the disease to be neither contagious, infectious or communicable in any shape, my own observations lead me to believe quite differently. I do not believe the disease contagious, but, I do believe it to be infectious.

At the present time I am treating a young married woman (and also her 3-year-old daughter) who presents a well-marked pellagra, and who up to a few years ago was as free from any suspicion of the malady as any healthy individual. At that time she was recently married, and, being a boarder, had no household duties to encumber her; while across the street from where she boarded I was treating a woman desperately sick with pellagra and of whom the neighbors and friends all were afraid. Then this young woman, out of sympathy, attended the patient faithfully until the end. She never experienced any ill effects until this last spring, when the dread disease developed, and that in a rather malignant form.

I have under treatment another young woman showing every evidence of robust health, but for the pellagra; and she, I am confident, contracted the disease from her

father, who had been afflicted with it for several years. I could enumerate several other cases presenting a history similar to the foregoing, and all this convinces me that the disease really is infectious; still, the two cases cited will suffice for the object of this paper.

Then the question might plausibly be asked, Why do not more people contract the disease, when they daily come in contact with it? The same answer can be given as to why a whole household is not stricken when one member is attacked with typhoid fever, which is a known infectious disease.

The Stomach the Point of Attack

We might say that the natural resisting-power or the high opsonic index plays an important part, but, in the case of pellagra, I think there is another reason. I am firmly convinced that the stomach is the first place of infection, and I am of opinion that the condition of the stomach determines whether the exposed person contracts the disease or not.

For a while I thought that nonacidity of the stomach was a predisposing cause, for I found that in every instance of advanced pellagra there was a very greatly diminished or even total absence of gastric hydrochloric acid. However, the investigations of Siler and others have shown this theory to have been erroneous, because they found it possible for a person with hyperacidity to contract the disease; nevertheless, all investigators, so far as I know, have established a decrease in the hydrochloric acid in the advanced stages. This, then, being such a constant symptom, it evidently is caused by the disease, and is not a mere coincidence.

Another reason confirming my belief that the stomach is the seat of the trouble is the increased motility of the stomach. I called attention to this symptom some two years ago. When we give a test meal and then try to withdraw gastric contents for examina-

tion, we shall find the stomach entirely empty, except in very far-advanced cases, where there is a stomach paresis; in which latter not only the test meal but the debris of the meal before is brought up.

All of my patients, without exception, have given a history of indigestion or some trouble with the stomach dating back from six months to a number of years before the appearance of the rash. The stomach trouble always antedates the nervous or mental symptoms, which latter all observers acknowledge as the cardinal symptoms of the malady.

Granting for the present that this theory is correct, does it, then, not give us a chain of symptoms that easily can be adduced as leading to the trouble? First the germ is introduced into the stomach, where it finds conditions suitable for its propagation; then we have as a consequence of this irritation a subacute gastric catarrh, which interferes with the secretion of hydrochloric acid; while, as the catarrh becomes more deep-seated, less and less acid is being secreted, until finally it is completely absent. With the loss of the hydrochloric acid—which is one of the essentials to digestion—and with the otherwise crippled condition of the stomach, there follows, of necessity, poor digestion.

Now, the increased motility of the stomach forcing the imperfectly predigested food down into the alimentary canal, we have an ideal feeding ground for any and all pathogenic germs that may inhabit that region. So, in view of the formation of ptomaines, leukomaines, and many other deleterious substances, and which constantly are being poured into the blood current from the vitiated intestinal tube, is it any wonder that there results an irritated nervous system, together with all of its train of unnumbered symptoms witnessed in a pellagrin?

The skin eruption so characteristic of pellagra to my mind is of central origin—Mizell, with his brilliant theory of the semi-drying oils, to the contrary notwithstanding. So many doctors, it seems to me, make the mistake of looking upon the rash as the disease itself, and bend their energies toward curing that, when it is only a symptom of an irritated nervous system.

The Treatment Based upon the Gastric Infection Theory

Remembering the old saying that the proof of the pudding is "chewing the rag," now, will a treatment based upon my theory "deliver the goods"? I do not claim to have a specific nor a cure-all; still, I do think that my treatment, based on this theory, will cure

as large a percentage of pellagra victims as any I know.

My first thought in instituting treatment, is, eliminate, and, for this purpose, the *sine qua non* in my hand is pure, unadulterated, old-fashioned castor oil. Of this, I give 1 tablespoonful every night; and I keep this up, sometimes, for six months, or sometimes even for twelve months. Then, if my patient does not get well and gain flesh and get the roses back to the cheeks, I do not know how much longer I shall keep it up.

I have in mind now a little strip of a woman, weighing 90 pounds, who took castor oil for a whole year and at the end of that time showed every evidence of perfect health and weighed 160 pounds; but when I consented to her stopping it for a few days she said she felt worse and went back to the oil of her own accord. Pay no attention to the cathartic effect of the castor oil; this will not last. Nor pay any attention to the diarrhea; castor oil is the very best remedy I have ever tried for the diarrhea of pellagra. This is the cleanout of the alkaloidal slogan.

Now for the cleanup. Pellagra is the only intestinal disorder in which I could never get satisfactory results from the sulphocarbolates. The only intestinal antiseptic that ever has done any good in my hands is freshly made chlorine-water, given in teaspoonful doses every two hours; and I keep this up for months and months, until I have made certain that the patient has been cleaned out and kept clean, until I know there is not a pellagra germ around.

Then I give arsenic, preferably in the form of the cacodylate of sodium, 3 to 5 grains, hypodermically, every other day until I get evidences of saturation. Oh, yes! I give iron in various forms. Usually I start with the elixir of iron and manganese peptonate; but I give also Blaud's pills with arsenic, and bone-marrow, ovoferrin, and other preparations. Codliver-oil? Yes. And the bitter tonics whenever I see them indicated.

Each patient is a history unto himself when you get him this far along in the cure. To the dictum of clean out, clean up, and keep clean you now can add build up, build up, build up. To every patient, without exception, I give castor oil; but it is not every one who can begin with chlorine-water. When the stomach is irritated, they simply cannot bear it. Under these circumstances, I start them on this combination:

Fluid extract condurango.....	ozs. 1
Tincture of nux vomica.....	drs. 4
Listerine.....	ozs. 1½
Carpeptic liquid, enough to make.....	ozs. 4

Label: A teaspoonful in water, three times a day, before each meal.

Give this mixture until the stomach is over the inflamed condition, then start with the chlorine-water.

For the neuritis developing in every advanced case, I give dilute phosphoric acid and nux vomica tincture in proper doses and in any agreeable vehicle.

Occasionally I give calcium sulphide, but I never have derived the same benefits as those following the administration of this drug in the hands of Mizell, of Atlanta. Urotropin is indicated sometimes, and I have seen cases in which I thought it benefited.

Reference to Specialists Advocated

With the experience garnered from treating more than 120 patients, I am satisfied that all pellagra victims should be referred by the general practitioner to the specialist. No line of treatment can be laid down which the doctor advised can follow with satisfaction to himself or benefit to his patient. To illustrate:

Recently I saw 4 pellagra patients huddled

in the same room, but they were of different families. I did not give the identical medicine to all the patients; each one, in my opinion, requiring different treatment. Had I given each one chlorine-water, for instance, three of them would have been made worse, I am sure, while the one receiving it derived very marked benefit from its use.

This disease is reaching such proportions that, I am convinced, the time is ripe when each large municipality in the South should prepare a hospital for the treatment of pellagra, with a competent man in charge. The hospitals in my city are closed to these unfortunates, and they will eventually be closed to it all over the South. Then there will be nothing else to do but prepare places for the treatment of pellagra alone.

It may not be immodest for me to say that, for the last year, I have used every ounce of influence which in me lies to convince our city-fathers of the necessity of doing this very thing for our own city, but so far without success. Nevertheless, as Paul Jones said on one notable occasion, "I have just begun to fight."

Reminiscences of Medical Work in China

By H. K. SHUMAKER, M. D., Flat Rock, Ohio

IN 1897, I began to do medical work in south China. There was much to learn ere one could handle the people satisfactorily. First of all came a revision of my ideas as to etiology—to fit Chinese ideas! Ordinarily but four causative factors brought on disease, namely, wind, dampness, heat or cold; and to make one's explanation of a case of sickness satisfactory to these people, one or other of these "causes" had to be mentioned. Occasionally the patient would ignore the rule, as when one, who was asked as to his idea of the cause of a pair of corneal ulcers situated exactly over each pupil, replied, "The devil did it." Many an abscess-patient came with the same etiology and diagnosis—"fung" (wind). When the lancet would let the "wind" out, great would be the astonishment of the patient and his friends.

Chinese ideas as to diet had also to be learned. Foods by them were divided into heating and cooling kinds. The physician who directed a heating food, when they thought the reverse indicated, at once lost prestige. Early in my experience I learned

that rice-water was an almost universally used food for the sick, and, so, when in doubt as to what diet to prescribe I gravely directed rice-water.

"How Many Parts Can You Cure?"

A question always asked, "Can you cure?" if answered in the negative, frequently was followed by, "Then how many parts can you cure?" If much relief could be given, the answer was, "Eight parts"; if it appeared that a half cure could be effected, the reply was, "Five parts"; if but little help could be given, "Two parts"; if the case looked hopeless, then "*Mo fat*" (No plan) was the reply.

Most of the native physicians based their charges on the results attained. At the first call a bargain was struck; a certain sum for medicines; so much if he cured four parts, so much for a five-part cure, and so on until a fat fee was agreed upon for a ten-part cure. Ten is the Chinese number of completion.

Neglected cases of eczema were common and victims would often come to natives who had studied with the foreign doctors. The

diagnosis would be leprosy, and fifty dollars would sometimes be collected for a ten-part cure.

A very considerable proportion of our cases were surgical, for the Chinese doctor knew nothing of the art. Everything, from a boil on the head adorned with a tar plaster to an ovarian cyst diagnosed as "wind," would come to our dispensary. Fractures and dislocations were treated without reduction. Plasters were applied and the victim assured that in a short time the pain and swelling would be controlled. If he returned to the native doctor, complaining of deformity or stiffness of the joint, he would be supplied with more plasters. The Chinese can out-alcok Alcock on the plaster business. In some places there was an unwritten law that whosoever was cured by a plaster must take the plaster back to the doctor and paste it on the front of his office. I have seen many a doctor's house adorned with hundreds of dirty rags, which either indicated a rushing plaster business or some questionable activity on the doctor's part after honest folk were asleep.

Unique Methods of Diagnosis and Treatment

There is no doubt but that the native doctors had knowledge of some valuable drug treatment, but, unfortunately, this was all held secret by individuals. There was very little that we could learn, and what I did obtain was of no use. This for example.

Hearing that a man had died of *kop shik shui hon*—a disease I had never heard of—I took occasion to call on a learned Chinese acquaintance, who, being under obligations for certain favors, very graciously enlightened me. The diagnosis was difficult, he said, but could be made by a secret method. Take a hard-boiled egg, thrust into it a silver pin, bind the egg over the navel of the sufferer. After a time remove and examine the pin. If it has become black, the disease is present and the man will die unless a certain remedy is quickly used. I asked for the potent life-saving remedy. Answer: The chips from a carpenter-shop, to be boiled in stagnant pond water and this decoction to be taken freely.

Ginseng was the great all-sufficient tonic and aphrodisiac. Never a chronic case fell into our hands but that he had a record of the free use of ginseng. Unless my readers are conversant with certain literature from St. Louis, the use of ginseng has not been called to their attention. There is, however, no lack of evidence that the drug has virtue.

Mercury and arsenic were known to the

native physicians, the former as an anti-syphilitic, the latter as an escharotic. The arsenical pastes were applied to abscesses, and in due time the pus would flow. The incurving of the eyelids, owing to old trachoma, was often treated with an escharotic paste, to the external parts of the lid. There would be a slough and a scar, which sometimes would draw out the lid and give some relief.

But in the line of animal-therapy our Chinese competitors had us bowing our heads in shamed ignorance, for that time we knew next to nothing of orchitic fluid, croctalin, adrenalin, pituitrin, thyroidectin, goat-lymph, or horse-serum. All I had to offset their boasts concerning the virtues of dried snakes, toads, lizards, powdered bugs and spiders, and the filings of the bones, horns and teeth of various animals were a few remarks concerning cantharides and *blatta orientalis*. Here is an incident illustrating the native idea of animal-therapy.

An Englishman was exhibiting a rhinoceros. The people were much impressed with the power of the great animal, and the manager was quietly approached with a generous offer for the animal's urine. To his astonishment he learned that the animal's strength was imparted to the urine and that the fluid was to be used as a tonic. The keeper made an honest effort (so he told me) to collect the urine, but could not succeed, so he sold the Chinese human urine. He boiled it before giving to the men, so that, said he, it would do no harm.

Faith in the Foreign Doctor

The confidence which the Chinese had in the foreign physician was to us remarkable. To them it did not seem inconsistent to follow a man with hoots, jeers and shouts of "kill the foreign devil," and the next day to allow the same "devil" to put one to sleep to reduce a dislocation which had been treated for three months with plasters.

One secret of their confidence was their faith in the idols. A sufferer would go to a temple and in his prayer ask whether he should go to the foreign doctor. He would then throw the divining blocks, and if the answer was "Yes" he would feel assured that the idol had sent him, and no matter what strange method the doctor proposed it would be well.

In an inland city where I resided for several years I once had an unpleasant experience from the overconfidence on the part of the people. Two missionaries had been driven from the city and when the populace had

quieted the job of opening the work was assigned to a doctor. In the midst of much abuse and persecution just stopping short of physical violence, a night-messenger came from a rich man beseeching the honor of my presence in his home. The only son was about to become a father, but the mother was dying and the child had not been born. Could the wise foreigner help? An easy forceps operation presented the despairing father with a son and placed the mother out of danger.

The story of that night's work spread through the city; abuse did not cease, but the sick began to call for help. Among the cases was one of advanced tuberculosis and one of an abscess of the liver. I tried to make clear that no human help could avail in either and ventured to predict how long each one could live. The Chinese were angered and reported that treatment was refused, in the hope on my part that a large sum of money would be raised to fee me. While these things were being discussed the poor patients died at about the time predicted.

Chinese public opinion promptly changed. That the foreign doctor knew how long a man would live became the town talk. Of this I was ignorant, but noticed that when I would give an unfavorable prognosis medicine would be refused and no subsequent call would be sent me. After a time I made inquiry and found that when the doctor said a man's case was hopeless food was withdrawn; for, argued the frugal Chinaman, what is the use in giving a man food who cannot recover. Thus it came about, strangely enough, that with the growth of my mortality list my reputation increased.

Experience in Severe Obstetrical Cases

I had numerous neglected obstetrical cases to handle, and results were remarkably good, both as to mother and child. This in the face of the fact that always the prospective mother had been dieted on ginger and vinegar and had been surrounded with filthy clothing.

One night I was called for obstetric service. The woman was found lying in the prow of a small boat about twelve feet long and four feet wide. The forward part of the boat was covered with a curved mat roof. Creeping on hands and knees, I worked up to within reach of the sufferer. I found a long-neglected occiput-posterior firmly fixed. Crouching between the woman's knees, a vain effort at instrumental delivery was made.

Then craniotomy was performed, the child's head crushed, and the woman safely delivered. This was the only occasion on which I backed out after being successful. The fee, thanks.

Sometimes the doctor received more. I was called to a woman living in a miserable shed not fit for a chicken-coop. The midwife assured me that this was the woman's home and that her husband was a night-watchman. She was found to be with twins. A high forceps operation for both children was necessary. Mother and children lived. The fee proffered and accepted was fifty cents. Later I learned that the people had recently moved into a new house and not caring to have it defiled by the death of the woman they had moved her to the shed where I found her. The poverty story was to prevent the foreigner holding them up for a big fee.

"Worms" and Bubonic Plague

During the height of an epidemic of bubonic plague a Chinaman informed me that at last a remedy had been found for the disease. I was eager to be informed, since my mortality was running about sixty percent. This was it: Take of *cham* wood shavings a handful and boil in a quart of water. Moisten a cloth in the water. Expose the patient's breast and rub up and down with the moist cloth. In a short time little black worms will be seen to come out of the skin. These are the cause of the fever, and if one can get them all out the patient will recover. When it is known that the average Chinaman bathes his body with soap not at all, it is clear whence came the "black worms."

Writing of worms, reminds me of a real worm story. Examining a tooth one day, the pained possessor of it asked, "Healer of life, is there a worm in it?" He was assured that there was not, and in a moment more the tooth lay in his hand for his own examination. However, my assistant assured me that worms did grow in teeth—he had seen them! An investigation was in order, and this is what developed.

A certain worm found on the roots of an aquatic plant, when dried, shrinks to the size of a mustard-seed, but when immersed in fluid it quickly takes on its former shape and form. A "wise" practitioner examines a decayed tooth and declares that there "is a worm in it." He bargains to remove it. The gums are manipulated until they bleed and the cavity fills with blood and saliva. Then a probe carrying in a cavity on its tip one of the dried worms is placed in the tooth.

More manipulation is in order while the worm is swelling. At last, with a small forceps, the worm is extracted and triumphantly held before the astonished gaze of the victim. Of course the ache ceases. If it returns, the dentist is ready to find and extract another worm for a satisfactory price.

An Epidemic of Asiatic Cholera

My most trying professional experience was an epidemic of Asiatic cholera. The infection was most virulent. Few lived more than twenty-four hours, many died in three hours. My patients all died. When I read a text-book treatment for this disease, I must wonder whether the authors ever saw a case of the intense type of the disease.

Another sadly interesting side of medical work in China was the large number of attempted suicide-cases in which we were called to save. In a land so overcrowded, where hope was dead to so many, where domestic and social injustice was the rule, and where the belief prevailed that one certain way to even up with an enemy was to die in his home, where one's spirit would ever torment the object of his hate, under such conditions suicide was common and the efforts to save the victim were dictated by frantic fear of his ghost.

Most of our patients chose the opium-

route. The vigorous use of permanganate of potassium, atropine, and the stomach-tube saved an encouraging number. One woman elected to end her sad life with a rope. She succeeded. Another woman chose lye. She died on the third day. One Christmas eve a young man quarreled with his father and elected to use a razor to put himself in a position to plague the old gentleman. He laid open his larynx. A chicken was killed, its body split open and laid on the wound, I found him with this strange dressing in place. The outcome was a small scar and a peculiar squeak in the voice.

While I was caring for this poor fellow, an interesting conversation was reported. Neighbors of the man were talking.

"Ah Tsan is better."

"Yes."

"The foreign doctor comes a long way every day to see him."

"Yes."

"He has no money, why does the doctor come?"

"There is no explanation."

"The doctor is crazy."

The noble physicians who are carrying to the sufferers in uncivilized lands the benefits and blessings of medical and surgical skill are not mad but have a part in the greatest work in the world. "And the greatest of these is love."

WHEN a patient is severely ill, treat him as thou wouldst wish to be treated thyself. If thou art called to a consultation, go at once and do not delay. If he ask thee for medicine, give it to him at once and do not ask if he be rich or poor. Use thy heart always to save life and to please all; so will thine own happiness be exalted. In the midst of the darkness of the world be sure there is someone who is protecting thee. When thou art called to an acute illness and thinkest with all thy might of nothing but making money out of the patient, if thy heart be not filled with love of thy neighbor, be sure that in the world there is someone who will punish thee.

—From a Chinese work on Medical Ethics.

WHAT OTHERS ARE DOING

ZENKER'S FIXING SOLUTION

The formula for Zenker's solution, employed for fixing microscopical preparations is as follows: Mercuric chloride, Gm. 5; potassium bichromate, Gm. 2.5; sodium sulphate, Gm. 1; 5 per cent. acetic acid, Cc. 100.

TREATMENT OF RED NOSE

According to Gross (*Med. Klin.*, 1913, p. 979), redness of the nose often may be cured, especially in the case of adolescents, by the internal administration of ichthyol. When this disfiguring condition occurs in anemic young women, the fugitive blushing of the nasal organ can frequently be corrected by the conjoined use of ichthyol and iron lactate, given in pill or capsule form, $1\frac{1}{2}$ grains, of each drug at a dose. The local application of a compress soaked in benzin will cause contraction of the congested capillaries, through the cold produced by evaporation. The blanching effect will sometimes persist for several hours. These applications should not be made near an open light or fire.

THE ACTION OF BILE UPON THE BACILLUS COLI

In *The Journal of Infectious Diseases* for May, E. O. Jordan gives the record of a series of experiments designed to determine to what degree the multiplication of the bacilli coli takes place in bile. With a view to ascertaining the degree of inhibition, a number of pure cultures of various ages and histories were placed in suitable suspension and in parallel series upon plain agar and bile-agar.

He ascertained that freshly isolated strains of this organism as well as those under long cultivation were inhibited by the bile to a noteworthy degree. This growth seems to take place with little regard to the vigor, or lack of it, of these bacilli. The observation showed that bile inhibits at least from one-third to one-half of the vital cells of the bacillus coli, and sometimes a much greater

proportion; that freshly isolated cultures are inhibited in the same degree as those under long cultivation and those subject to long sojourn in water; that there is no evidence that bacilli coli that were unable to grow on the bile medium were any more attenuated or less vigorous biologically than their fellows.

Jordan holds these facts to demonstrate that bile is an inhibiting substance for the bacillus coli as for other microorganisms, and that its presence involves the suppression of a certain number of viable cells.

ACTION OF LECITHIN IN POISONING

Lecithin is without toxic effect when administered parenterally (i. e., otherwise than by way of the alimentary tract) to the higher animals, according to E. Hauschmidt, of the pharmacologic institute at Jurjew, Russia (*Biochem. Zeitsch.*, through *Ther. Monatsh.*, 1913, No. 8), and even repeated injections do not cause anaphylactic phenomena.

However, these injections of lecithin exert an undoubted influence upon the action of various powerful poisons, interfering, for instance, with the effects of strychnine, curare, morphine, veronal, chloral, and ethyl-alcohol. On the contrary, the action of ricin is augmented by it, and also that of phosphorus under certain conditions.

DISINFECTION OF SCHOOL ROOMS

In a contribution to *The New York Medical Journal* (Sept. 22, 1913, p. 615), J. T. Ainslie Walker takes occasion to criticize a paper of Dr. Charles V. Chapin on school disinfection read at the school-hygiene congress that recently met in Buffalo. In this paper, Doctor Chapin declared that scarlet-fever, measles, and diphtheria rarely were contracted in the school; that there was no danger of breathing in floating diphtheria germs; and that infection by means of fomites was unlikely.

Walker takes sharp issue with Chapin on these three points, quoting statistics to show the increase of diphtheria, scarlet-fever, and

measles during the school-year and the rapid fall noticeable in the number of cases occurring during the summer vacation. He quotes many authorities to show that garments and dust may be, and are, a frequent means of transmission of disease. As a striking illustration he instanced the experience of Shackleton, who relates how on one of his polar expeditions some articles of clothing were taken from a chest which had not been opened since the start of their expedition three months before, but when this clothing was distributed among six members of the party four of them developed septic sore throats within thirty-six hours.

Walker is firmly of the opinion that great danger inheres in school-life and that it is essential to cleanse the school room properly at frequent intervals; that germ-life should be destroyed by the aid of proper disinfectants, the mere removal of visible dust being insufficient.

DIURNAL VARIATIONS IN URINARY INDICAN

If we examine the urine for indican every two hours from the first morning voiding until bedtime, W. H. King writes in *The Medical Record* (May 24, p. 928), we shall find the indican most plentiful in the morning and then see it gradually decreasing until toward evening, when it may begin to increase again slightly. This variation, irrespective of the specific gravity, show, he thinks, that the absorption of toxins is greater during the night.

This observation may explain the morning malaise, bad breath, bad taste in the mouth, and other sensations experienced by many upon awakening, as well as the morning exhaustion so characteristic in neurasthenic patients. When a patient complains of these symptoms, it is certainly the part of wisdom to secure a careful examination of the urine, as well as to "clean out, clean up, and keep clean."

THE BACILLUS BULGARICUS AS AN INTESTINAL ANTISEPTIC

When intestinal putrefaction is present in the small intestine, says W. H. King (*Med. Rec.*, May 24, p. 928), as evidenced by the sulpho-ethers in the urine being out of all proportion to the condition found in the stools, medication will be found of the greatest benefit; and here the lactic-acid bacilli are of the greatest value.

The Metchnikoff bacillary treatment likewise is of value when the colon is the principal seat of trouble; but benefit is less marked in such instances, although the bowels become more regular and the other symptoms attributable to putrefaction will be relieved to a certain degree.

EYE TROUBLES AND INTESTINAL AUTOINTOXICATION

W. H. King (*Med. Rec.*, May 24, p. 928) tells of a patient who had visited many oculists, both of New York and Berlin, on account of weakness of her eyes, close application of which, for only a few minutes, caused her the greatest distress. The oculists consulted could find nothing materially wrong, for the reason that the weakness arose from a condition apparently more general than local. Nevertheless, the glasses had been changed and the ocular muscles trained by the oculists; but without effect.

Later, Dr. King treated the patient for autointoxication, without any thought, however, of her ocular condition, when, to his surprise, her eye troubles began to improve at once and within five months after discontinuing the systemic treatment she was able to read and sew for long periods without suffering.

APOMORPHINE IN INSOMNIA

According to Dr. Francis Hare (*Brit. Med. Jour.*, Sept. 13, p. 663), apomorphine is an excellent remedy for the insomnia of alcoholism. In acute cases, 1-10 grain is recommended hypodermically, but care must be taken not to induce vomiting. In chronic conditions, 1-40 of a grain, given hypodermically, as a rule produces a short sleep. This observation is worthy of further investigation.

SANDALWOOD OIL IN URINARY INFECTION

According to Jordan as well as Walker (*Brit. Med. Jour.*, Sept. 13, 1913), the bacillus coli grows readily in urine after the ingestion of sandalwood oil. This substance seems to have, however, a somewhat specific action upon the staphylococcus, growth of which is delayed six or seven times the length beyond the normal period when this drug is being taken. For this reason, it is always worth trying in cystitis owing to staphylococcus

infection alone. According to Jordan, it is probable that this remedy may have some selective action upon cocci generally, which would explain its undoubted value in gonococcus infections.

UVA URSI AS A URINARY ANTISEPTIC

Jordan has been experimenting with uva ursi as a urinary antiseptic, employing both an alcoholic extract and the glucoside arbutin. The uva ursi was found to possess a slight but noticeable diuretic action, and putrefaction of the urine was delayed following its use. This antiseptic action was exerted both in alkaline and in acid urines, but was more marked when the reaction was acid. The bacillus coli grew quite readily in acid specimens, but very poorly in alkaline ones. The staphylococcus seems very slightly affected by the drug.

The antiseptic condition following the administration of arbutin, which was given in 20-grain doses three times daily, was only slight, and, so, Doctor Jordan concludes that as an antiseptic the active principle alone is inferior to the whole drug. However, as a diuretic, arbutin, he thinks, is much more valuable than uva ursi itself.

This, in the main, is in accord with our own observations. Arbutin probably is our most valuable diuretic; and it possesses the added and peculiar virtue of adding tone and recuperative power to the urinary mucosa. In this respect, arbutin is unexcelled. In urinary-tract infections, this glucoside should always be given, but generally in association with some more powerful urinary antiseptic.

THE DIET FOR CHOLELITHIASIS SUBJECTS

In a paper read before the International Congress for Physiotherapy, held in Berlin in March, Dr. Salomon (*Muench. Med. Woch.*, Apr. 15, 1913), discussed the proper dietetic regimen in cholelithiasis during the latent stage. His idea is that this prophylactic diet should be the same as in chronic hyperacidity; hence, avoidance of fat-foods of low value [Just what fats are meant the author does not tell us—Ed.] strong spices, coarse kales, uncooked garden-vegetables, coffee, spirits, and all fatty prepared foods. Cold beverages also are warned against.

The author warns strongly against the habitual use of cathartics, although the laxative salines, rationally prescribed, seem to be well borne.

As probably the best preventive of gallstones he considers regulation of intestinal peristalsis, this favoring free flow of the bile. For the latter purpose, he recommends, as is common, a coarse diet of graham-bread, fresh fruit, and boiled garden vegetables. The much-praised grape-cure he puts in this category. Ingestion of albumin may have to be restricted.

EMETINE IN DYSENTERY—MORE TESTIMONY

Speaking of the value of emetine hydrochloride in the treatment of amebic dysentery, the editor of *The American Journal of Surgery* (Mar., 1913, p. 111) says: "Specific therapy has gained another triumph, and emetine will take its place with quinine, salvarsan, and mercury. Indeed, in the promptness and completeness with which it destroys the invading organisms it seems quite to surpass these!"

THE QUININE CURE OF RABIES

The success in treating several diseases of a parasitic nature, notably malaria, sleeping-sickness, and syphilis, by means of internal medication, led Virgil H. Moon to undertake a series of experiments upon dogs to determine the effect of quinine in rabies. This work was done at the Memorial Institute for Infectious Diseases of Chicago, and the results have been published in *The Journal of Infectious Diseases* for July last (p. 165).

Dogs were inoculated with the brain substance from rabid animals and allowed to develop the active symptoms of the disease. When these symptoms were beginning to develop (unusual excitability, restlessness, changed quality of the bark, decreased appetite, difficulty of swallowing, muscular spasms, paralysis of the legs, etc.), the animal was given quinine sulphate in large doses several times daily. In every instance a control-animal was inoculated with the material from the same rabid animal, but it received no quinine.

The drug usually was given in capsules, the daily amount for a 6- or 7-kilogram dog being from 1.0 to 1.6 Grams (15 to 24 grains); this being equivalent to from 12 to 18 Grams (3 to 4 drams) daily for an average man.

Six dogs in all were inoculated. Every one of the control-animals (those which received no quinine) died from rabies. All the three dogs subjected to the quinine treatment survived; two being alive and healthy at the time

of writing, the third dying from an obscure cause two and one-half months after treatment.

While Dr. Moon admits that the number of cases reported is insufficient to warrant too sweeping deductions, and while he does not assume that because quinine is effective in dogs it must be equally so in humans, nevertheless, he is very much encouraged by these results, and expresses the opinion that hereafter we should not regard the medical treatment of developed hydrophobia in human victims as necessarily hopeless. Furthermore, should quinine not prove effective in such patients, other remedies should be given a thorough trial experimentally.

In human subjects the quinine treatment should be instituted as early as possible, and frequently enough to get the full effect. He also suggests resort to sedatives for quieting the nervousness and excitability, as well as spraying of the pharynx with cocaine solution in order to prevent pharyngeal spasm. Curare, he says, has been given hypodermically, in minute doses, to relieve extreme muscular spasm.

Obviously, everything possible should be done to conserve the patient's strength, as exhaustion weakens resistance to any disease. Of course, this method of treatment is not offered as a substitute for the Pasteur treatment, which is purely prophylactic.

UTERINE HEMORRHAGE DUE TO FIBROIDS

The utilization of the Roentgen-rays for treating uterine hemorrhage is recommended, by George F. Pfahler, in *The American Journal of Obstetrics* (May, 1913, p. 862), and this method seems to be especially valuable when the hemorrhage is caused by the presence of fibroids.

Dr. Pfahler quotes the following indications for Roentgen therapy in uterine fibroids, as given by Menge and Eymers: (1) In all older women with myoma in whom there is already a well-advanced anemia, and which may be the cause of an anemic heart. (2) In all elderly and young women with myoma in whom there is marked organic heart disease, diabetes mellitus, chronic nephritis, marked lung disease, and goiter associated with cardiac symptoms.

In general, the older the patient and the more nearly she has approached the menopause, the more prompt and more satisfactory will be the results. With regard to age, the patients over forty show best results. Under

forty, roentgenotherapy is not the method of choice.

The type of tumor will influence the result very much. Those of the intramural or interstitial variety give the best results. The subserous, pedunculated and submucous variety do not give good results and should be operated for. In the subserous or submucous varieties, excision might be performed, to be followed by roentgenotherapy, to prevent a recurrence or further development of fibroids.

For inducing complete, permanent amenorrhea, from one to six series of applications will be necessary; and this usually requires from three to six months.

EMETINE HYDROCHLORIDE IN AMEBIC DYSENTERY

Randolph Lyons, of New Orleans, adds the record of another case of amebic dysentery treated with emetine hydrochloride, to the six he already has reported, in an interesting résumé published in *The New Orleans Medical and Surgical Journal* (Oct., 1913, p. 278). Lyons' deductions are very carefully made, and he is anxious to avoid overenthusiasm because of his most favorable results. A synopsis follows:

Of the 7 patients having amebic dysentery treated with emetine hydrochloride, all apparently were cured, except one, who was hopeless from the beginning. The latter suffered from peritonitis upon his admission to the hospital, and the necropsy disclosed gangrene of the large intestine, with three perforations. All but one of the surviving patients have been seen or heard from, and these have remained well after their discharge, the periods being from one to four and one-half months.

The duration of the disease in these 7 cases varied from fifteen days to eighteen months. The stay in the hospital varied from eight days to thirty-nine days. No bad symptoms of any kind were observed from the injections. The largest dose of emetine hydrochloride given was $\frac{3}{4}$ of a grain, but in two cases, now under treatment, Dr. Lyons says he has administered as much as 2 grains (equivalent to about 180 grains of powdered ipecac) in a day, with no untoward results following.

Lyons' last case occurred in a man thirty-seven years of age. His illness began about a year before, with slight diarrhea and occasional abdominal pain. The disease has progressed gradually for the past six months, the patient has become weaker and paler and lost 25 or 30 pounds. The number of stools has averaged, for the last month, from nine

to ten in twenty-four hours, and these contain bloody mucus, while the passage was accompanied by tenesmus and a dull persistent pain in the lower half of the abdomen.

This patient was given 1-3 grain of emetine hydrochloride morning and evening. The first day the number of stools was reduced from five to two. By the third day there was but one daily stool. Up to this time the patient had received a total of 2 grains of emetine hydrochloride in three days. On the seventh day the patient was allowed to sit up for a few hours, and specimens of the feces obtained with the rectal tube were found free from amebas and blood. He was discharged on the seventeenth day. On the thirty-first day he had gained 15 pounds, the hemoglobin was 90 percent, and the bowels were perfectly normal. Since then he has remained well. In concluding his report, Doctor Lyons says:

"I do not feel justified, from my limited experience with emetine, in making any definite assertions. However, I believe that the drug may prove to be of great value in the treatment of amebic disease. Whether the cures thus far reported will be permanent cannot yet be foretold. Still, it must be borne in mind that relapses often occur because patients are discharged as cured too soon; nevertheless the fault is attributed to the medication.

"Again, many recurrences that are reported among ignorant individuals (especially true in respect to negroes) are due to the fact that the patients return to the same infected localities and conditions whence the disease was derived, and the so-called relapse may not be due to a reinfection from within, but to a fresh infection from without."

BORIC ACID, BENZOIC ACID, AND THE BENZOATES

In his paper upon urinary antiseptics (*Brit. Med. Jour.*, Sept. 13, 1913, p. 648), Anson Jordan asserts that boric acid given by the mouth as a urinary antiseptic has not obtained the recognition which it deserves. His experiments show that whether it is used when there is alkaline urine or an acid one, this drug is efficient in rendering it antiseptic and that its power apparently is practically unaffected by the reaction. In this respect it differs from all other drugs which Jordan has investigated. He believes that boric acid without doubt is the most efficient urinary antiseptic agent *when the urine is alkaline* and must be made acid. It seems to be equally

effective against the various different microorganisms.

Benzoic acid and ammonium benzoate are used for rendering the urine antiseptic and also for the purpose of increasing its acidity, for both of which purposes their reputation is higher than that of salicylic acid. Benzoic acid does not cause any higher degree of acidity than does ammonium benzoate, and seems to possess no advantage over the salt. Jordan concludes that the benzoates are second only to acid sodium phosphate. (Walker in the same symposium declares that the benzoates are just as efficient as is acid sodium phosphate.)

As to the antiseptic power of the benzoates, Jordan affirms that alkaline benzoic urine appears to possess no antiseptic power worth speaking of, although, as the acidity increases, there is more or less retardation of putrefaction. The bacillus coli grows very sparingly in highly acid benzoic urines. The staphylococcus, on the contrary, seems quite unaffected by benzoic urine.

GASTRIC DISTENSION AND BLOOD PRESSURE

Experiments with healthy individuals, as also with those having cardiac trouble, performed by Dr. Funder (*Deut. Med. Woch.*, 1913, No. 14), lead to the conclusion that circulatory disturbances after meals are not the result of pressure of the diaphragm upon the heart, but must be of reflex nature. His method was, to produce adequate pressure over the abdomen, and, also, to inflate the stomach artificially; neither of which disturbed breathing, pulse, or blood pressure.

GOITER ARTIFICIALLY PRODUCED BY SUSPECTED WATER

Repeating the experiments of Bircher, which seem to support the geologic-water theory of the cause of bronchocele, Blanel and Reich have kept a large number of rats upon water obtained from two regions where goiters are prevalent, and report (*Deut. Arch. f. Klin. Med.*, No. 1, 1913; through *Muench. Med. Woch.*, No. 16, 1913) that on the whole these confirm Bircher's claims.

While the latter employed water from goitrous regions of Switzerland, the present investigators took their material from Wurmlingen and Heirschau, where between 85 and 90 percent of the children are affected.

The experiments were varied, to exclude and include all possible factors, and the experi-

mental healthy rats were obtained from Berlin, where hyperthyroidism is not a feature. The strumism produced was not as pronounced as that described by Bircher, and the authors frankly admit that, while striking, their work does not remove all objections to the water-theory of goiter origin.

HEXAMETHYLENAMINE TO PREVENT POST-OPERATIVE TYMPANY

In considering the disagreeable and sometimes dangerous tympanites following surgical operation, G. B. La Roque (*The. Gaz.*, July 15, 1913, p. 471) some two years ago was struck with the idea that hexamethylenamine might succeed in some way in causing a diminished gas accumulation in the bowel.

In pursuance of this thought, La Roque began to give this remedy for two days previous to the operation, prescribing it in 10-grain doses, dissolved in a glass of water, every two hours between meals while the patient was awake. Prior to the operation the bowels are cleaned out by means of castor oil and enemas. Immediately after operation, the nurse having dissolved 120 grains of hexamethylenamine in a quart of pure water (usually without ice), the remedy is given to the patient in small quantities whenever he complains of thirst. As a rule, he will take and retain at least a quart of this medicated (and tasteless) water, during the first twenty-four hours. Thereafter, 10 grains of hexamethylenamine dissolved in a tumblerful of water may be administered every two hours, so that between 60 and 120 grains of the drug is being taken daily for three days after operation.

La Roque has employed this method of treatment in 300 cases, including all kinds of operative work. He concludes that with this method of treatment the postoperative typanites is prevented in practically all cases; in fact out of 300 patients who received this remedy, only 4 had real tympanites, and one of these could not tolerate the drug.

UTERINE HEMORRHAGE AND HIGH BLOOD PRESSURE

In an excellent paper, printed in *The Practitioner* for June, Beckwith Whitehouse states that increased arterial pressure is not an uncommon cause of uterine hemorrhage at the time of the menopause. An increase in vascular tension naturally occurs at the cessation of the menses, and it is not surprising

that it sometimes finds an outlet in "flooding" at repeated intervals of two or three months.

This condition can be diagnosed by the type of bleeding by the fact that it frequently is preceded by marked flushes and headaches, and by an estimation of the blood pressure by means of the sphygmomanometer. Treatment obviously is by drugs which reduce arterial tension, such as purgatives, glonoin, and by suitable diet.

A CASE OF ASPIRIN POISONING

"At the present time aspirin is probably more frequently employed than any other medicinal substance," Lindsey and Leckie write in *The British Medical Journal*, for May 24, page 1108. Inasmuch as only a few cases have been recorded in which toxic symptoms have followed its use, the following report of the writers mentioned is of considerable interest:

"The patient was a painter, aged 29, who, when in the Royal Mineral Water Hospital one day, complained of a slight cold, and at 7 p. m. was given 10 grains of aspirin. Just previously he had taken a glass of milk. An hour and a half later he felt a burning pain in his epigastrium, and his right eyelids began to swell. The swelling then quickly spread over the left eyelids, the face, lips, tongue, and pharynx. The roof of his mouth 'felt dry,' his speech became thick, and urticarial blotches appeared over his chest and arms. At the end of three hours from the time of taking the aspirin he could see out of the right eye only with difficulty. There was no dyspnea. He experienced some discomfort from the swelling of the face and presented a very bloated appearance. Next morning, that is, fifteen hours after the administration of the drug, the only sign remaining consisted of some puffiness of the eyelids, which did not entirely disappear until the fourth day."

WHAT IS A DREAM?

A most illuminating theory of dream causation is that presented by Freud, whose remarkable hypothesis relative to the etiology of neurasthenic, hysteric, and borderland mental state has become so popular in this country. As *The Lancet* strikingly says, in its issue of May 10, (p. 1327):

"Freud's theory of dreams is recognized to be the corner-stone of his psychological system; it is the point at which the normal

and abnormal elements in mental life meet. Very briefly, Freud holds that all dreams are doubles; that the dream as related by the subject, however confused and fragmentary it may seem, is only the outward manifestation of elaborate mental processes. What the dreamer is able to narrate is but the 'manifest content' of the dream; it is in reality the exteriorization of a 'latent content,' made up of elements of high personal significance, which can be recovered by the technic of psychoanalysis.

"The elements of the latent content, the true 'dream thoughts' are modified, repressed, distorted, according to laws which, in Freud's opinion, are perfectly definite, and for reasons that can readily be understood. One of his fundamental generalizations is, that *every dream is a wish fulfillment*. Another is, that all dreams are egoistic. A third is, that the wishes repressed in waking life but fulfilled in dream-life are predominantly sexual.

"One of the cardinal features of the theory is the place assigned, and the importance attached to, a 'censor.' Freud assumes that certain mental processes are prevented from reaching consciousness by the activity of a certain psychic resistance, which is almost personified by him and dignified as an 'endopsychic censor.'

"However convenient the terminology, it is not one of the least difficult conceptions of the theory, this elevation of an element of resistance into a quasi personality who sits in judgment on dream-thoughts, whose watchful eye they are forever trying to evade, whose efforts at repression it is apparently their delight to balk."

HEXAMETHYLENAMINE AS A URINARY ANTISEPTIC

In the report of some interesting work upon urinary antiseptics, Anson Jordan (*Brit. Med. Jour.*, Sept. 13, 1913, p. 648) states that the antiseptic power of urotropin (hexamethylenamine) in alkaline or neutral urine is almost negligible, that this power rises rapidly as the acidity increases, and that when the latter reaches about 4 (that is, slightly above the normal) it becomes absolute and the urine remains indefinitely sterile.

This antiseptic power depends, as Jordan's experiments demonstrate, upon the fact that in acid solution hexamethylenamine tends to disintegrate into formaldehyde and ammonium compounds; while in alkaline solution no such disassociation occurs, and, hence, the drug is

inert. Formaldehyde is the active antiseptic agent.

The practical conclusion from this investigation is, that, when the urine is alkaline and a urinary antiseptic is indicated, it should be made acid by the use of appropriate remedies, such as the benzoates or acid sodium phosphate.

During the discussion of this subject before the British Medical Association, one speaker made the statement that hexamethylenamine always should be administered in association with remedies designed to acidulate the urine. Two remedies advocated for this purpose by J. W. Thomson Walker are, ammonium benzoate (which may be given in doses of 15 grains thrice daily) and acid sodium phosphate (which may be given in doses of 30 grains three times daily). According to this writer, the dosage of hexamethylenamine often is too small. Usually, in diseases of the bladder in which frequent micturition is a symptom, 5 grains every four hours will suffice, but, when the desired action is not obtained, he gives as high as 15 or 20 grains of the drug three times daily.

Urotropin itself is nontoxic, but it is true that the liberation of a high percentage of formaldehyde in the urine may give rise to irritation of the genitourinary tract. Before giving the larger doses, therefore, the physician should first ascertain by smaller doses whether the patient exhibits any idiosyncrasy toward this drug.

SOME DANGERS FROM QUININE AND UREA HYDROCHLORIDE

According to Samuel T. Earle (*Interstate Med. Jour.*, Feb., 1913, p. 143), there is danger of sloughing following the use of quinine and urea hydrochloride as a local anesthetic when a solution stronger than 3 percent is employed. Nor are weaker solutions free from danger.

Dr. Arthur Hebb, in April, 1912, observed an extensive abscess following the use of a 1-percent solution for the removal of internal hemorrhoids, while a few weeks subsequent to this Dr. Lewis J. Rosenthal, Dr. Earle's assistant, had two cases of sloughing following the use of a 2-percent solution in hemorrhoidal operations. In July of the same year, Dr. Earle had a similar experience in such a case with a solution of the same strength; the wound seemed to do remarkably well, but on the third day the temperature rose to 103 degrees. On the fifth day, there was a distinct slough of considerable size beneath the

mucous membrane and above the external sphincter. After a few days the slough broke down and liquid pus was discharged.

In *The Journal of the American Medical Association* (Sept. 14, 1912), Dr. H. H. Rightor, of Helena, Arkansas, has a report of a similar result following the use of quinine and urea given hypodermically in an operation for circumcision. Here also necrosis was delayed for several days. Dr. Earle's experience shows that quinine and urea hydrochloride, while a valuable local anesthetic, is not free from disadvantages and dangers.

THERE ARE TWO KINDS OF HELENIN

Strangely—and unfortunately—there are two active-principle preparations bearing the name helenin. This fact was brought to light through the publication of an abstract in the last number of *CLINICAL MEDICINE* (p. 931) concerning helenium autumnale, or sneezeweed. The active principle of this plant is a crystalline substance known as helenin. It has the empirical formula $C_{20}H_{25}O_5$, with a melting-point of 167° to 168° C. Like the drug from which it is derived, it is exceedingly irritant when applied to mucous membranes.

The active principle of elecampane—inula helenium—also is called helenin. This substance is a camphoraceous body, has the empirical formula $C_{15}H_{20}O_2$ and melts at 76° C. The action of helenin from inula is not at all like the helenin from helenium, and it is important these two drugs be not confused.

The sneezeweed principle is not adapted for very general therapeutic use; while the elecampane camphor of the same name is one of the most valuable remedies we have for the treatment of various respiratory ailments.

THE ATROPINE TEST OF THE BRADYCARDIA OF TYPHOID FEVER

As is well known, the effect of atropine upon the pulse has been used as a prognostic sign in cardiac disease. Thus Talley has shown (*American Journal of the Medical Sciences*, October, 1912) that, while in the normal heart the injection of 2 mgm. of atropine into an adult increases the rapidity of the pulse from 30 beats to 40, when there is a serious disease of the organ or if the patient has been recently subjected to an exhausting general disease, the acceleration is much less; in fact, Talley concluded that when the pulse increases 20 beats or less under the

influence of atropine the outlook is not very promising.

Roger (*Province Médicale*, May 17, 1913) has applied this test in cases of bradycardia occurring during typhoid fever and similar diseases, and found it of some value in differential diagnosis. In other words, in cases of paratyphoid and a febrile gastric attack simulating typhoid, the pulse was in each case increased 75 to 80 percent, that is, from 50 to 90 in one case and from 60 to 100 in the other. However, in a third case of bradycardia, with a beginning pulse of 48, the nature of the affection being undetermined, where there was a decided elevation of temperature, erythema, and intense headache, the atropine test was negative, the pulse increasing only about 12 beats following the injection of this drug.

In conclusion, Roger says that the bradycardia occurring in typhoid fever and similar diseases usually is dependent upon the nervous system, that is, upon irritation of the pneumogastric nerve or its bulbar center by the typhoid toxin. This he calls the extracardial bradycardia, and in these cases there is obtained the positive atropine reaction, namely, a decided increase in the pulse rate following the injection of this drug.

The intracardial bradycardia, on the contrary, is present when the typhoid toxin attacks all the organs, including the heart-muscle itself. Here the atropine reaction is likely to be negative, and naturally the prognosis is also less favorable; although it should not be assumed that even in this type recovery may not be expected. It is to be remembered, however, that bradycardia may be present prior to the typhoid infection, and also that it may be due to complications, such as icterus, meningitis, or to medication, as for instance with digitalis. Still, the atropine reaction is plainly of value in making prognoses in cases of bradycardia, while being quite harmless.

GASTRIC HYPERACIDITY AND DUODENAL ULCER

Francis W. Palfrey (*Am. Jour. Med. Sciences*, June, 1913) states that what formerly was regarded as simply sour stomach or heartburn, in later years has been shown, in many instances, to be gastric or duodenal ulcer. The patient affected with this form of hyperacidity eats his meals with relish, but a short time afterward he becomes conscious of a burning sensation in his stomach, which gradually increases in severity. After

an hour or more these symptoms gradually pass off, only to recur however at the next meal. Generally relief is obtained by the ingestion of an alkali.

Dr. Palfrey states that, while in some patients there actually is present an excess of acid, in others the examination of the test breakfast shows nothing abnormal in the content of the gastric juice, and this symptom he believes may be explained by supposing a lack of balance between the acidity of the stomach and of the duodenum, the former viscus emptying itself (as shown by Cannon) only as fast as the liquid poured into the duodenum from the stomach has been neutralized by the fluids normally encountered. Hence, if we can increase the alkalinity of the contents of the duodenum, and thereby shorten the time required for neutralizing the gastric fluid emptied into it, then the stomach will correspondingly be able to relieve itself more rapidly of its contents. And this result can be brought about, according to Palfrey, by the ingestion of ox-bile, which by stimulating the liver, induces a free flow of the hepatic secretion.

Very striking results have been obtained by this method of treatment in pronounced cases of gastric and duodenal ulcer, while in no typical instance of dyspepsia of a milder type presenting hyperacidity, Dr. Palfrey says, has pyrosis and pain directly connected with eating failed to be relieved.

Dr. Palfrey gives the ox-bile in a salo-coated pill containing 4 grains; however a much more stable and equally efficient and far more definite preparation would be a preparation of the bile-salts, which are now available in elegant pharmaceutical forms.

NEW REMEDIES

Alendrin—carbaminic ester of dichlorisopropyl-alcohol—has been found an excellent hypnotic (one dose of 1 to 1 1/2 Grams) and sedative in anxiety-neuroses and for all nervous and psychic derangements (1-2 Gram three times daily), even in the presence of great pain and when other remedies had failed.

Cystopurin is a compound of hexamethylentetramine with sodium acetate. In doses of 6 Grams per day, according to G. Krebs (*Zeitschr. f. Urol.*, 1912, p. 654), it acts as an excellent disinfectant of the urine.

Hexal—hexamethylentetramine sulphosalicylate—introduced by Riedel, belongs with the class of urinary disinfectants. In the alkaline intestine, it is split into its com-

ponent parts, is rapidly absorbed, and eliminated after forty-eight hours. E. R. Frank considers it (*Muench. Med. Woch.*, 1912, No. 52) preferable to the other representatives of this chemical group—helmitol, cystopurin, amphotropin, and mismaldyl. In a series of 80 cases, he has seen no untoward by-effects.

Noviform is a compound of bismuth with tribromphenol, and is claimed to be an improvement upon xeroform; being astringent, antiseptic, antipurulent, penetrant, non-irritant, and nontoxic. Dr. Million (*Muench. Med. Woch.*, 1912, No. 52) considers it an excellent substitute for iodoform. Other surgeons (*Most, Luksch*) also give it praise.

Phenylcinchonic ethyl ester is recommended by A. Stephan (*Apoth. Zeit.*, 1912, No. 27) as a desirable substitute, for certain purposes, of atophan, the plain phenylcinchonic acid. Like the latter, it is an eliminant of uric acid, but this action proceeds more slowly and evenly because of its lower index of solubility. It is without taste.

Melubrin is being tried, with satisfactory results, for acute rheumatism and similar conditions (*J. Mueller, Ther. Monatsh.*, 1913, No. 1). Superiority over salicylates is claimed for it, in that it induces less sudorific activity.

Pellidol (and azodolen, a prepared form) is chemically related to scarlet-red, being the diacetylamidoazotoluol. It is soluble in fats. In the polyclinic for children at Giessen, Germany, it has been extensively tried, according to Dr. Bantlin (*Muench. Med. Woch.*, 1912, No. 52), in eczema of the exudative diathesis, and results frequently were better than with the ordinary remedies. Pellidol, a mixture of pellidol with an iodoalbumin, proved excellent for healing burns, epithelialization being promoted by it. Pellidol is claimed to be nontoxic.

Mesbé is a preparation derived from *Sida rhombifolia cubilguitiana*, a Central American plant, which is being tried as a new local cure for tuberculous conditions of the nose and throat and other surgical forms. Hermann (*Muench. Med. Woch.*, 1912, No. 50) reports his experience with three cases; but very little as yet is known about this new drug.

Valamin is the valerianic-acid ester of amylene hydrate, and is a new sedative and hypnotic devised at the municipal hospital of Berlin. Stein (*Med. Klin.*, 1913, No. 9) recommends it very highly giving from 8 to 12 grains for inducing sleep, and in 4-grain doses as a sedative.

MISCELLANEOUS ARTICLES

Colchicine: The Single Barreler In Acute Articular Rheumatism

IN ACUTE articular rheumatism, I rely solely upon colchicine to control the acute, very intensive variety of this painful condition at all ages and in either sex. During the past eighteen years, colchicine has not failed to do the work. Some time in March of 1894 I began to pin faith upon the single remedies and to study their effects on properly selected ailments, also how best to administer them with respect to the symptoms of disease as well as the quickest way of relieving and curing a given complaint.

Inflammation located in one or several articulations and rheumatic in nature is one of the diseases which often absolutely overwhelm a patient. Among remedies having the power of quick elimination in acute articular rheumatism, colchicine, in my hands, has proven to possess it in a superlative degree.

Many patients come to me complaining of but one point, sometimes two, of invasion—the shoulder or elbow-joints, or both. The wrists and ankles are usual sites at the beginning. The pains are moderately severe, and usually home treatment is first tried. One, two, six weeks elapse often before failure or but partial relief determines the sufferer to seek aid from a physician. Many members of a community hold down an acute invasion by resort to some form of drug to free the bowels. This fact explains the slight and sometimes considerable improvement. There comes a time when autotoxemia gets in a big charge, then follows the explosion. Colchicine acts equally well in any and all stages.

I will cite only a few cases to prove the efficiency of colchicine, but not less than two hundred have been treated successfully by me during these eighteen or more years with this single remedy; hence, my faith.

The case of a two-jointer—ankles. Was called in the latter part of March, 1894. He was a heavy-set German of 45 and a reliable

patron of a corner saloon. His occupation necessitated working in slush ice in the winter season. I had treated him several times previously, by using 3- to 5-grain doses of salicylic acid (pure crystal from oil) given in capsules, preceded or followed by intestinal flushings and antiseptics. Slow relief, but no cure.

This time Henry V. crippled in and said, "Doctor, my two ankles are loaded with sharp needles, every step breaks off a dozen. The pain is terrible."

I prepared a vial of 50 colchicine granules, 1-128 grain each, directing him to take one every fifteen minutes until four or six were taken, then every two hours as long as there were "needles" to cause pain.

"Well," said Henry, "I must have something for the strong pain."

"Sure, Henry, follow directions and the 'needles' will soften up and your pain will cease." Henry looked solemn and very incredulous at the little yellow granules, then hobbled out.

Several days later I met Henry hurrying along with a quick, vigorous step. "I am cured, doctor, but I nearly killed myself before I got next."

"How?"

"It was like this: Them 'ere little yellow seed looked so small I thought if one was good more would cure quicker, so I took several at a dose. After the fourth the pain got in my belly and I quickstepped for two hours in one spot. This gave me time to read the directions, and I made up my mind to take just one every two hours. When I got up the pain was not much—but I was hungry."

Henry had a few of those granules (colchicine) left, but he said that no amount of money could buy them. Several years have passed since then, but there has been no return of his rheumatism.

The rheumatics of childhood and youth

yield alike to colchicine. The younger life exhibits more sensitive features. Febrile and stomach symptoms must be met with aconitine, and sometimes with veratrine.

Cerium oxalate usually controls emesis, even when induced by crowding doses of colchicine; also, often the pain is so acute that to modify it requires gelseminine or hyoscyamine, or both, added to the solution made of colchicine. But few cases hold out over twelve to twenty-four hours under the rapid-fire single-barreler. When pain does lag, there is seldom need of repeating analgesics.

Visiting a family some distance in the country, the patient's sister, a woman of 25, married, always vigorous, mother of several healthy children, had complained for two months of soreness, stiffness and at times slight redness and swelling of both wrists. No skill was required to charge articular rheumatism as being the cause of her trouble. I had by me only 26 colchicine granules, 1-128 grain each, and I gave her these with the usual instructions. This absolutely cured her, to stay cured. I say "stay cured" because after three years she has enjoyed absolute freedom from the least manifestation of a single symptom, and the carrying in the meantime a big healthy boy to easy, successful delivery did not reawaken the rheumatism.

In the fall of 1912 I visited a lady 46 years of age, the wife of a soil-tiller, who was unable to move a single joint except in the cervical region, retaining ability to move her head. Temperature, 104° F.; history of constipation (they all have this); attack forty-eight hours old. A solution was made of colchicine, 1-128 grain; hyoscyamine, 1-250 grain; and gelseminine, 1-250 grain. The fever was soon controlled by another solution of aconitine and veratrine.

This visit was made late in the afternoon. By daylight the following morning the fever, pain, and joint features were banished. Patient being 20 miles out, she was seen but the one time. One hundred and twenty-eight doses of colchicine cured all acute trouble; sodoxylin put on the polish and finish; nuclein solution put the phagocytes on top and the opsonic index to normal.

Saw a farmer one cool forenoon in April, 1911. He was at the age of 38. The stertorous way oxygen was pulled in, the pallor, haggard face, the half-open eyes, sort of chilled me as I stepped in upon this picture. Seemed the undertaker's visit a better guess. One big toe, jaw, and head were the extent of his ability to exercise. Rousing him from

stupor, some questions put told me more of the situation.

His former physician had controlled the pain with morphine, hence his apparent last sleep when I came into his room. He had made his will, arranged his business two days previously, and was anxiously waiting to be ushered into "His presence." I soon had my rifle leveled and was firing straight at Old Rheumatism.

Next morning my "dead man" was occupying a big rocker-chair with a hole in the center. He was cheerful, able to joke, nearly able to walk, no pain; but the aroma from beneath that rocker was terrific. In a week he came to town in a lumber-wagon, revoked his will, and in two weeks more he was attending to business on the farm.

During the winter of 1879 a rushing practice exposed me so much and so long that I came down myself with a cracker-jack dose of acute articular rheumatism. Home at midnight suffering fierce pain in left knee-joint. Took 10 grains of quinine in capsules. Tried to get into my buggy to go to a sick child in the country. Threw up the quinine before I could get started. There was ice on the buggy-step, team was wild—so was I with my knee—foot slipped as I attempted to get in. My knee struck the step—gee whiz! but I went up with pain. Went to bed—now.

Next morning called a doctor. Left powders. Recognized when first dose came. Sent for drug-clerk. Dictated 8-ounce mixture of sodium salicylate, 20-grain doses. By the time I received it no joints worked. Contents of bottle at three doses, with the Dover's, put a hitch on me and the pain, and I slept. Six weeks in bed and six months getting well gave me lots of time to consider the inroads of rheumatism. I took a trifle less than a barrel of different decoctions. Could scarcely retain any medicine any length of time—threw it up. I took salicin the last two months, in 10-grain doses, which appeared to obtund gradually joint lameness.

I always figured wine of colchicum should produce much relief. It was late in my siege before I thought of it. Then my stomach rebelled.

Not until the Abbott age did we get colchicine in shape to do Old Rheumatism up. The active-principle therapeutics in all probability is of Belgian birth, but it required an American to put the greatest discovery of the age to the front—so why not say, "The Abbott Age of Clinical Therapeutics in America."

In scattering these lines on the positive effect of colchicine in acute rheumatism, I have made no attempt to group symptoms or to delve into the etiology or pathology. Rheumatism, as a disease, in any and all its phases is too much written of and about to require additional telling. The acute variety I treat solely and successfully with colchicine, and that settles it, so long as it works in future as in the past eighteen years.

J. D. JUSTICE.

Hunter, Okla.

[The old war-horses, like Justice, surely do know the ins and outs of these troublesome diseases. The Doctor has been an earnest student of drug-action for many years and can always give "pointers" worthy the attention of any man. Colchicine is assuredly a most valuable remedy. It should be used more in rheumatic and gouty states.—Ed.]

ABOUT THAT MELANODERMA IN A YOUNG GIRL

In the November number of *CLINICAL MEDICINE*, among the queries (page 965), we reported a most interesting case of melanoderma. It will be recalled that the patient in question is a child of 10 who since infancy has been growing darker and darker, until now the entire surface of her body is as deeply pigmented as that of the negro. Since quite evidently there is present some marked abnormality of some of the ductless glands, we referred the case-reports, together with some photographs of the child, to Dr. Charles E. de M. Sajous, of Philadelphia, author of the great work on "The Internal Secretions," and requested his opinion. His letter in reply is quoted herewith:

"Your favor of the 8th inst. came just as I was leaving for Ottawa, Canada, to attend a consultation; hence the slight delay in answering it.

"The case of melanoderma described in the slip received is a very interesting one. I should like to explain it with the aid of somebody else's views, but can not, and, so, am obliged to refer you to my own labors.

"You will find in the second volume of 'Internal Secretions' (page 835) an explanation of melanoderma, as based upon many experimental facts.

"You will remember that I consider the albuminous constituent of hemoglobin as the product of the adrenal glands. It is, therefore, carried to all parts of the body. You will recall, also, that the adrenal secretion

controls, in connection with sympathetic system, the caliber of the arterioles. These facts suggest the solution of the enigma, the explanation of which seems to me to be as follows:

"Either as a result of inadequate development, or of some acute disease that caused grave lesions of the adrenal glands—which, therefore, now would be partly sclerotic—the child since that age has not secreted



A case of melanoderma: the pigmentation of skin of course does not show clearly in the picture

enough adrenal secretion. As the latter (from my viewpoint) takes part in the respiratory process and general oxidation and sustains cardiac dynamism, the general symptoms observed, including dyspnea, muscular asthenia (lassitude), and valvular inadequacy are explained.

"The adrenal secretion being deficient, the cutaneous arterioles are dilated and inadequately propel the adrenalin-laden (hemoglobin) blood through the capillaries. The adrenal constituent of the blood accumulating in the peripheral tissues by virtue of the torpor of the circulation, and, being the substance that assumes the brownish-black color

upon exposure to light, the child's hands and arms are the regions most discolored.

"The exophthalmos is the result of the abnormal dilatation of the postocular veins, owing to the abnormal quantity of blood admitted by the dilated arterioles.

"The case is not one of true Addison's disease, in that the adrenal glands are not the seat of a progressive lesion, but rather is a marked instance of the condition I have termed 'functional hypoadrenia.' Still, the treatment which I advocate for Addison's disease if continued sufficiently long and carried out with due care, would do the child



Face of patient with melanoderma. Note the distinct exophthalmos

considerable good. Hoping this may be of some service to your correspondent, I am, sincerely yours,

C. E. DE M. SAJOUS."

Philadelphia, Pa.

[The treatment advised by Dr. Sajous, given in a very few words, consists in the administration of adrenal extract or adrenalin to supply the blood with the adrenal principle which it lacks. Also, since toxic wastes are inadequately katabolized, in the treatment of Addison's disease he advocates giving physiologic salt solution intravenously three times a week. In the little girl's case this would

perhaps not be desirable. Remedies which are contraindicated are thyroid, arsenic and alcohol.

We hope to be kept informed of the future progress of this case.—ED.]

DOCTOR ROBERTS' INCOME: A COMMENT

I cannot but comment upon Dr. George Roberts' (Lincoln, Va.) letter in a recent issue of *CLINICAL MEDICINE*, thinking he has told only half of the story. As it reads, one is to believe that from no other source but \$340.92 per annum he raised and educated eight children.

Upon the face of it this seems impossible. He must have had some other sources of income from farm or garden—or his family "worked out." To say nothing about the cost of medicines, books, keeping of road-outfit, etc., bare food and raiment for ten people could not be provided for the pittance he mentions.

I can claim to be economical, but it bothers me to live and keep even on \$1200.

A. S. T.

—, Ontario.

[The doctor did not submit this letter for publication, hence we do not print his name. However, it may encourage others to write us concerning the doctor's income. We shall appreciate it if many will tell us their own experiences. If preferred their names will be withheld. To cure an evil we must first understand it. We are sincerely anxious to contribute all we can to the relief of the financial distress from which so many of our craft plainly suffer.—ED.]

DOCTOR ROBERTS' EXPERIENCE, AND MY OWN

Dr. George Roberts, of Lincoln, Virginia, undoubtedly is one of nature's heroes. To say the least, he certainly is an able financier, and had he a larger field for manipulation he no doubt would have rivaled some of Wall Street's best men. I say this with all respect and sincerity, as he has done wonders on his small income.

I am a native Kentuckian and practiced in that state for some time, and I imagine conditions are similar in parts of Kentucky to those in Virginia. My own experience there may be worth something. My results, not so good.

After doing fairly well, my first two years in practice in a city, the panic came on, making it necessary for me to move to the country. I landed in a small crossroads place in the tobacco-section of middle Kentucky, on Green River, 15 miles from a railroad.

Did I get any practice? Well, I guess I did, and from morn till night, and often all night, did I ride horseback, as the roads were simply trails over the steep hills, and this was the only safe mode of travel. The natives, who were of a very low grade of intelligence, mostly made a living from small clearings planted to corn and tobacco. A few were considered wealthy, because they had managed to build two- or three-room houses instead of the regular one-room log cabin, without window in most instances.

Living within this indicated distance from a railroad and good, intelligent people, I saw more ignorance and superstition than I knew existed. Experiences were the chief remuneration I received, as the cash was not plentiful for a doctor. My income averaged 45 dollars per month; my living, horse care, medicines, journals, insurance, and so on, used all of it. This was too slow for me and I was looking for something to do besides charity work; so I pulled out after just four months. In order to get away without going into debt, I was compelled to sell out a good office-equipment and all household furniture. Then out to dear old Montana my good wife and I came, and here I made a fair success of it.

I remember that, while I was in college, several locations were offered the class, many of them good locations; but on investigation they proved to be places with plenty of practice, but a man had to make his living at farming. Now, I did not go to medical college to learn to farm, and I would not stay with any location where I could not earn from \$2000 to \$5000 per year. And I manage to use all of that; yet I am not extravagant.

My first year in Montana, in a purchased practice in small town, netted me over \$3000, the next two years from this to \$4500 per year, and when I sold out I had collected all but \$75.00, and half of that I have received since. How, you say? Statements sent at regular periods when I knew the ranchers had money from the sale of cattle or wool or grain. The tardy ones I spoke nicely to when I met them and secured their verbal promises, to which I saw that they lived up. I never hesitate to speak to any of my clientele about an overdue bill in a friendly manner, and I

generally have as hard a tale to tell them as they have me. Of course, they tell me theirs first.

I try to keep optimistic with them, and when I know any are down and out I give plenty of time; and they generally pay out. By this method I have collected from people and made good clients out of people that beat every other doctor who had worked for them. In seven years of practice I have asked for but one personal note, and have asked for but one judgment against any client.

Of course, from all of this, don't think that I do not have to wait, as more bills go six months rather than one.

Since locating here in Bozeman I have been compelled to cut fees down to what one other man was charging. He dispenses, as I also do. His business amounted to more, perhaps, than that of the rest of the doctors: in fact, more than he can do at times, and I have found a very desirable new business here in addition to holding my work from Salesville, which is only a short distance away.

Straight business sense, as I see it. Some of the other "goose-step" office-chair warmers are criticizing me for my fees, claiming that it is not fair to them. I am looking out for myself and family, and whenever I have not sense enough to make a respectable living out of the practice of medicine in some honest manner I shall quit and take a job, as I always have had to hustle and would not be content just to keep my office-chair warm, even had I plenty of surplus cash, which I have not. I must be busy or I shall go where I will be..

If conditions don't suit a doctor and he cannot make more out of his practice, I think he should go to a larger field. There he may be compelled to adjust his ideas somewhat, to get the business; and that he should do, as the average practitioner is jealous of the other one. It is natural and beneficial; then, why should not this same jealousy stimulate a man to try all the harder to get business that the other fellow gets, if it is by fair methods?

In some sections of the United States, the fees are too low and in others too high (not for the hard-working doctor), but for the struggling newcomers, as in some sections of this state. I try to be as reasonable as the other doctors in my community, and I have never failed to get the business, though at times things look blue to me as well as to others.

F. E. McCANN.

Bozeman, Mont.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION

The Mississippi Valley Medical Association met this year at New Orleans on October 23, 24 and 25. We hear reports of an excellent meeting with a fairly good attendance. Dr. D'Orsay Hecht, of Chicago, was elected president for the ensuing year, and the next meeting of the Association will be held at Cincinnati.

TWO CASES OF PUERPERAL ECLAMPSIA:
ONE AFTER, THE OTHER BOTH
BEFORE AND AFTER LABOR

On April 8, 1913, about 10 p. m., I was called to attend Mrs. J. in her fifth confinement. Found her "grunting" some. Was large and ruddy, weighing about 175 pounds. All her labors had been normal, but all the children died at four or five weeks of age, save one. I found the membranes pouching nicely, os fully dilated. After rupture of the membranes the patient had only one expulsive pain, and the little man came humpin'. In three or four minutes she informed me that the afterbirth had passed. There was very little hemorrhage. As is my invariable rule, I examined the secundines thoroughly and found everything complete.

After the patient's toilet was complete, I spent a couple of hours in getting acquainted with the family, as it was my first visit. About 1 a. m., after collecting my fee, I headed for home, leaving the patient in apparently good condition. Had just gotten in bed and stretched out, when the 'phone rang. When I answered, the party told me to hurry back out to Mr. J's (about four miles), as my patient was having a spasm.

Well! I hustled into my clothes, hooked up Jo-Jo and "went some." Found patient laughing and talking, pulse normal, no temperature, no pain, no spots—no anything pointing to trouble. However, I gave her 20 minims of Norwood's tincture hypodermically, and about 10 grains of calomel. She had no further trouble, and I stayed until after breakfast.

I reached home about 8 a. m. and prepared to shave. Just as I had my face covered with lather the 'phone jangled and my wife answered. I heard her say, "Is that so?" She informed me that those people wanted me again, as the woman was having more spasms.

When I reached the house I found the patient in convulsions. I gave 20 minims more

of veratrum by needle, 3 minims of croton oil in olive oil on tongue, placed the patient in a hot-pack for two hours. She was certainly sweated and purged thoroughly. Her pulse was below 50 per minute, but still the convulsions persisted, growing more frequent, the patient turning a greenish-yellow hue; was comatose, tossing head from side to side. Used chloroform to try to ward the convulsions off, but suddenly she would be in the midst of one.

About 3 p. m. I called for help. Dr. C. responded, and we decided to bleed her good. Extracted about three pints of very dark, thick blood. In about ten hours, or midnight, she roused up, having had no more spasms after bleeding. By 7 a. m. she was rational, and thereafter made a fine recovery. Baby doing finely.

On the morning of May 6, 1913, I was called to attend Emma B., mulatto, 28 years old, weighing about 150 pounds. Husband and one old negro woman told me the patient had been having spells. I could not arouse her till I attempted to make a vaginal examination, when she cut up considerably. I found no dilatation whatever. Gave her 1-2 grain morphine and 1-120 atropine, and told the husband to call me if she had another spell.

About 3 p. m. he called me. I carried Dr. H. to assist me. When we reached the house we found her grunting and pressing the hands to her head. I told the doctor she was having pains. (I will here state that she lacked one month from term, as near as I could find out.) Dr. H. examined her, and found the os fully dilated and the membranes protruding. I asked him to anesthetize her while I prepared my forceps for possible use. She became quiet, when I delivered her of a living baby and at once secured the placenta and membranes. When we left, I informed her husband that she would probably not have any further convulsions, telling him I should return the following morning.

Next morning upon my arrival I found her as crazy as the proverbial bedbug. I am some cusser myself if occasion demands, but her vocabulary of cusswords capped anything I ever heard. She cursed me and everything and everybody, husband included. They told me she had been having "spells" all night, and that they had kept her strapped to the bed. I had carried a medical student with me; so, I chloroformed her at once, then surrendered the mask to the student. I opened the right median cephalic vein and

extracted about two quarts. She roused up, made a nice recovery, and had no trouble, save a chewed tongue.

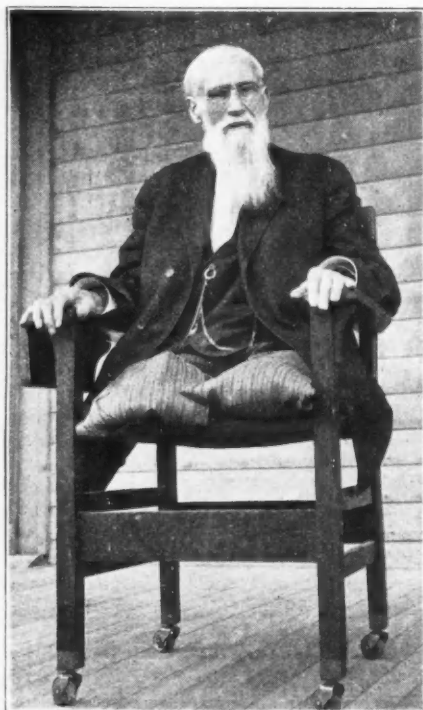
These cases may not be of much interest to the "family," but to the man at the bat they mean something.

R. E. FOSTER.

Carrollton, Ga.

LOOK AT THIS PICTURE

We all admire a man who has grit. That's why I want you to take a good look at the picture of Dr. H. L. Smith, of Geneva, Nebraska, printed on this page. Dr. Smith is more than 84 years old. He has had cataract, and for a long time was practically blind. The lenses of both eyes were removed some months ago, and now he can see to read and write again.



Dr. H. L. Smith

For about thirty years Dr. Smith has suffered from diabetes mellitus. The outcome was senile gangrene of a lower extremity compelling amputation of the right leg at the lower third of the thigh, and later of the left

leg at about the same place. Both of these legs were taken off after he was 80 years old—remarkable in the case of any diabetic; especially remarkable in a man of such advanced age.

Now he has a chronic bowel trouble requiring constant care and personal attendance. But in spite of it all Dr. Smith is cheerful and hopeful, and as full of grit as ever. Fortunately he has laid aside something for a rainy day, and can "pay as he goes." Take a good look at his face.

RINGWORM—CURED BY IMPATIENS FULVA

Some thirty-four years ago, when I was a boy of about 9 years, I was troubled with "ringworm," just above and on the inner side of my knee, and about the size of a silver dollar. It annoyed me very much, so much, in fact, that I can still see that "ring" with my mind's eye. Speaking of it to an old man in the neighborhood, a so-called herb-doctor, he told me to get some of the wild touch-me-not growing along the edge of a marsh near by, then to squeeze the juice out of the stems and rub that on the ringworm three or four different times. This, he promised, would cure me. I did so and was cured by two or three applications on so many days.

I never forgot this episode, and, so, when I began to practice medicine in 1894, and ever since then, I have resorted to this remedy, on all occasions offering giving it a fair try-out; and it has worked like a charm in every case—in some where ointments, lotions, and other tried remedies had failed. The application is a simple matter, and it does not stain the skin. Now I am anxious to learn whether others have tried this drug.

As I did not know the correct name of the weed, I sent a sample to Doctor Abbott, who in turn referred it to Prof. W. B. Day, of the University of Illinois School of Pharmacy. Professor Day very kindly has informed me that the weed is known as wild balsam, June-weed, or wild touch-me-not, the botanic name of the plant being *impatiens fulva*. It belongs to the family geraniaceae and is related to the common nasturtium and the garden balsam.

I. L. TURMAN.

Cynthiana, Ind.

[By referring to the Dispensatory, we learn that the *impatiens fulva* has numerous synonyms among native Americans, including wild celandine (the more proper), wild

balsam, jewel-weed, silver-weed, spotted touch-me-not, snap-weed, slipper-weed, wild ladies' slipper, and still others. A European variety is known as *impatiens noli-metangere*. The "snap"-balsam of the gardens—*impatiens balsamina*, native in India—is a close relative, and the much smaller delicate, pretty blossoms of the *impatiens fulva* have the same orange color, but are sprinkled with brown dots. The writer has encountered them to the west of Chicago growing in the edges of woods bordering streams. Their botanical description is found in the Dispensatory. The juice of this succulent plant enjoys a certain reputation among Eclectics and Homeopaths as allaying cutaneous irritation, for instance in rhus poisoning. No active constituent has been determined in it, and pharmacologists doubt its possessing specific virtues, save, perhaps, for the presence of tannin, which makes them astringent. Dr. Turman's communication is of interest, and we hope other physicians who possibly may have had experience with the plant—for any purpose—will tell us about it.—Ed.]

ICTERUS. "WAUGH'S DISEASE." ASTHMA

Permit me to submit to the brethren a few notes and comments on the above-named subjects.

Icterus has given me several severe jolts—not personally, but professionally—during the forty-odd years I have been a practitioner of medicine.

Many years before I studied medicine I learned from an old woman that there were two kinds of jaundice—"yellow janders" and "black janders." At college I was taught that there was idiopathic jaundice, obstructive jaundice, and essential (or malignant) jaundice, the latter represented by that most fatal of all forms of jaundice, acute yellow atrophy of the liver. Later I was taught by the books that when the liver was the seat of the trouble it should be called hepatogenous jaundice, and when the blood was the source of the trouble, hematogenous. Later still, the distinctions cholelithiasis and angiocholitis came into use.

None of these terms, however, convey in their meaning a full definition of the etiology and pathology of jaundice in all of its forms.

The simplest classification I know of is that of *obstructive* and *hemoglobinic* jaundice. In the former, anything that partially or completely closes the ductus communis choledochus or the cystic-duct, or both, will cause

the bile to be absorbed by the lymphatics and disappear from the intestines and stools and instead appear in the urine, skin, and conjunctivæ. In the other variety, any agent introduced into the blood that will destroy the red blood-corpuscles will manufacture bile-elements that will appear in the same organs and secretion as in the obstructive variety.

In regard to acute yellow atrophy, it seems to me the blood becomes so filled with hemoglobin that the liver simply is clogged by the debris and the patient dies. I have seen but one case of this disease and that not quite typical. But, judging from the reports of others, it must be a terror.

Of the obstructive variety, I have had three in my own practice and one in that of a friend. Three of these were obstructed by cancer of the head of the pancreas (two of them confirmed by a postmortem), and one by a gallstone in the common duct (also confirmed by a postmortem). All these cases were jaundiced for many months, and those who died of cancer did not suffer much severe pain, but the one who died from the one gallstone impacted in the duct near the outlet suffered untold agonies.

This last-named patient had many attacks and was treated by more than a dozen physicians. When I first saw her I diagnosed gallstones and advised an operation, but it was refused. A year after, she sent for me to consult with another physician and then she wanted me to operate. But she was so near death that I was compelled to decline to operate, and she died a few days afterward. I made the postmortem examination and found the duct closed by a large gallstone impacted as above stated. Only one of the many physicians who saw this case diagnosed gallstone. That was twenty years ago. I am sure more doctors of the present year would do better. Gallstones were not then thought to be removable by operation, except so by a few supposed cranks.

I need not enumerate here the various causes of obstruction of the bile-duct that will produce jaundice just as surely as would a ligature around the ductus communis choledochus. But the form of jaundice found without any obstruction in the duct seems to be so complex in the manner of its production that its exact cause has not as yet been discovered.

There are several substances that will destroy the red blood-corpuscles to such an extent as to produce bile-products or near bile-products in the blood in sufficient quantities

to give rise to jaundice of a very malignant type. Here is a field for extensive investigation by some of our enthusiastic young pathological chemists.

Catarrhal jaundice is the mildest of the obstructive forms of the disease. It generally runs a short course and the patient fully recovers in a few weeks. Good treatment will hasten recovery and prevent complications. Broken doses of calomel and a laxative saline to clean up the bowels; then phosphate of sodium and chionanthin will soon remove the swelling of the ducts and start the bile flowing into the bowel. A little nux vomica and hydrastis will soon bring the appetite up to a healthy state.

The obstruction caused by gallstones should be discovered before much organic change is produced in the liver, and if medicine fails surgery should be employed.

The medicinal treatment of gallstones often is successful before the calculi get too large or too numerous to close the duct. The possibility of dissolving the stones is very doubtful, but cholagoges may drive small ones into the bowel and thus relieve the obstruction. I have seen several cases where the stones were washed out of the stools after severe gallstone-colic had suddenly ceased. Phosphate of sodium, succinate of sodium, chionanthus, and chloride of ammonium are useful in these cases and have given me good results in a number of patients.

But what shall I say of the cancer cases of obstructive jaundice? One may try many remedies before a diagnosis is made. After one has concluded that the patient has cancer of the pancreas, liver or gall-bladder, there is little to do but to produce euphoria as completely as is possible as the patient nears the inevitable end.

"Waugh's disease." Doctor Waugh tells us of his experience as a wood-chopper and gardener, in the September number of *CLINICAL MEDICINE*, and because he and his forebears had not been accustomed to heavier utensils than pens and scalpels the trauma that was produced by the ax and spade in his hands, he thought, was a new disease; which of course it was to him personally. But to us fellows who were brought up on a farm or in the lumber woods, this traumatic neuritis is a very old affliction; many a young fellow has contracted it severely by overhaste to immunize his hands to chopping after many months of idleness.

Many a case have I treated of such neuritis, often combined with thecitis of some of the flexor or extensor tendons of the hand and

wrist. I have found hot epsom-salt solution kept on for twelve or twenty-four hours, generally cures such cases, but does not immunize the patient. If Doctor Waugh had started when a boy to render immune his hands to the use of the ax-helve as well as a pen, he surely would have developed an immunity to neuritis from wood chopping to a very large extent.

Asthma: Now a word on personal experience with this great affliction. I have suffered from bronchial asthma for about half the time during twenty-seven years, and nothing ever stopped the cough entirely, except change of climate, and that would last not more than a few years before the attacks would return. Last April I was attending a case of confinement and was up most of the night. After I got through with the case I was somewhat exhausted and a spell of asthma came on more severe than for many weeks past.

I got the nurse to give me half a dram of subculoyd lobelia hypodermically, and that dose acted like magic. In an hour I was sleeping sweetly, and from that time on till now I have not had a severe attack. The cough has left me and I have gained weight, several pounds, and have not smoked an asthma-powder more than a dozen times since April. Before that, for ten years I had to inhale the smoke from two to ten times a day. Now I sleep all night.

I am 72 years old and am still attending to a general practice. I have great faith in subculoyd lobelia. I have used it in only a few cases, but it fills the bill.

THOS. W. MUSGROVE.

Sultan, Wash.

TOXIC INFECTIONS AND SUPPURATIVE MYOSITIS

My reason for writing at this late date this article upon the conditions named in the title is, that I have yet to see anything written upon the subject in any journal in this country.

I reported the first case that I saw in the year 1905. It was published in *The St. Louis Weekly Review*. Quite a correspondence was kept up between Dr. Millican, editor of *The Review*, and myself. I was contending at that time that it was "polymyositis." At any rate, the report of the case was published and is referred to in volume vi of "Modern Medicine."

A pen-description from myself of a severe case of this kind can not give a just idea

of how bad it is. So I will describe my first case as I saw it.

In October, 1904, I was called to see a man 24 years of age who, until the present illness, had been strong and healthy, weighing 175 to 180 pounds. He was night-watchman at a planing mill. Fourteen days prior to my visit, while on duty, he was taken with a severe rigor. He went home and called a physician, who gave a hypodermic injection of morphine, to allay the pain. The patient growing worse, the doctor called again, and he found that the right leg from the toes to the body was swollen enormously, but not red.

Monday, 9 a. m.: The swelling had begun the night before in the left groin, and passed down to the toes, as in the night. By Monday night the swelling had gone up to the axilla on the left. A high fever was present all this time—104° to 105° F., pulse 130 to 140, respiration 30 to 32. Tuesday morning the entire left arm and hand were swollen intensely. By Wednesday the neck, right shoulder and arm were all in the same condition. Tongue red and very dry; sick at the stomach; bowels costive; kidneys not acting much. This is what I learned from one of the physicians who had treated the man.

I found the patient still swollen and so sore all over that he could not be turned over by anyone, but he could turn himself by getting on his knees and elbows and, with his face to the bed, turn. To make it worse than ever, a few days before I was sent for he had almost completely lost his eyesight. The pupils were dilated and barely reacted to light. The muscles of his jaws were swollen so much that he could not protrude his tongue enough for me to see it. I found: temperature 102° F., respiration 41, pulse 115 to 120. The limbs had a woody feeling when pressed upon. Palpation showed a fluctuation and over the tendons a sound as heard in tenositis was present. I saw him only one time. Two weeks after I saw him the family moved twenty miles away. A few days later (he was still helpless but had regained his eyesight), he had contracted pneumonia of some variety and soon died.

All this time I was at sea as to what the real trouble could be and what was the cause of it. Dr. Millican, above referred to, concluded that it must have been "malignant edema." But I had seen that disease, or condition, before and knew this to be something else. Later I saw the young man's

father and inquired as to whether his son had at the time he was taken, or had had before, any sore on his toes or foot (the right). Then he told me that a few days prior to the night that he came home sick his son had dropped a scantling on his great toe and mashed the nail loose, that it had pained him very much, and there had been bloody pus around the nail, until he grew so bad.

This cleared the case to my understanding as to the cause. But still, what was it? I had consulted all my books, medical and surgical, without result. Later, Dr. Millican sent me a leaf of *The London Lancet*, for November 12, 1904 (pp. 1341-2), also a leaf of the *Gazette Médicale de Paris*, pp. 549-50.

The *Lancet* article was on "Inflammation of the Muscles With Special Reference to Two Cases of Infective Myositis," by Dr. John Hill Abram. Dr. Abram says, in part: "It has been my fortune in the last two years to meet with two cases in which an inflammatory process in a muscle was a distinctive feature in the symptom-complex. In spite of their rarity, muscle inflammations are important, from their deadly character. Thus, out of 17 cases of infective myositis alluded to by Lorenz, 7 were known to have died in from four to sixteen days. In one of my own cases death occurred on the sixth day. Again, in 15 cases of true dermatomyositis death followed in 11, and of 5 cases of myositis hemorrhagica all died."

Dr. Abram then quotes a classification from Lorenz's, including "the suppurative and nonsuppurative, the infective, and traumatic," and these are the main ones within the scope of this paper.

The author further states "that Branon's list of muscles affected in infective myositis runs as follows: pectoralis major, deltoid, triceps and biceps, psoas, quadriceps and the gastrocnemius."

I cannot give all of this valuable report, as printed in *The Lancet*. Let it suffice to say that this article was discovered after my own case had been published. I now knew what I had run against.

Second case. In August, 1906, I was called (a distance of 43 miles) in consultation in the case of a 15-year-old boy. The lad had been sick about three weeks. I found large abscesses in the gastrocnemius, deltoid, and pectoralis major muscles, as also in the psoas on one side. I knew that there was pus in all of the sacs. The physicians in charge contended that there was none. I opened

three of them that morning and two in the afternoon. The family physician contended that it was "muscular rheumatism."

I soon learnt that one week before he was taken sick the lad had cut a small place on his left shin, which suppurated for three or four days and then dried up. Soon this was followed by a rigor, high fever, swelling of the injured limb, and in a few days all the muscles named were swollen and tense, with high fever, and spleen enlarged. I told the father that I saw no chance for his son. He died a few days later. This was my first suppurative case.

Third case. July, 1908. I was called to see a boy 11 or 12 years of age, who was or had been under treatment by two physicians, who both pronounced the trouble acute muscular rheumatism. I had talked to one of the physicians a few days before I was called and, after he had given me a description of the case, I told him that it could not be rheumatism, as the pectoralis muscles were not affected so early after the onset.

This lad had been down ten or twelve days and was still growing worse. I found that he had myositis. The whole body was swollen, as well as limbs. Temperature 103° F., respiration 38, pulse 126 to 130. Respiration was difficult, owing to the muscles of the trunk all being involved. This was the non-suppurative form.

The cause in this case was from the boy's being hot from working in the field, a hard, cool rain fell, he ran along the road, wading the cool water for nearly an hour. He was taken with a chill that night and at first complained only of his legs. Next day both limbs were swollen up to his body. He died of lobar pneumonia and endocarditis, fifteen or twenty days after I saw him.

These experiences had given me a dread of this disease and, as the literature was meagre on the subject, I was hoping to see no more of it.

But the winter of 1910, in and around the town of Heavener, Oklahoma, they had 10 or 12 cases, only 3 being of the suppurative form—two men and one young woman. All three died. In the case of the woman only one side was involved.

One of the three men (and who was the father of the woman) was taken with pains in his feet and legs, followed by fever and swelling of the limbs. I do not know how many abscesses were opened. He died of lobar pneumonia (double) about the end of the eighth week. The girl died, not long before him, of endocarditis. Her limb was

incised in several places and a vast amount of blood-stained pus escaped.

The other fatal case was that of a stout man, 40 odd years old. He died in four or five days. I never saw him. There were no cuts on any of these fatal cases.

Later a young man and his wife were both taken with the rheumatic (?) form—as laid down by Lorenz. They were brought near to my place for treatment. There was swelling of some of the groups of muscles before mentioned. These people finally got well. The young man went to Hot Springs, Arkansas, for the stiffness of his limbs. Also one other man did the same, and came back in good shape. One young man, lately married, after working in the rain one day was taken suddenly and had to be taken home. Both of his legs and one arm were affected. He was not able to do anything for two months.

There is little need to say anything about the treatment in these cases. Antistreptococcic serum was used in only two cases, but too late.

The pathology of this condition seems to be little understood. Even Adam's great work says but little on the subject. There is no use in my referring to the different medical and surgical works that I have searched, in quest of this condition. Martin, in his "Surgical Diagnosis," as well as Butler, in his "Diagnostics of Internal Medicine," and, lastly, Anders, in his "Diagnosis," each have a very clear but only short article on it. Struppell's work on "Medicine" is the best of any single volume.

My idea is that myositis is oftener encountered than diagnosed. For this reason, I write this, to stir up the subject among the CLINICAL MEDICINE "family," for the sake of scientific medicine.

CHEVES BEVILLE.

Waldron, Ark.

THE EFFECT OF PROTECTIVE COLLOIDS ON DIGESTION

Digestion concerns itself with the utilization of food in two forms, the crystalloids and the colloids. By crystalloids we mean compounds that, like sugar and salt, diffuse readily through animal membranes and as a rule can be obtained in crystalline form. They also dissolve in water, forming a true homogenous solution—no single dissolved particle being large enough to be seen under the most powerful microscope.

Colloids, on the other hand, are substances

that do not readily diffuse through animal membranes and the seeming solutions of which in water are merely heterogenous mixtures. The separate particles in a colloidal suspension may be seen by the aid of the ultramicroscope. Colloids may be obtained in such finely divided condition that their suspension in water has the appearance of a true solution and may even require years to settle.

These colloids may be coagulated into particles large enough to settle quickly by heating, by the addition of colloids of opposite nature and by the action of electrolytes (acids, bases, and salts). In the process of digestion of such food colloids, such as proteins and starch, the opposite effect is desired; that is, disintegration of the colloids into smaller particles capable of being absorbed by the membranes of the intestines. Such disintegrating agents are found in the enzymes, including pepsin and pancreatin, themselves colloids.

These, like all enzymes, or ferments, are catalytic agents, hastening reactions which without them would proceed very slowly. In all probability the enzyme of the digestive juices unites with the food and the resulting compound later breaks up to release the original enzyme and a disintegrated form of the protein or starch attacked. Naturally a very little enzyme can digest a great deal of food.

Milk is a suspension of casein and other colloids in water and is easily coagulated, or "curdled," by the addition of acid or by the lactic acid developed in souring. This merely means that the minute particles in suspension have collected in masses large enough to settle. Now, it is an interesting fact that certain colloids, such as gelatin and acacia, can protect the milk colloids from the coagulating effect of acids. Probably this is effected by a thin film of gelatin, say, around each particle. Whatever the explanation, the fact may be easily demonstrated.

To a definite quantity of sweet milk add just enough dilute acid to coagulate it, carefully noting the amount of acid added. Then, to another sample of the same milk, add first a 1-percent solution of gelatin. It will be found that the amount of acid used before will not coagulate the milk, in fact considerable more will be required. A very little gelatin, however, is just as efficient as a large quantity in its protective action. Another illustration of this protective action is shown in the gelatin layer on a photographic plate. Silver nitrate is easily precipitated by potas-

sium bromide, yielding curdy silver bromide. However, if a gelatin solution be added to the silver nitrate before adding the bromide, no precipitation occurs. Silver bromide is formed, but the minute particles first formed are kept apart by the films of gelatin and so do not form large aggregates; an opalescent suspension results. It happens that this particular one is sensitive to light and thus gives us a photographic plate.

Undue curdling of milk in the stomach has caused much indigestion, especially in infants. The ferment rennin in the stomach exerts this coagulating influence. Nature has tried to check this coagulation of milk-casein by mixing with it a protective colloid, known as lactalbumin. It is a noteworthy fact that mother's milk contains a much higher percentage of lactalbumin than is found in cow's milk, in fact, the proportion of lactalbumin to casein is six times as great as in cow's milk. Ass's milk is even less likely to curdle and for that reason has occasionally been prescribed. Now, curds, when formed in the stomach, must be disintegrated before absorption, hence it is highly desirable to have as much protective colloid present as possible.

If a small quantity of gelatin is taken with the milk, curdling is prevented or minimized, exactly as in the test-tube experiment previously described. Acacia is useful in this respect, but of far less protective value. A highly interesting observation made by the author in this study was, that colloidal silver exerted a far greater protective effect on milk than did gelatin. Of course this was only a test-tube experiment and before advising its use with food the question of toxic effect in other directions would have to be considered.

However, in the case of gelatin no such caution is necessary. Gelatin is a cheap, palatable and nutritious food, and surely no harm can come from the use of a spoonful or less with any ration containing milk.

Another phase of this question is the emulsification of fat by the acid and alkali albumins formed in the process of digestion of proteins. Since fat must be emulsified into very minute drops before absorption, it is evident that fat of any kind should be accompanied by protein food, in order to permit the formation of the alkali albumin, an emulsifying colloid. Milk fat is accompanied, of course, by protein, but the fat is not emulsified to any great extent in the stomach—most of that is done in the intestine. If curdling takes place in the stomach, much of the fat is dragged down in tough, leathery lumps, which cause the "fat indigestion"

referred to by Herter, Czerny, Talbot, and others.

Cow's milk is not so rich in fat as mother's milk, so that it seems possible that after addition of a very little gelatin it may be really more easily digested than milk from the breast. Herter refers to a case where calcium salts were not absorbed and skeletal growth was arrested in consequence of fat indigestion.

We have everything to gain and nothing to lose by accepting gelatin served with meats or with cream or in salads, and we shall be "colloidally protected."

HARRY N. HOLMES.

Earlham College, Richmond, Ind.

THERAPY OF EUPATORIUM AROMATICUM

White snake-root is the common name for eupatorium aromaticum. It is diaphoretic, antispasmodic, and expectorant. One of the most important uses for white snake-root is for morbid wakefulness during typhoid fever. If the remedy had no other influence except this it would certainly deserve a place in the materia medica. In typhoid fever with irritation of the brain (typhomania), Dr. Frank Webb gives 15 drops of specific white snake-root, in 15 drops of hot water, hypodermically, repeating in half an hour. Dr. Webb says: "In irritation of the bladder, where the primary cause is vesical calculi, it is to be depended upon every time." He also says: "In some chronic cases of chronic bronchitis it seems to act like magic."

White snake-root influences the circulation by promoting the outward flow of blood and favoring diaphoresis and expectoration. Hence its usefulness in pneumonia, bronchitis, pleurisy, eruptive fevers, and so on. It relieves the heart and brain from pressure owing to congestion. The nervous system is influenced by this agent. It is a very good antispasmodic and useful in hysteria, dysmenorrhea, restlessness, and headache.

J. A. BURNETT.

Hartshorne, Okla.

COMPLETE PLACENTA PRAEVIA

When I was doing general practice in a small country town of 800 population in the northwestern part of Pennsylvania, I had the following experience, which may be of interest and instruction to some of the other readers of this Journal:

One cold rainy night in the first part of April, 1912, just after I had gotten into bed

and gone nicely to sleep, I was awakened by the ringing of the telephone. Hastily arising, I received an urgent call to go out in the rain and cold to see another doctor's woman patient, about five miles distant. After dressing, hitching up my team, getting the much-used obstetrical bag, with its usual supply of instruments that I always carried, and those which I thought I might need in this case (for they told me that the woman was bleeding profusely) I started, arriving at the house at about 11 o'clock. Here is what I found.

A girl 18 years of age, small, short of stature, very closely built, and, needless to say, she was a primipara. She was lying in bed with her clothes all soaked in blood, so weak she could hardly turn over; her pulse was hardly perceptible, beating 140 to the minute; temperature, 98° F.

Hastily cleansing my hands with bichloride solution, I made an examination, and found the cervix dilated sufficiently to admit my first three fingers. Adherent all around the cervix, was the placenta. Owing to her extreme weakness, it was not advisable to deliver at once. So I packed the vagina well with gauze and stopped the hemorrhage, washed her off, changed her clothes and the bed, and made her as comfortable as possible, and administered strychnine hypodermically. Then I obtained the following history:

The last time she was unwell was in the last of July, 1911. Everything seemed to be getting along all right, until in November she had a bad hemorrhage. They called their family physician, and he kept her in bed for a few days, and gave instructions for her to be careful, and if she had another hemorrhage she must immediately go to bed, and let him know. Everything again went nicely until in the early part of February, 1912, when she had another bad hemorrhage, and was compelled to stay in bed for a week before she was able to get up. She never fully regained her strength up to the present moment.

The family physician called us up at 1 a. m., and asked about the patient. I told him the conditions and requested him to come out at once and bring a nurse along. He got there about 2 a. m., and shortly after he arrived the patient began to have some pains and the hemorrhage started again. After consultation we thought best to deliver at once. So we had the necessary instruments sterilized, prepared a table, administered an anesthetic, and delivered the baby, which was dead.

I dilated the uterus and inserted my hand.

I got hold of the baby's feet and did a podalic version, making a breech-presentation, then delivered the baby. As I did this I had the other doctor press down on the abdomen over the uterus, to keep the hemorrhage in check. As soon as the baby was delivered I packed the uterus with gauze, which kept the hemorrhage checked; however, the patient died during the morning hours, as a result of the excessive loss of blood. It is the hemorrhage in these cases that is the most dangerous, and if we could see the patients soon enough more lives could be saved.

Jellett says: "The first point to recognize with regard to the treatment of placenta praevia is that, immediately the condition is diagnosed, steps must be taken with a view to ending the pregnancy. The only exception which may be made to this rule is in those cases in which the patient is in such circumstances that, if the bleeding re-starts, she can be immediately treated." But to the physician doing general country practice, he cannot always be in a position to give immediate treatment in these cases, so I advise immediate delivery as soon as placenta praevia is diagnosed."

J. C. COULTER.

Charlottesville, Va.

[We referred Dr. Coulter's letter to Dr. Rittenhouse, who commented upon it as follows: "It is not my custom to terminate the pregnancy as soon as the diagnosis of placenta praevia is made, because I believe I can save more mothers, and especially more infants, the other way. A forced delivery before labor has set in is not free from danger to the mother, and is almost certain to sacrifice the child. Of course, every case is a law unto itself to a certain extent, but the foregoing indicates my general custom."—ED.]

THE SECRET OF OLD AGE

Interest attaches to the declaration of Professor Metchnikoff, of Paris, that the indols and phenols in the large intestines are responsible for the decay of the human system, and which is known as old age. He claims that they can be destroyed only by sugar or by his recently discovered sugar-producing bacilli, which latter he has called "glycobacteria," at present found only in the colon of the dog.

In addition to the ingestion of these bacilli, artificially produced, Metchnikoff thinks that a vegetable diet—including particularly

beets, carrots, and dates—is of assistance in furnishing the system some of the sugar it needs; although he admits that sugar as such is not found in the colon.

In Metchnikoff's opinion, if sufficient glycobacteria can be liberated in a man's intestinal tract, his life can be greatly prolonged.

As is usual when any scientist lays claim to a new discovery, this modern Ponce de Leon is ridiculed by some of his French confreres, and the assertion is freely made that indols and phenols play no causative part in senile decay.

Metchnikoff's standing as a scientific investigator will, however, assure him a respectful hearing, and all mankind will join in the hope that his theoretical findings may develop into actual facts.

LEONARD KEENE HIRSHBERG.

Baltimore, Md.

[Bulgarian buttermilk, à la Metchnikoff, seems to afford no assurance of long life in Bulgaria during these strenuous, warlike days! However, the Bulgarian lactic-acid germ certainly does prove effective in cleaning up the alimentary canal.—ED.]

APPRECIATION AND OPINIONS

Billy Sunday is campaigning in our town, and that may help to account for my demonstrations over the October CLINICAL MEDICINE. For, as I read that number, I thumped the arm of my chair and said, "Glory be," repeatedly. The first article on "Optimism," with the Cumberland saying, brought the first blood.

And closely following came "Obsolete Ideals," and the paragraphs on "Contentment or Discontentment" suited me precisely.

Then the special and general articles, all too good to criticize, and I am like the youngster, who, seeing his favorite dish of dumplings on the table, pushed up his pan and shouted, "Dim me all of 'em!"

I attended a confinement lately. Mother very nervous. (It was the 13th of the month!) Gave one of half-strength H-M-C. Delivery rapid, almost painless, and she could scarcely be convinced that all was over.

In a number of cases of indigestion, I am getting much relief from calcium sulphide, and they come again for the little gray pills. Is it the antiseptic action they exert?

Am having great success with echinacea in septic conditions. One bad case of erysipelas of head and face. Woman of 70. Used

pilocarpine to effect. Echinacea and baptisin, calcein and nuclein, with compresses of saturated solution of epsom salt locally; and, while she was sick, the case went on to uneventful recovery.

An observing physician says all diseases are caused either by shock or strain, physical, physiological or mental. It has been interesting to me to study my cases to test the truth of the statement, and I am fully convinced that much serious illness might be averted if the family physician were employed by the year and then would see his patients every so often, and by advice or other treatment save the shock or lessen the strain.

J. F. SHANE.

Steubenville, O.

A STORY OF AUTHORITY BY MULTATULI

Thugather milked the cows of her father, and she milked well, for the milk which she brought home produced more butter than did the milk brought home by her brothers. I'll tell you how this happened, and then take heed that you know the story well—should you ever have to go out milking. But I tell you this, not because you would milk like Thugather, but to show you how her brothers, by milking less well, did better—at least, more wisely.

Before the young peasants enter the pasture, yea, long before that hour, the cows are waiting by the fence, to be delivered of their abundance, which, properly said, they prepared for their calves. But men eat these calves, because they wish to; and, besides, there is too much milk in the cows' udders.

But what happens while the cows, standing sleepily chewing their cuds, are waiting by the fence? Surely, you already have guessed it—the lightest portion of the milk—the cream, the fat, the butter—gathers in the upper part of the udder, and, therefore, is the farthest away from the nipples. All who milk patiently to the last drop bring home fat milk; while all those who are careless and in a hurry do not get the cream.

Thugather was not in a hurry, but her brothers were, for they pretended that they had a right to something better than to milk the cows of their father. The young woman, however, did not think of such rights, and, so, always performed her duty well.

"My father has taught me to shoot with bow and arrow," one of the brothers said. "I can live by hunting; I will roam and work for myself alone."

"He taught me to fish," said the second one. "I were a fool, indeed, always to be milking for somebody else."

"And he showed me how to make a boat," the third one spake. "I am going to cut down a tree, throw it in to the water and ride upon it. I want to know what there is to be seen on the other side of the lake."

"As for me, I should like to live with the blonde Gune," declared a fourth one of the sons, "that I may have my own home, with our sister, Thugather in it to do the milking for me."

Thus every brother had a wish, a desire, a *will*. And they were so absorbed in their selfish desires that they gave themselves no time, when milking their father's cows, to take the cream too, which now the cows had to keep without profit to anyone.

But Thugather milked to the last drop.

At the last the brothers spoke up, saying, "Father, we are going away."

"Who then will milk my cows?" asked the father.

"Why, Thugather, of course," they answered in chorus.

Said the father: "How will it be when she too wants to sail, to fish, to hunt, to see the world? How when *she* too gets desires to live with something blond or brown so that she might have her own home and what goes with it? *I can spare you*, but not *her*. For the milk that my Thugather brings home is fat."

Then said the wily sons: "Oh, father, do not teach your daughter one single thing—then will she keep on milking your cows to the end of her life. Do not show Thugather how the springy sinew of the bent bow shoots away the arrow: she will then have no liking for hunting. Hide away from her the stupidity of fishes, who will swallow a sharp hook when it is covered over with toothsome bait; she then will not think of throwing out hooks or nets. Do not teach her how to hollow out a tree and how she can float away in the boat to the other side of the lake: then she will have no desire to see the distant shore. Lastly, do not ever let her learn that, in company with a blond man or a brown-haired one, she can make for herself a home and all that goes with it. Let her never know any of all this, oh, father, for then will she stay with you forever, and the milk of your cows will be fat! But, as for us, let *us* go, father, every one as his heart may desire." Thus spoke the four sons.

But the father, who was a wise and thoughtful old man, continued to argue. "Prithee," said he, "and who shall prevent her from

learning the things that I do not teach her? When she sees the fly floating on the stream? When the hard-stretched thread of her spun yarn shortens back to its former length, and quickly shrinking, mayhap accidentally prople the bobbin of her loom? When at the brink of a brook she spies the fish biting after the twisting worm, but, failing from wrongly guided eagerness, hooks to the sharp reed-joint? And last, but in no manner least, when she finds the little nest which the pair of larks built themselves in the blossoming clover in the month of May?"

After pondering a spell, the sons made answer to these questions: "She will learn nothing thereby, oh, father. Our sister is too stupid to create desires from wisdom. We ourselves should not have known of any of these things had you not told and instructed us."

But the father replied: "No, no, the girl is not stupid, and, I feel sure, she will soon discover all by herself what you young men did not find out without being taught. No, my sons, Thugather is not stupid!"

Then the sons thought the things over once more, and their thoughts this time went deeper. At last they said: "Father, tell our sister that *To know, to understand, to desire*—is sinful for a girl."

And this time the very wise father was satisfied. He let his sons go away, to fish, to hunt, to go sightseeing, to marry, to go and do as might suit each one best.

But the father forbade knowledge, understanding, desire to Thugather, his daughter, who, in her innocence, went on milking the cows to the end of her life.

And thus it has continued to be in the world until this very day.*

D. A. ZWIGTMAN.

Niles, Mich.

THE EXPERIENCE OF AN EAST INDIAN PHYSICIAN IN TREATING PNEUMONIA

Some four years ago I first learned about active-principle therapeutics by reading an advertisement in *The Therapeutic Gazette*. The advantages of the alkaloids, as there presented, attracted my attention at once, and I wrote to America for further information and also for a supply of them. The literature I received further increased my desire to use these remedies in my daily practice, but it was only about a year ago

*"Mulatali"—I have suffered much, endured much. "Thugather"—Daughter (Sanskrit); milkster (Hindustani), "Guni"—Female; in general, a woman (Hindustani).

that I succeeded in procuring a satisfactory supply of these agents. I am now glad to give you a brief description of some of the successes I have had, especially in the treatment of pneumonia.

I do not know whether you have any idea of the conditions under which country doctors practice in India; I mean by "country doctors" the qualified government-licensed practitioners in the villages of the interior, far away from the larger towns. There is no law to prevent quacks from practicing in India, consequently we have to compete with many charlatans of small education, and many of the cases come into our hands only after the patients have been treated by these gentry.

Speaking of pneumonia in particular, as an illustration, only those victims who are intelligent come to us early, while the majority of the natives fall into the hands of these morally weak practitioners, who care little for the lives of other people, always give high hopes of recovery to the friends and relatives of the patient, and never permit a qualified practitioner to be called in if they can prevent, lest their prestige in the community be impaired. It is only when some of the friends of a sick person happen to be intelligent and understand the real situation, that a competent physician is urged and we come to see the patient. By that time, the sufferer from pneumonia as a rule is in about the following condition:

The patient's temperature is usually high—104°-105° F.,—with a degree of variation morning and evening; and has been in this condition for more than a week. He is unconscious, often delirious; bowels have been confined for four or five days; there generally is tympanites and severe pain in the abdomen; the tongue is furred; pulse is 130 or more; the first sound of the heart is absent; usually a condition of pulmonic consolidation is discovered, the area showing a tendency to spread; scanty tenacious blood-stained sputum is expectorated.

Now imagine how difficult the condition is with which we have to deal. Often our patient lives eight to ten miles away, and perhaps we can call but once or twice; nevertheless we are expected to effect a cure.

In such cases of pneumonia, I succeeded in curing eight of the subjects, with but two or three visits in seven or eight days, but following the active-principle method of treatment. It is not easy to accomplish such results, because in the homes of our patients in India people have little idea of

time, as to when and how often the dose is to be repeated; and it is practically impossible to "push to effect," because those in charge do not understand what we are trying to do.

Providing I see the patient in the congestive stage, or if pleuritis is present, I generally put on a mustard plaster first thing. Then I give six granules of the calomel, podophyllin and bilein compound, 1-2 dram of nuclein solution dropped on the tongue, and one dosimetric trinity granule is given every half hour for twelve hours.

The next day there is observed almost invariably marvelous improvement in the patient's condition. The bowels have moved five or six times. (Here in India we rarely use salines, as patients do not like purgatives. The saline laxative I usually give two days later.) The pains are gone, the temperature has fallen, the pulse rate has come down, and hope can be read in the face of the patient.

Now I give one granule of strychnine arsenate, two of digitalin, two of scillitin, and one of emetine, besides three 1-3-grain tablets of calcidin. Such doses are given every two hours for twelve doses. As a result, the cough becomes looser and the pulse rate falls to 90 or 95.

I also give the benzoates sometimes, in order to liquefy the tenacious sputum. Occasionally potassium bichromate is used; but nuclein is employed throughout, 20 minims on the tongue at a dose thrice daily. Atropine is employed in the early stages and seems to limit the formation of congested areas, through dilating the capillary system.

Here is an illustrative case. Patient, wealthy man, 54 years old, living in rich district; no diabetes and no alcoholism; has suffered from spasmodic bronchitis for the last two years; bronchial secretions are scanty; few râles heard, with wheezing respiration; expiration prolonged; slight dyspnea; hoarseness every evening, with troublesome cough at night; no paroxysms of asthma; no fever; cough varies with the humidity.

I put this patient on calx iodata, scillitin, antiasthmatic compound, lobeline. This promptly relieved the evening hoarseness, but did not produce much general benefit until I added glonoin. Since then the dyspnea has disappeared. An antiasthmatic combination was used, also ammonium benzoate, but without much benefit, although the dyspnea was relieved. When I added emetine to every dose, marked benefit was obtained.

The asthmatic condition has been entirely relieved, the patient expectorates less and can now sleep at night without being dis-

turbed by cough. He takes 3 1-2 grains of opium at 3 p. m. Gastric acidity is present, for which he uses potassium bicarbonate as a routine measure.

N. CHATTERJEE.

Chakdighi, Burdwan, India.

[There are several things that can and should be done in this case. First determine the bacteriologic picture. No doubt there are good clinical laboratories in India to which samples of sputum can be submitted for examination. This should be attended to at once. Probably the report will give the key to the treatment. There is a possibility that the hoarseness and bronchial discharge may be tubercular; but it may be due to a mixed infection, and we are inclined to think this the case. Very often affections of this character yield to treatment with bacterial vaccines.

Meanwhile, the drug treatment must not be neglected. Dr. Chatterjee's success shows that he is following right lines. We believe that two of the drugs employed might well be pushed hard, i. e., calx iodata and lobeline (either lobeline sulphate or lobeloid). The former we should give in at least 5-grain doses, and the latter to effect—hypodermatically usually. Look to the heart. If its action is weak push strychnine arsenate and digitalin. It is most unfortunate that the patient is depending upon opium, since this complicates the situation. Finally, insist upon thorough bowel elimination and antiseptis. The hoarseness *might* mean syphilis—investigate! Fact is, there are so many possibilities that we can not follow up all the "trails" which may lead to the center of this interesting clinical maze. Anybody suggestions to offer?—ED.]

SANITATION IN HONDURAS. SALVAR-SAN CURES MALARIA

In company with my wife, we left New Orleans, Louisiana, October 2, 1913, and arrived at our destination, the city of San Pedros Sula, Honduras, at half past twelve o'clock in the afternoon of the 12th. This city, my present abode, has a population of about 7000, and is situated 47 miles inland from Puerto Cortez, being reached by means of the Hondurian National Railway, a narrow-gauge railroad of fairly good bed but very badly worn-out steel.

The altitude here is about 150 feet above sea-level, and the days are hot. Directly on the west side the mountains rise up to 1500 feet, and from these flumes bring the water supply. The water-works are as fine as I

have ever seen, and the 18-inch pipes are started from a mountain-stream 300 feet above the city, at a small concrete dam, and run down to the ice-factory, where the pressure furnishes the power for the plant. From



A village street in Honduras

the wheel the water goes to a settling-pool and thence to the general water-main. The water is free for all users and its liberal consumption is almost made compulsory, since the yellow-fever scourge in 1905 that came near putting the city out of existence. The expenses are raised by taxation, in order to preclude any possibility of the natives being economical with the use of water.

The sewage is conducted in open concrete ditches running along both sides of all streets, and there constantly runs through them a brisk stream of water. All closets are located over these ditches, but the quantity of water passing is so great that one can never notice any fecal matter in it. The city is also well lighted by electricity, the same stream furnishing the power; but the electric-light plant is privately owned.

Still, with all this sanitation, San Pedro is not a very healthy place. There is not a screened house in the city, and the mosquitoes (very plentiful) certainly do spread malaria. There are very few house-flies here, in fact, one will hardly notice them at all. This is so because of the absence of breeding-places.

According to an agreement of the Pan-American Union, all these republics reciprocate in the registration of physicians. An American physician desiring to practice here can register by having the genuineness of the signatures on his diploma certified to by his nearest Hondurian consul in the United States, with any other proofs, such as a certificate of membership in the association to which he belongs; with this evidence at-

tached, make application to the Secretary of State. No fee is charged. In Honduras, it is usually best to employ a local attorney, who will charge about ten dollars, to complete the legal arrangements. In fact, one engages his influence, since there is some feeling against foreign physicians, especially in Guatemala. This "feeling," however, arises from the presence of the local medical college, which is ever alert to its own interests.

I am sending a photograph of a papaya carica tree. The fruit is here used only for food, usually for lunch or the noonday meal. Most foreigners have to cultivate the taste for these papaws, although I liked the first one I ever tasted. The meat is yellow and a little firmer than that of a ripe muskmelon, and is served either with or without salt and pepper. The unripe fruit, when cooked, makes an excellent vegetable. The leaves are used to render meat tender. For the latter purpose, three hours before cooking the meat is carefully wrapped in the green leaves, which exude a milky juice (containing the



A papaw tree, with its fruit

papayotin), and the whole then is wrapped in paper, to insure close contact. The result is very marked, as proven by a careful personal test. This juice resembles that of the fig-tree; also the leaves, though larger, are shaped the same as those of the fig-leaf. This fruit at first had the effect of a laxative on me to such an extent that I was compelled to desist from its use for a time.

The papaya is not new as a medical plant but I have found a thing here very new to me, and quite a nice one. The following data I owe to the kindness of Dr. M. Paz, a local native physician. *Chan* is the common name for a seed of a variety of papaya grown in the interior, especially about Santa Rosa. When placed in water, these seeds quickly yield a mucilaginous mixture, to which the natives add vanilla or any other flavor, with sugar to suit the taste. It is used to quench thirst in fevers, very much as we use slippery-elm or acacia-gum solutions in the States.

Malaria being the chief malady here, the salts of quinine are admitted free of duty; but the local physicians have begun the use of salvarsan with satisfactory results. Dr. I. J. Jones, a physician of Honduras for twelve years, says:

"Having observed reports from the French army officers on the use of salvarsan and neo-salvarsan as a remedy for malaria, and particularly in those forms produced by the estivoautumnal parasite, which prevails here, the staff of the local hospital began its use. To date, we have made about 300 injections intravenously. The results have been uniformly beneficial, many cases very strikingly so. In addition to the curative effect, it exerts an immunizing action that lasts for three to five months. Cases of very marked cachexia, including enlarged spleens and livers, with anemia of high grades, are rapidly cured without other remedies than salvarsan. We have treated 100 cases of syphilis in different stages with salvarsan, also with good results, the most marked effect being in the secondary stages. Good results have been obtained also in tertiary paralysis, in many instances radical cures."

T. H. STANDLEE.

San Pedro Sula, Honduras, C. A.

[The observation regarding the value of salvarsan in malaria is most interesting. No doubt the drug will be thoroughly tried out in the pernicious forms of the disease. In this connection it is interesting to note that sev-

eral cures of pernicious anemia have followed the use of salvarsan.

Dr. Standlee sent us some "chan" seeds, and we have found them a very pleasant demulcent.—ED.]

ALKALOIDS AND BIOLOGICS

Yes, the alkaloids and the biological products are taking away the slavishness and the uncertainty of medical treatment and the dangers of many of the diseases.

What the profession most needs is more doctors who are willing to use enough gray matter to keep up with the procession. It takes the exercise of gray matter, but the more it is exercised, the easier and the more delightful it becomes. I look forward to an old age of study with delightful anticipation.

L. V.

—Kansas.

EMETINE AND IPECAC IN INDIA

The "family" surely must be very much pleased to learn of the beautiful results following Rogers' discovery of the value of emetine—the active principle of ipecacuanha—in the treatment of tropical dysentery and allied disorders. Within the next few months we may confidently look for even more splendid results from this alkaloid; and those who have closely studied the virtues of ipecac in various diseases should not be at all surprised at the discovery of new applications of emetine.

As for us here in India, we have had excellent results in acute dysentery from bulky doses of ipecac, and though the ensuing nausea was almost unbearable, the effect always was splendid. We did not know, nor care to know, what would come from such vomiting and the elimination from the stomach of its poisonous contents. We looked only on the effect upon the bowel. Whether the benefit was caused by the action of the drug on the liver directly or due to the pressure on that organ from excessive vomiting was not given serious consideration.

Ipecac has a decided action on the liver, and that action is owing to its emetine; which fact, unfortunately, was not formerly properly understood and, in consequence, that alkaloid was removed from the drug. The ipecac actually was depleted of its emetine and "ipecacuanha sine emetino" was presented to the profession—with what result, you already know. The patient was thank-

ful for getting medicine that did not cause vomiting; but we doctors were not satisfied with the indifferent results secured.

Now, however, Rogers' discovery surely will put ipecac into that high place that it deserves, and it will be the dosimetric system of dosage that will be successful. It will not be necessary, absolutely, to give the drug hypodermically; a clean, empty stomach will be quite as good a route for the introduction of the remedy, provided that viscus is properly made ready for its reception.

I was taught to give a large dose of ipecac (30 grains) once every week when treating syphilis with mercury and opium—the pill of mercury and Dover's powder. The vomiting produced by this large dose of ipecac gave excellent results. Now, might it not do as well to add to the medication a small dose of emetine every day, instead of one large occasional dose? What do others think?

In respiratory diseases of children, emetine is known to play a good part, and all the "family" knows it. It is its action upon the liver and the abdominal viscera that is to be studied in detail.

Every physician should study the active principles, and with one selfish view, which is, to prolong his own life and make himself happy in his old age. One's own life is more valuable than all the rest of the world, and the selfish motive inspires me to learn new things.

When the plague broke out, I was sure of being attacked some day. So, I learned, and made popular among my friends and people the hydropathic ways of fever treatment. When I found pure water was rather injurious, I added salt to the water, making it a normal saline solution for drinking purposes, and brine for baths, and I got better results. With the alkaloids to help me, I saved my own life, in the year 1906, from a dire attack of the plague.

Since reading Doctor Roemer's letter in *CLINICAL MEDICINE* I have been trying dosing with emetine for my liver, since I had a very large abscess twenty years ago. I am hopeful of obtaining good results. It is my wish that the old-style physician would study the active principles with this personal selfish motive. He must be conversant and well versed about prolonging his own life; and this he can do by trying the alkaloids on himself for ailments from which he suffers.

Ipecac was used by missionaries, many years ago on the Island of Formosa, with good results in the treatment of the plague. Of course, this must have been used in the

beginning of the attack, with the idea of cleaning out the stomach, not taking into account the general result that such a dose produced on the body, and particularly upon the liver.

In short, emetine deserves a place in the front. It was once in front, through the use of the ipecac root itself, but was slighted and driven out for a few years. However, thanks to Rogers' discovery, it will again be given the consideration it deserves at the hands of progressive physicians.

I appeal, through your journal, for the use of more of emetine hydrochloride in the management of disease.

VAMAN BAJI KULKARNI.

Bombay, India.

EXPERIENCES WITH DIPHTHERIA

That peculiar cough, that brassy cough that frets the hearts of those who realize its import when they hear it in the little ones as the bark of laryngeal diphtheria, haunted the ears of Doctor Bleil, as he frankly admitted in his article on "Diphtheria" in the October issue of *CLINICAL MEDICINE*. Well it was that this peculiar cough caught attentive ears ere it was too late and got him busy till the conquest was his.

Better, still, that his patient was not a helpless wee tot in the throes of suffocation. How many little mounds, long ago grown green, dot the myriad cemeteries, because the significance of that peculiar cough remained unheeded till hope was gone and science stood aghast, defeated!

But what otherwise can be expected when oft the initial treatment consists of home-remedies, however well meant and tenderly given?

Nor is it always easy for a physician to recognize the condition back of that peculiar cough. Think you a throat-specialist infallible? Take heed, though nigh every diseased thing panders to and riots in specialism, there is still hope that the family doctor will be saved a corner in that great subdivision in which he can be identified apart from his sphere of measles, chicken-pox, and worms, and be spared making tracks for the Poor House! The following case reflects a bright spot in this pessimistic outlook.

Years ago a mother took her boy to a specialist for an examination, who, when he had concluded it, said he thought the child's trouble lay in the lungs. So, she brought her son to me. Laryngitis, probably diphtheritic, was my diagnosis. The first culture

showed diphtheria. Apart from getting busy with a steam-apparatus and having on hand a suitable tracheotomy-tube, should emergency require, no other data are vouchsafed by memory. But he recovered!

Puzzling, think you, to differentiate from bronchopneumonia? Certainly, if you neglect to use your eyes and ears.

When my sheepskin was young and yet sufficiently modest to hide its date, a kind neighborly lady came and asked me to visit a three-year-old child; for the attending physician's *dictum* was, "The child is dying from pneumonia." The parents were resigned and awaiting the last call. However, a ray of hope flashed a rift in the grim shadows when, after a subsequent examination by myself, it was explained that there was false membrane in the child's throat and that an operation might possibly save it. In the consultation, Doctor Farnum, who taught anatomy and knew it like a book, concurred, and just before beginning to operate he observed a piece of membrane that was coughed up by the child; this cinching the diagnosis. Tracheotomy saved the little girl, but in a moment when unguarded she withdrew the tube and tossed it away.

A hurried call got my feet scurrying from a nearby patient to the bedside of the little one, and, although it went out that "the child is dead," two feathers deftly manipulated in the dim lamplight admitted sufficient air till the tube could be replaced, and the child's spirit, though it nigh had "crossed the bar," returned, and she who was thought dead grew strong and blossomed into womanhood.

A boy was apparently sleeping his last sleep. The father walked the floor, exclaiming, "There is not a doctor in America who can save him." Tracheotomy saved the child. Victories in 1891 for Dr. Tracheotomy and his adjuncts!

The two preceding cases are not included in the following report of 104 cultures from the throats of 90 patients; 50 of whom showed diphtheria, the rest negative. Mortality from diphtheria, 4 deaths and one, another's case where I assisted not included, 8 percent. Four intubations, 1 (diphtheria) died, 3 (negative) recovered. Three at least of the fatal cases did not receive antitoxin. Two patients treated one day, dead the next. Two apparently convalescent died of cardiac paralysis. Out of the 90 patients, 12 received antitoxin.

Case 1.—Was this complicated? Scarlet fever too? Girl, 4 1-2 years. Previous

history: sick with fever twelve days, nine of which she was treated by another physician, whose two cultures were returned as negative. Clinical history: temperature, 102.3° F.; pulse 100; spotted rash about buttocks, slight erythema of body and eczema on lower extremity; exudate on tonsil, diamond-shape ulceration of soft palate and membranous deposits thereon. Culture returned as diphtheria. By this time pulse was 140; respiration 60.

I gave 3000 units antitoxin. The third day, pulse 120, respiration 28, throat scarlet, membrane still visible. The sixth day, throat clear. Onset of bronchopneumonia Morning pulse 140-150; respiration 58, afternoon pulse 160; respiration 60; urine showed casts and albumin. Then followed: nephritis, double suppurative otitis, five abscesses (mostly submaxillary, cervical, and the like), and facial paralysis. Enough? The patient as well as the writer survived! February 12, 1899, to end of May, with the ledger still open for payments!

Case 2.—September 12. Adult, male, 23. Had diphtheria when ten years old, with other members of family. September 13, membrane on tonsil and uvula. Diagnosis, diphtheria. First culture was negative. September 14. Right tonsil and contiguous tissues swollen and occlude fauces.

I injected 2000 units antitoxin. Temperature 102° F. I injected another 2000 units five hours after. The second culture was negative. September 16. Pulse 80; temperature 99.4° F. Posterior pillar of tonsil covered with membrane. The fourth culture was affirmative. September 20. Recovery without sequela.

Bacteriologist's report read: "After over forty-eight hours incubation of first culture a profuse growth of diphtheria bacilli was obtained."

Moral: Let them incubate, but inject antitoxin before your patient is a dead one! Criticism? Why, he should have injected more antitoxin in his cases. Certainly, now! But when you are up against prejudice, aggressive kiddies, and the price, bucking is at a premium!

Case 3.—Child, 2 years. Sick five days. Membrane on tonsil, throat swollen. September 2. Gave 2000 units. At 12 p. m., pulse 124. September 3, at 5:45 a. m., pulse 140. September 4. At 7 a. m., gloom! 1000 units. Culture returned as affirmative. September 5. At 9 a. m., pulse 100. Bright. September 6. Throat clear. September 8. Recovered. Antitoxin scored here, and stim-

ulants. In five days well, and fourteen visits.

Case 4.—Postdiphtheritic paralysis. Child female, sick from December 13 to February 23. Refused food. Laryngeal paralysis. Prominent symptom, cough; but that churchyard cough caused hope to battle against hope, still, under hypodermic treatment (strychnine, in the main) the battle was finally won. Received no antitoxin.

Case 5.—Boy. Received 3000 units antitoxin the sixth or seventh day. First physician did not send culture. Mine was returned as negative. Two months later he developed paralysis and was unable to lift head from pillow or to walk. Food, tonics, strychnine hypodermically, and crutches restored him to health in about two months.

My treatment: Antitoxin early and in sufficient doses. Late effects *nil*. In nasopharyngeal cases, I syringe nares and spray throat. Use weak alkaline solutions in the young. Poisonous solutions should never be used in young children, and only in the older ones who can return it by expectoration. Never allow the laity to use swabs or sprays. Use them yourself. Calcium sulphide to saturation in these cases, and preparations of iron with strychnine from the start. Nuclein would be a good adjunct. Laryngeal cases require, in addition to antitoxin, calx iodata frequently to effect.

Use steam continuously. If you do not have a steam spraying machine, buy one. Meanwhile slake lime in small quantities at the time under an improvised sheet-tent—a life saver I found it in treating cases not reported here. These tots need lots of air; so, do not shut it out with tents badly arranged. Never let a little one die without giving it its last chance.

Try tracheotomy or intubation, or both. But alkaloids! Though thou knowest the stars and telleth them by name, yet know not nor use alkaloids, your wisdom may count as naught, doctorally!

MORRIS HARVEY.

Fruitvale, Cal.

[Also, the doctor who knoweth antitoxin and useth it not, and useth it not early and in large doses, his name shall be anathema. Suspect diphtheria? Then give 5000 units. Are the symptoms severe or the case advanced when the patient is first seen? Then give at least 10,000 units. And if thou are wise neglect no measure that may remove local sources of infection; that may give comfort; that may prevent complications; that may

sustain strength and forestall disaster. Dr. Harvey's advice is excellent, and wise is he who profiteth thereby.—Ed.]

THE DIGESTION OF OUR MEDICAL LITERATURE

Words are not always definite; several significations may attach to a word. What, then, do we mean by the word digest?

A man with an empty stomach feels and sees but one meaning: he says, "Hunger is my cook; my labor brings me meat, which best digests when it is sauced with sweet."

To dissolve in the stomach and be converted into life-giving chyme, is a very important kind of digestion.

But there is another meaning, which is, to arrange and condense. Nowadays we should have more written on this plan. Readers of this age are too busy to ponder over prolix and verbose chapters and articles. They must have their mental food well digested and concentrated.

Thus, how repulsive to the eye are solid, black and unbroken pages of a book or paper, with unleded lines and few paragraphs. Such matter often is read or scanned with a sweeping and skipping glance, and then relegated to the high shelf for a long repose. The editors of such matter may be good, clever, adipose fellows—not always saturated with nicotine—but they lack taste and art, and fail to appreciate the spirit of this electric age.

Digestion and concentration of thoughts and facts, with liberal spacing to let the light upon black pages, would have been salt for them and pleasure to the reader.

Now the writer, acting upon these hints, may become erratic, but his concise and significant paragraphs will be read and digested for their lucid facts and ideas. Much originality will not be required of him. His readers will be satisfied with facts and apt suggestions. They want that which will enlighten and stimulate—be it original or plagiarism. In fact, there is not much actually new under the sun. Our inventions are, to a great extent, but shadows of lost arts, and often our brightest ideas have illumed the brains of our ancestors ages ago. We should be wise if we fully comprehended and appreciated all of the past. Invention, as well as history, frequently repeats itself.

Now there is room for the digester, he who can abstract and re-state facts in the least number of words for lucidity. Let him, to a

great extent, discard those pompous and useless words "I" and "We." Yes, and he may sometime save ink required to state authority—if, in such cases, he makes no show of originality. But let him not be oblivious to ideas and incandescent truths.

One cannot doubt but that such presentation of the progress and status of the age would be appreciated. Great observation and diligence would be required of one attempting such work—but there are different degrees in which it might be undertaken.

It may be true that a high, literary, and ornate style may not be attained in this way. But let us have more of the digested, redacted, and practical; illumed by the electric flash of concentration. Such pages may not be highly homogeneous, if only redolent with facts and ideas.

Some publishers have a clever way of doing things; with German houses it is a practice to issue "make-believes."

These are first editions, consisting of not more than a dozen copies. Then the words "second edition" are inserted. By this jugglery it is expected that both author and publisher may be benefited.

The old Greeks also had a very ingenuous deception. With them death could be made to appear joyous to sympathizing friends. The victim had but to partake freely of the root of the common buttercup. This highly poisonous substance will so contract and distort the muscles of the face as to produce, in the death-struggle, the appearance of high exultation, shouting and laughter. Death was thus made palatable—to the observer.

In the medical world of today, there is the same demand for elimination, digestion, and concentration; elimination of the inert and incompatible elements of the one agent desired. He who ignores this reform and fails to keep abreast with the advancing tide will find himself a back number.

C. E. WITHAM.

Lawrence, Kans.

[What Dr. Witham says is absolutely true. Not only should our books and journals be presented in a typographic form which is attractive to the eye and easy to read; but the material itself should be given in a simple, direct, *condensed* form, so as not to weary the reader. Most men want facts without padding. They care little for mere opinions, unless such opinions have the weight of authority.

This condensed, right-to-the-point stuff is what we are most anxious to get. Also, it

is the hardest to secure. Right now we want to know how a hundred of you fellows treat such diseases as asthma or chronic bronchitis—if you are using methods that make good; we want to know the new uses you are finding for pilocarpine, apomorphine, emetine, and a score of other drugs; we want to know some of your experiences with bacterin and serum therapy.

Why don't you tell us? Hammer it into us with a few hot words, written from the travail of the spirit after a hard day's work. Tell the other fellow why you failed—and how you made good. Don't make it a "bromide"—write us a real letter, just as you would to Brother Bill, if he were a doctor. Use "I" or "we" all you please—there we disagree with Dr. Witham.

Won't you do this? Let's all consider Dr. Witham's letter a call to (literary) arms! —Ed.]

CHLOROFORM DANGERS. TREATING TONSILLITIS WITH PAPAINE

Having just read an article by Doctor Abbott, entitled "Deaths from Anesthetics," sets me thinking whether conditions which I shall describe do not prevail in other parts of the country than where I found them. After practicing a short while in a southern-Michigan city of 6000 people, I was asked by my barber to give his wife chloroform at a dentist's, who was to extract some of her teeth. He informed me that a good many people had died there from the effects of chloroform; so many, in fact, that he did not care to take risks with any of the older doctors, so chose me, as the new man. I consented to do the job and when, he asked the fee, I told him it was \$5.00. It took his breath, nearly, and he told me no other doctor there charged more than \$1.00. Then he was informed that the material, if good chloroform was used, would cost nearly a dollar.

After due explanation, I was employed. Then a search for some of Squibb's or any other chloroform pure enough for anesthesia disclosed that none such was in stock in any drug store in the city; and everywhere I was met with a "Doctor, this is just as good and does not cost as much;" and the druggists, every one, offered me a certain cheap-grade commercial chloroform—no wonder their patients died.

Now I will tell you how I treat my cases of tonsillitis.

First give aconitine for the fever. Then

give a cleanout with calomel and podophyllin, followed next morning by a decided dose of hyposulphite of sodium; also leave a gargle of a saturated solution of the "hypo" diluted with an equal amount of distilled water.

Now comes the meat in the nut. If the trouble is follicular, then take a few small tablets of papain. Just moisten them, one at a time, as used, and with a swab or small brush apply the paste direct to the white matter in the follicle. The papain "eats it up." I have cleaned up a bad throat in thirty minutes by the frequent application of the papain; and right there convalescence was established. Try it, and be surprised.

W. K. JOHNSON.

Piqua, Kans.

[Chloroform is being regarded more and more as a dangerous drug, and an A. M. A. special commission has gone on record as opposing its anesthetic use. At any rate, only the very purest and best chloroform should ever be administered.]

The papain treatment of tonsillitis is novel. Has anyone else tried it? Don't forget that many of these cases are essentially rheumatic; and that frequent recurrence suggests the trial of an autogenous bacterin—or tonsillectomy.

By the way, can't we have a dozen short reports on tonsillitis—all kinds—for our next issue? Do *your* part, Brother.—Ed.]

A "FRACTURE NUMBER" OF THE AMERICAN JOURNAL OF SURGERY

The American Journal of Surgery will present in January an issue of their journal devoted exclusively to "Fractures and Their Treatment."

The following subjects will be presented by acknowledged authorities in this special branch of surgical work:

"Astragalus Injuries," by F. J. Cotton, M. D., Boston, Mass.

"Diagnosis of Fracture," by Lewis A. Stimson, M. D., New York.

"Position in the Treatment of Juxta-epiphyseal Fractures at the Hip and Shoulder," by Fred. Albee, M. D., New York.

"A Splint for Maintaining Nail Extension During Transport," by John C. A. Gerster, M. D., New York.

"Fracture of the Skull: Roentgen Ray as an Aid in Its Diagnosis," by W. H. Luckett, M. D., New York.

"Vicious Union," by James K. Young, M. D., Philadelphia, Pa.

"The Immediate and Remote Results of Fractures of the Skull and Spine," by Chas. Elsberg, M. D., New York.

"Conservation in the Treatment of Fractures," by Wm. L. Estes, M. D., South Bethlehem, Pa.

"Some Phases of Fracture Treatment as Based on Hospital Experience," by E. S. Van Duyn, M. D., Syracuse, N. Y.

"The Treatment of Fractures," by E. P. Magruder, M. D., Washington, D. C.

COMICAL DELIRIUM-TREMENS CASE

On reading an article in a medical journal recently, giving the treatment in a case of delirium tremens, I was reminded of an amusing incident that occurred in my practice with such a patient several years ago. This man was a stalwart fellow, standing some six feet four in his stockings, and well put up in proportion.

My first call to attend him was in the middle of the night. He had aroused the inmates of the household, and had peremptorily ordered mater familias to provide an elaborate supper, under the duress of divers threats. This she was proceeding to do. I found the table spread, on which were broiled beefsteak, fried potatoes, fried ham and eggs, hot coffee, and everything else the fellow could think of that was in the house in the culinary line. The old woman was busily engaged in cooking flapjacks (!), and altogether the menu was sufficient for twenty men, and the patient had not touched a morsel. I administered a quieting potion and departed to secure a male attendant.

On the following day I received an urgent hurry call to see the patient, who had escaped from his attendant into an adjoining garden back of the house. On my arrival, I beheld a most amusing and comical sight. It being in the month of September, the patient had his attendant were having a race around and through a patch of green corn, among which there was a plentiful supply of ripe and rotten tomatoes, with which the patient had bespattered the pursuing attendant from his head to his feet. The patient finally recovered, although he, as well as the attendant and the old lady, have long since retired to the "happy hunting ground."

GEORGE D. STANTON.

Stonington, Conn.

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

MY CREED

I will not yield this everlasting truth—

That joy soars far above each earthly sigh,

Set like a star in the deep night of ruth,

And throned in light too pure, too sweet, to die.

'Tis this that lifts bowed-down humanity

To thoughts sublime and actions that entwine

The heart of man with beauty. Earth and sky

Repeat forevermore, "All is divine,"

And through the grossest clay the smile of God
doth shine.

Doctor, hand this to your hypochondriacal,
melancholic patient, and see if it won't do
her more good than medicine.

"Laugh, and the world laughs with you; Weep,
and you weep alone."

How true this is! I am reminded every
day of the tonic influence of laughter, in its
beneficent effects often more potent than
medicine. Let us learn to tell a good story,
to laugh and be cheerful; "don't wear your
heart on your sleeve" but keep your sorrows
to yourself. We all have troubles of our own,
and people are too selfish and busy to listen
to your tales of woe.

I am not arguing against sympathy, but it
is idle to go about croaking, with a long face,
soliciting sympathy and condolence from
everyone we meet. Learn to hide your pains,
aches, and sorrows under a pleasant smile.
You need tell no one but your physician
that you have earache, headache, heart-
ache, corns or constipation. Don't, for
heaven's sake, get the complaint habit.
Cheer up! The sanguine optimistic man or
woman is always as welcome as a beautiful
spring morning; but the hypochondriacal, dis-
contented, complaining individual is an un-
qualified bore and nuisance to everyone.

Just try for a year to smile and to acquire
the cheerful habit. Put away all those
wrinkle-producing, skin-withering, blood-im-
poverishing, soul-contracting feelings of envy,
spite, jealousy, and self-love—those petty
complaining, narrow-minded ambitions and
all discontent, and make up your mind to
enjoy life as you go along. "Joy is the sun-
shine of the heart and cheerfulness and honest
mirth bring forth the blossoms and unfold the

leaves, and their fragrance sweetens all our
lives and the lives of others."

Fun often is better for a sick child than
medicine. And, after all, we are but grown-
up children; and, whether sick or well, we
should not drain our vitality, shorten our
lives, and make everyone about us uncom-
fortable by worrying. Cheer up! for our
misgivings may not be true, and, remember,
that mirth is the best tonic in the world.

When the physician finds himself in the
presence of organic maladies, that is to say,
inflammations which, having run through
their successive stages, have finally given rise
to degenerative products such as tubercle or
cancer, he has already begun to doubt his
power; he has become discouraged through
the impotence of his therapeutics and feels
impelled, in spite of himself, to let matters
take their course. In other words, such a
one gradually falls back upon what we call
"expectant treatment;" which, of course, is
not treatment at all, but the neglect of it.

And what, candidly, can we do against, for
example, an organic affection of the heart;
against a tuberculous cavity in the lung;
against the progressively infective elements of
cancer, with their tendency to destroy adja-
cent tissues? This is a question asked every
day by the physician. But ought he to ab-
dicate in favor of all serious maladies, and
undertake to treat only those the course of
which is benign and whose treatment is easy?

Here, active-principle therapy is able to
render him the most powerful aid, for it
teaches that we may live comfortably for
twenty years or even longer with a serious
affection of the heart; or that a lung cavity
may be greatly diminished, rendered aseptic,
and often made to heal under the persistent
use of the proper active principles. This
mode of using drugs teaches also that even
cancer during its evolution may be subjected
to arrest of development; provided only that
the physician—whose mission widens with
the extent of the danger—understands how he

may combat, step by step, the symptoms in the successive order in which they may present themselves; how he may avoid or definitely meet all the complications, and how he may sustain the vitality which is constantly menaced by the wasting fever.

The results this man obtains will prove to him that he has done well not to remain a merely inactive spectator of the progression of the disease. And if it be that after all effort made the malady remain incurable, this physician will have the consolation of knowing that he has made his patient comfortable and has prolonged his life; the last-named result in very many special instances being a most important one.

The secure increased blood pressure, is one of the therapeutic indications most frequently to be met in certain depressed conditions (in tuberculosis, for instance), and strychnine is the chief drug to be employed for that purpose. The arsenates of iron, quinine, and strychnine are good supertensive medicaments, the dose being increased according to the susceptibility of the patient. Tuberculous subjects, among others, are observed to derive the best results from the daily ingestion of from 15 to 25 milligrams, given in three doses. The frequently employed combination of sparteine with strychnine seems a useful one, also.

Sparteine, as we know, acts rapidly, is devoid of cumulative action, and is the type of the cardiotoxic drugs suitable for prolonged administration. Its action upon the blood pressure seems slight, but the heart effect is useful for preventing the tendency to cardiac overwork existing during the temporary pressor effect of agents such as epinephrin, with which it often is combined. The effective dose of sparteine is from 3 to 6 centigrams singly, and from 5 to 15 centigrams a day.

Epinephrin acts only partially, that is, it does not affect the greater proportion of the deep viscera; its evanescent constrictor action is followed by dilatation, which, in the kidneys, results in polyuria. The initial hypodermic dose of epinephrin should not exceed 1-4 of a milligram; the patient should be kept recumbent and with the head low for five or ten minutes after its administration, and he should also be warned that fugacious palpitation, pallor, slight vertigo, and depression may follow.

Extracts of the posterior lobe of the pitui-

tary gland and their crystalline principle, hypophysin (isolated by Houssay, of Buenos Ayres), act much like epinephrin, but the effect endures from thirty to sixty times longer than that of the latter. Many observers have used the extracts with favorable results in tuberculosis and in acute infections where there is cardiovascular weakness, as well as in mitral involvements and chronic myocarditis associated with insufficiency of circulation. Hypophysin must be used in doses corresponding to 0.15 Gram of the posterior lobe, or 0.34 Gram of the entire organ. Smaller doses have been found ineffectual. The pressor drugs above mentioned may be variously combined or alternated in different conditions.

The tendency to misjudge others, and especially their capacity, is common. I myself have just been guilty of it. We all have been guilty of it. We are usually too selfish to look for good in others.

Lack of address, failure to seize the favorable opportunity, and modesty of character that shrinks from self-assertion or publicity not infrequently deny to their possessors the recognition due them. Nothing can be more flippant than the common query, "What does he amount to?" true worth being seldom seen by dull perception and the rule-of-thumb measure of the man.

I have in mind a notable instance, where a man of rare merit, cast aside because of a momentary lapse on his part, eventually, through kindness of heart and a knowledge of human nature, was nobly rescued from oblivion. But for that friendly sympathy and unshaken faith, one who today is conspicuous for his virtue and fidelity and whose superior talents have been notably displayed in service to his benefactor, might have passed to his grave, unappreciated and unknown.

Geoffrey St. Bridges has said, in effect, that many a deserving aspirant after success has failed because of want of a little trust and encouragement. The material business world is too apt to judge of fellowmen as of dumb cattle, observing only that which directly appeals to the outward, arithmetical estimate. It is a lasting reproach to one assuming to be an intelligent Christian gentleman that the accidents of sensibility and unworldliness of character, even a passing slip of morality, should irremediably obscure a struggling honest heart.

How rarely are we understood; how few people
really know us—

Oh yes! You know me—so at least you say,
Basing your knowledge on a laugh or tear,
An idle jest, a thought in which appear

The hidden elements of character. Always
You think me so light-hearted that today
When my uplifted countenance did wear
A look of tranquil joy thou said'st, "Lo, here
A sunny stream o'er which bright glances play."
Art thou then so ill-schooled in circumstance,
So ignorant of men, thou couldst not see
The rocks beneath or hear the knell that sang
In secret chambers of my soul—perchance
The solemn undertone of agony,
The sighing of the spirit's voiceless pang?

The reader is not asked to believe that the following incident is an actual fact, and he need not laugh, unless he feels like it.

A lady was attacked the other day by a violent internal pain. It didn't yield to simple remedies and, so, she called the doctor. The doctor was puzzled, and admitted it; then sent for the x-ray-man. After a little manipulation the woman was asked whether she missed a watch. Why, yes, she had and still did—and then the mystery was a mystery no longer. She had swallowed the watch, which luckily was a diminutive one; and there it was, having the time of its life.

Then the woman remembered having lately dropped to sleep with the watch in her hand. After running down as far as it could, the watch had stopped. The doctor said they must get it up, some way, and the bright assistant suggested that they wind it up.

"It is an unusual case," remarked the doctor.

"You are mistaken," rejoined the owner; "It's a regulation open-face."

"Perhaps we could get it up in minute particles," suggested the assistant.

"No second-hand suggestions," growled the doctor, as he knit his massive brow.

So then they went to work in earnest and the watch was presently restored into the hands of the gratified lady.

And now when she wants to time her slumbers she holds a clock—no matter how heavy time hangs on her hands.

The modern tendency to specialism in medicine has elicited wide discussion. On the one hand, it is claimed, and quite plausibly, that the field of present study has become too vast to be compassed by the sphere of ordinary practice; that, in fact, the startling advances of scientific investigation in our day have necessitated restriction of professional effort and compelled attention to special departments of study, in order to assure practical

success for any individual. On the other hand, it is with equal plausibility held that particular devotion to a single phase of the medical art tends to a narrow vision of its possibilities and a limitation of the general knowledge an acquisition of which insures the most permanent results.

It is somewhat difficult to endorse either one of these methods exclusively. It undoubtedly is true that many so-called specialists are woefully deficient in the principles of medical knowledge, without which the field of inquiry is naturally deprived of its professional breadth, not to speak of its usefulness to the laity.

That there are certain obstinate conditions not to be thoroughly understood or competently treated without long and arduous investigation of their peculiar character, cannot be denied. Yet, precisely here we find a lamentable deficiency in our schools, which in a few years' course of study claim to produce the expert. A comparatively slight acquaintance with bacteriology, for example, confirms the student in the belief that he has mastered the science; whereas he has but crossed the threshold of it, and years of patient industry will be required to render his talent that of an adept.

Great, indeed, is the achievement of the laboratory, in commanding its control of difficult details; yet, liberally speaking, it should be regarded as only a single step in the attainment of professional truth, marvelous in its accomplishment, but of itself only subservient to the larger learning which constitutes the highest medical progress.

The duty of the physician and of the surgeon should be regarded as two-fold: while bestowing requisite attention upon the minutiae of their callings, each should regard with conscientious care the ampler demands of a profession whose cardinal impulse is, to acquire the broadest view and the most complete equipment possible for mitigating human misery.

Beam kindly on the anxious earth,
Autumnal suns, and with your light
Dispel the shadows which have grown
From sorrow's starless night.

Is not man still the infant god
That trod the sacred Academe,
And ever has been climbing still
Unto the heights supreme?

O days with golden light aglow—
O years remembered with regret;
Upon our glorious heritage
The sun shall never set.

AMONG *the* BOOKS



BLAKISTON'S PHYSICIANS' VISITING LIST

The Physician's Visiting List for 1914. Philadelphia: P. Blakiston's Son & Co.

We are just in receipt of this annual visitor, which has become a necessity to thousands of physicians. In addition to the account-book section, the little book contains much useful information, including a physician's dose book, table of weights and measures, and simple directions for the treatment of emergencies.

The book is made in different sizes: that for twenty-five patients weekly costs \$1.25; for fifty patients, \$1.50; for seventy-five, \$2.25, and for one hundred, \$2.50, the last three being in two volumes. There are also perpetual editions and monthly editions, the prices ranging from \$1.00 to \$1.50.

This little book is so well known that it needs no special recommendation. It is one of the best of its kind.

MARSHALL: "DISEASES OF THE EYES"

Diseases of the Eyes. By C. Devereux Marshall, F. R. C. S., surgeon to the Royal London Ophthalmic Hospital. London: University of London Press, Hodder & Stoughton, and Henry Frowde. 1912. Price \$3.75.

It hardly would seem that there is any particular demand in this country for a new work on diseases of the eyes, in view of the large number of most excellent treatises already in the field, together with the rather limited extent of the field itself. Indeed, one would think that even in England the writing and publishing of such a book must be largely a work of supererogation.

However, it is hardly the function of a reviewer to speculate upon that aspect of the matter, but rather to express some sort of estimate of the intrinsic value of the book itself. In the present instance, this is a much more pleasant task to perform than the other; for, concerning the merits of Dr. Marshall's little book there can, we

think, be no difference of opinion. He is in every way fitted to write a modern, practical manual on the subject; and he has amply justified his qualifications. One criticism we venture to offer. Since the book is frankly devoted to ocular diseases, and the author could not treat extensively in it of the subject of refraction, it seems he would have done better, possibly, to leave refraction out altogether; or, still better, to have discussed errors of refraction only as they are connected with diseases of the eye. Still, when all is said, the little book is a pleasing and helpful one and deserving of high commendation.

DUBOIS: "ORIGIN OF MENTAL DISORDERS"

The Psychological Origin of Mental Disorders. By Paul Dubois, M. D., professor of neuropathy in the University of Berne. Translated by Edward G. Richards, M. B., A. M. New York and London: The Funk and Wagnalls Company. 1913. Price 50 cents.

We confess to a sensation of disappointment in the perusal of this little monograph, chiefly because of the vagueness, and even triteness, of its treatment of the matter in hand. For genuine nub and clean-cut method it is not for a moment to be compared with its English counterpart, Hart's "Psychology of Mental Diseases." Indeed, it does not strike us as being the work of a scientist at all, but of a philosopher, and a rather visionary philosopher at that; just as we have always held Dubois himself to be more of a poet than a physician.

Not, that the book is without a certain practical value, of course. Even poets and philosophers have their utilitarian value, little as the general public suspects it, which consists chiefly in the general and transcendental illumination that they shed upon ways and truths undreamed of by the myopic scientist.

Dubois is a dreamer of dreams and a seer of visions. His teachings have no very great

clinical value, as they stand; but they point the way to fields of scientific experiment, and open up possibilities of clinical advancement. Even so, we could wish that he had been a little more sequential in working out his philosophy and a little more definite in indicating the connecting link between the philosophic and the clinical. His psychiatry reminds us of Flammarion's astronomy and Poincaré's mathematics—big and imaginative, but a trifle nebulous.

STEVENS: "DISEASES OF WOMEN"

Diseases of Women. By Thomas George Stevens, M. D., B. S., M. R. C. P., obstetric surgeon to St. Mary's Hospital, London. With 202 illustrations. University of London Press, Hodder & Stoughton, and Henry Frowde. 1912. Price \$5.50.

This is another of the University of London series of medical publications. And right here we cannot refrain from suggesting that the same consideration of superfluity applies to a new work upon gynecology that ere this we have pointed out in regard to one on diseases of the eye—perhaps it applies even more strongly. On this side of the Atlantic, at least, we are simply flooded with gynecological textbooks and manuals, almost *ad nauseam*. Possibly in England the subject is not quite so overdone.

However, when we turn to the other aspect of the matter—the intrinsic merits of the text itself—we are happy to find that in this respect also the cases are parallel. We have nothing but praise for the subject-matter of the book, its arrangement and presentation. Two things strike us with particular force: first, the marvel of comprehensiveness and condensation which the author has achieved, and, secondly, the pleasantly deceptive excellence of the illustrations.

We do not know that we have ever seen, in any book, so much information in so small a space, yet, all clear and adequate. And considering that the illustrations are none of them in colors—which one has grown to believe a necessity in these days—it is a delightful surprise to find that they portray their subject with a graphic fidelity that we hardly thought possible in plain black ink.

WOODWARK: "MANUAL OF MEDICINE"

A Manual of Medicine. By A. S. Woodwark, M. D., M. R. C. P.; junior curator of St. Bartholomew's Hospital Museum; physician to the Royal Waterloo Hospital and

the Miller General Hospital for Southeast London, Edinburgh, Glasgow, and London: Henry Frowde and Hodder and Stoughton. 1912. Price \$3.75.

This "manual" of about four hundred pages evidently is intended primarily for the medical student, yet, it contains so much information in so small a space that it will be found extremely convenient as a work of reference for almost every physician. It is particularly complete as regards help in diagnosis, while the arrangement and presentation of diagnostic facts makes it very convenient. Thus, for instance, in introducing the section on diseases of the bronchi and lungs, there are several pages of explanation of the technical terms employed, and the normal and abnormal sounds are carefully described. This makes the succeeding pages of descriptive matter perfectly plain, even to a reader who knows very little about medicine.

Everywhere throughout the book the facts are assembled in such a way as to make them easy of reference; as, on page 111, where there is a footnote giving all the usual causes of clubbing of the fingers; so, also, on page 163 the reader is told in a few words how to feel the pulse and how to interpret and apply the information thus obtained. Information of this character is of the utmost value in differential diagnosis.

The principal defect of the book, we should say, is the small amount of space devoted to the subject of treatment. In fact, from the therapeutic standpoint, the book has very little value. However, the author was limited in the matter of space to devote to this phase, and possibly may be excused on that score.

BROOKS: "PATHOLOGY"

General and Special Pathology. For Students and Practitioners. By Henry T. Brooks, M. D., former professor of pathology at the New York Post-Graduate School and Hospital. With 525 Illustrations. Philadelphia: The F. A. Davis Company. 1912. Price \$5.00.

As the author publicly admits in his preface, this book is really an elaboration, in English, upon the German work of Professor Robert Langerhans, of Berlin. Since the death of Langerhans, which took place in 1905, there have been, of course, many additions to and changes in the store of pathologic knowledge, which made it necessary to recast and augment the subject-matter of his classic textbook; and this is the

task which Dr. Brooks has set himself. How well he has succeeded, time and a more or less extensive use of his book alone can show. A somewhat hurried glance through its pages, however, leads us to the opinion that it will be found a worthy edition of the parent work.

Nor must it be supposed that this work lacks in originality, for the author has managed to embody in it a large amount of his own personal experience and to infuse into it, throughout, his own strong individuality. Moreover, the arrangement is good, and the condensation (for it necessarily is condensed) shows fine discrimination.

In its physical features the book, in the main, is excellently done—especially in the matter of illustrations. On the whole, the book is a worthy contribution to the literature of the subject and should prove a very usable textbook for the student and the practitioner.

DE LEE: "OBSTETRICS FOR NURSES"

Obstetrics for Nurses. By Joseph B. DeLee, A. M., M. D., Professor of Obstetrics, Northwestern University. Fourth Edition. Philadelphia and London. The W. B. Saunders Company. 1913. Price \$2.50.

The issue of the fourth edition of this excellent little work of Dr. DeLee's apparently finds the public for which it was written—that is to say, the nursing public—just as eager for its reception as it was when the original edition was first announced. And no wonder; for it still marks, as it did mark then, an unparalleled departure in the field of obstetrical literature.

For one thing, there is no other book, to our knowledge, which gives to the trained nurse such frank, outspoken, scientific information upon this subject. There has always been a lurking idea that you must not tell the nurse too much about such things. DeLee has fearlessly broken away from this ancient tradition and taken her frankly into his professional confidence. Again, the book is like DeLee himself—modern, alert, clean-cut, shorn of all old-fogeyisms, consistent, not afraid to carry all the principles of modern medical science to their ultimatum in the practice of his craft.

Hence, Doctor DeLee's own personal success, and, furthermore, the popularity and effectiveness of his book. This is not written for the doctor, to be sure, but we venture the assertion that there is more in it than the average doctor knows or practices; and,

besides, the nurse depends largely upon the doctor for her literature, so that it is well for the physician to acquaint himself with books written for the trained nurse.

SCUDDER: "SPECIFIC DIAGNOSIS"

Specific Diagnosis: A Study of Disease, with Special Reference to the Administration of Remedies. By John M. Scudder, M. D. Twelfth Edition. Cincinnati: John K. Scudder. Price \$3.00.

Doctor Scudder is the prophet of Eclecticism, and his book has for years been, and still continues to be, the bible of the Eclectic physician. We are warned on the title page that the book, although now reprinted by request, has not been revised since 1890—from which we gather that the author finds, in the main, no reason for receding from or adding to his position of twenty-five years ago. This position is best told by the author himself, in the words of his preface, from which we quote:

"The first lesson in therapeutics is, that all remedies are uniform in their action. The conditions being the same, the action is always the same. We learn to know the healthy man by exercising all our senses upon him. Then we want to learn the diseased man in the same way and compare him with our healthy standard. Then we study the action of drugs upon the sick, and when we find them exerting an influence opposed to disease and in favor of health we want to know the relation between the drug and the disease—between disease expression and drug expression."

This is the relation which Dr. Scudder seeks to establish between his materia medica and his symptomatology—with what convincingness, we leave our readers to determine.

SCHOTTELIUS: "BACTERIA"

Bacteria. By Dr. Max Schottelius. Translated by Staff-Surgeon Herbert Geoghegan, R. N. Second Edition. London: Henry Frowde, and Hodder & Stoughton. 1912. Price \$3.50.

So far as our personal acquaintance with medical literature goes, this is the only book in print which contains within two covers (at least within two such small covers so close together) the entire lore of the bacteria.

It is inherently impossible, of course, for any book on this vast subject to be absolutely up to date, since bacteriology is constantly assuming a more complicated aspect, new

methods supplanting the old and new paths of research constantly being disclosed. Furthermore, as the author wisely points out, there is always a danger attaching to summaries of this character, in that they may delude the reader into a belief that he has a larger and deeper knowledge of the subject than he really does possess, and, in consequence, lead him to form hasty judgments upon difficult biological problems.

Nevertheless, it is very desirable that one should have a coherent, comprehensive understanding of the science of bacteriology as a whole, and this is what Doctor Schottelius aims to supply in this little book.

The present edition has undergone a thorough revision and many essential alterations. Two entirely new chapters have been incorporated, one on immunity and protective vaccination, and another on protozoa, both rendered necessary by recent advances in these directions.

STITT: "BACTERIOLOGY AND PARASITOLOGY"

Practical Bacteriology, Blood Work, and Animal Parasitology. Including Bacteriological Keys, Zoological Tables, and Explanatory Clinical Notes. By E. R. Stitt, A. B., M. D. Third Edition. Philadelphia: P. Blakiston's Son & Co. 1913. Price \$1.50.

This is a presentation of the subject of bacteriology from an angle totally different from that of the book just reviewed. As its name implies, Doctor Stitt's work is a practical working-manual for the laboratory-man; and it is about as complete and helpful a one as we ever have seen. That its value is recognized and appreciated by the profession, is amply evidenced by the fact that already it has passed into its third edition since its first appearance in 1909.

Not the least valuable of this book's features is the clinical interpretation that is offered of the various laboratory findings. We could wish that more of our laboratory manuals paid a little attention to this phase of laboratory work. We are in the habit of calling this method of diagnosis "clinical diagnosis," principally, we are forced to conclude, because it has so little or nothing to do with the bedside.

The crying need of the general practitioner

is a system of clinical interpretation that will make contact between laboratory tests and bedside diagnosis. We repeat, one of the most praiseworthy features of Doctor Stitt's book is that it makes this contact. As with the book by Doctor Schottelius, so with this one, a new chapter has been added on the protozoa, in accordance with the demands of recent research.

TURNER AND CARLING: "TREATMENT AFTER OPERATION"

Treatment After Operation. By William Turner, M. S., F. R. C. S., and E. Rock Carling, B. S., F. R. C. S.; with a Chapter on the Eye, by L. V. Cargill, F. R. C. S. University of London Press, Hodder & Stoughton, and Henry Frowde. 1912. Price \$3.75.

Here, at least, is a character of book of which there are none too many on the literary market. Doubtless the recent enunciation and pretty general acceptance of Dr. Crile's theory of surgical shock will stimulate the recording experience and observation in the treatment of patients in the pre-operative and post-operative periods, which may eventually develop into something like a definite and trustworthy literature on the subject. For the present, though, it must be confessed that the operation itself largely overshadows the care of the patient before and after the event, and worth-while information as to the principles and details of such care is all too meagre.

For these reasons, we welcome with open arms the experienced and successful surgeon who will suspend his scalpel long enough to tell the rest of us something about the incidental phases of his surgical work which unquestionably contribute to his success—and which may turn out to be not so incidental, after all, but, on the contrary, decidedly essential. This is precisely what the authors of this book have done. It may fitly be said to treat of the therapeutics of surgery, which forms no mean part of the surgical procedure.

A goodly quantum of well-executed illustrations visualize some of the technical lessons that can, hardly, be imparted in any other way, while an adequate index enables the reader to make ready use of that which the book holds of interest for him.



CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWER TO QUERY

ANSWER TO QUERY 5908.—“Tinea Circinata, or Ringworm.” I think I can suggest to T. D. F. (May, p. 461) a never-failing and simple remedy for ringworm, one that for years I have intended to publish, and which, I am sure, is better than burning rags on steel, as recommended by G. D. S. of Stonington, Conn., in the August issue. This is my method:

Take a large sheet of writing-paper (foolscap), roll it up into funnel-shape, using two pins to fasten together. Cut the mouth of the funnel even and then stand the funnel upside down on the back of a china plate. Now set the apex on fire and let the funnel burn evenly down to the plate. After blowing off the ashes you will find a yellow oil collected on the plate. This oil is used to apply all over diseased area, and you want to be sure to burn enough paper funnels to produce oil sufficient for this purpose. One application does the work, as a rule. I do not know what its composition is, but suppose the oil contains some form of arsenic and a little creosote produced from the burning

paper and condensed inside of the cone.
—Tenn. L. L. N.

[Thank you for calling our attention to your method of obtaining this “oil of steel,” and adding your testimony about its efficacy. Your explanation seems reasonable. Most paper nowadays is made of wood pulp, and from this, as the products of destructive distillation (combustion), there may result pyroligneous (and, possibly, acetic) acid, phenols, cresols, creosote (i. e. from certain woods), and other empyreumatic bodies. You would find it rather tedious, of course, to analyze your “oil of steel;” for its composition would vary materially under different circumstances, according to the wood-fiber used, the method of manufacture of the paper, the temperature generated, and the amount of smoke thrown down upon the cold plate.

We have found creosote a very excellent remedy in various parasitic skin diseases, and especially a substance sold as pyrolygnine has given us good results.—Ed.]

QUERIES

QUERY 5957.—“Elephantiasis.” E. H. A., Illinois, has under observation a case of elephantiasis in a large fleshy woman about fifty years of age, the disease so far being confined to the legs. The Doctor prescribed calcium sulphide. He now wants to know whether there is anything that may help.

Really, doctor, the term “elephantiasis” merely means a permanent swelling of the tissues, the underlying cause being blocking of the lymphatics, i. e., interference with the backflow of lymph.

The filaria—the blood-infesting nematode

parasite—is rarely encountered in this country; we must, also, differentiate between tropical elephantiasis and the milder form, usually involving the leg, observed here. In the milder degrees of elephantiasis in the leg, systematic and careful massage and bandaging from the toes upward will prove beneficial, provided small doses of arsenic sulphide are prescribed at the same time. We should suggest arsenic iodide, 1-64 grain, after each meal, alternating week and week about with the triple arsenates. It is just possible that liquor arsenii compositus, Bar-

clay (arsenous acid, and iodides of strontium and lithium), in 5- to 10-drop doses, well diluted, three times a day, will prove even more efficacious. Castellani has employed and recommends repeated injections of thiosinamin, either into the affected extremity or deeply into the glutei.

Under any circumstances, massage and bandaging from the toes upward are essential. Recently, injections of a vaccine of a diplococcus found in the blood have been recommended. These injections are to be continued until the diplococcus disappears.

It is plain that we cannot offer definite suggestions in view of our limited information on existing conditions.

QUERY 5958.—“Chronic Rheumatism and Arthritis Deformans.” C. O. R., New York, is treating a woman of 45 who has been in bed six months with what is considered either chronic rheumatism or arthritis deformans. Our correspondent requests us to tell him how to make a positive differential diagnosis and to outline the best treatment for either condition or for both.

“Would the local hyperemic treatment,” he inquires, “do any good, and, if so, how best secure effect? What do you think of massage for the joints or the back? If you think osteopathic treatment is indicated, please describe the exact method of procedure. Do you think Abrams’ book would help me out in this? If you think it well to induce local hyperemia in the joints, name the necessary things with which to do it and exact instructions for employing them; also instructions as to massage and local and internal treatment.

“The woman cannot take a step and has not been able to do so for about six months. Almost all the joints are involved and already considerable deformity exists. Her general condition was very bad, but now is better, owing to tonic treatment. The joints are enlarged and the knee-joints are quite painful to the touch or when manipulated. Her back did hurt considerable, but not much at present.”

Now, frankly, doctor, you have asked us to write a small volume on treatment, and, much as we should like to treat the subject-matter of your letter in detail, the extent of our correspondence absolutely makes this impossible.

But, really, you do not even supply clear-enough clinical data to enable us to make a definite diagnosis, so that it is not possible to advise for or against osteopathic treatment.

Even were it likely to prove beneficial, we cannot, of our own knowledge, “describe exactly the indicated manipulations.” Probably the book by Abrams on “Spondylotherapy” would help you materially; you might also study Murray’s “Practice of Osteopathy.”

You ask us to tell “how to make a positive differential diagnosis between chronic rheumatism and arthritis deformans, and to name the best treatment for either condition, or both.”

Arthritis deformans (rheumatoid arthritis) is a term used to describe cases of arthritis displaying a marked tendency to chronicity, with permanent changes in the joints or periarticular tissues. Those forms of arthritis, the etiology of which is clearly established, i. e., gonorrhoeal arthritis, are excluded.

With our present uncertain knowledge, cases of chronic arthritis must be classified in purely clinical groups: (1) Polyarticular arthritis deformans: (a) chronic and subacute; (b) acute. (2) Senile, or localized, arthritis deformans.

Polyarticular arthritis deformans is the commonest form, parts most subject to early attack being the hands. Corresponding joints or both sides are involved, and there is a tendency of the disease to advance from the extremities to the trunk. The number of joints involved varies, but generally are the same on both sides.

In one form, the joint assumes a spindle shape, and the bony landmarks are defined with difficulty. The joints may contain fluid and be hot and tender to the touch. Again, they may have a doughy, semielastic feeling. This is the subacute form of polyarthritis occurring frequently in young patients.

In some chronic cases, the joint is enlarged, not symmetrical, and nodular outgrowths appear. Motion is limited, painful, and accompanied by a considerable creaking. The joints rarely contain fluid.

Bear in mind that pain is a variable symptom; it may be acute or almost absent; and, on the other hand, muscular wasting is invariably present, and the deformities resulting from combined joint and muscular changes are marked. The deformities of arthritis deformans are not peculiar to this disease, however, and may be seen in other chronic joint affections.

No hard and fast line exists between the acute, subacute, and chronic forms. Frequently, however, the former resembles rheumatic fever, with sudden involvement of many joints, swelling of the synovial sheaths,

and moderate fever. There is less migration than in acute rheumatism, the affected joints do not return to normal, and there is a tendency to involvement of the smaller joints.

Young women from twenty to thirty years of age are most often affected; not infrequently the disease arises during pregnancy.

In chronic rheumatism, we must differentiate by the early history, absence of joint deformities, and so on. However, it is not always an easy matter to differentiate between chronic rheumatism of the joints and so-called "arthritis deformans."

The modern conception of the latter disease demands that the treatment should be directed toward the discovery of the source of infection. The mouth should be investigated for carious teeth, and pyorrhea, if present, must be treated. The tonsils must be examined, and not infrequently tonsillectomy is called for. Any crypts or pockets containing accumulation of debris and microorganisms must certainly be cleaned out. The nose and ears must be examined for suppurative processes and the gastrointestinal tract cleaned out and kept clean. Free purgation and colonic irrigation nearly always are beneficial. The pelvic organs in women, the urethra in men, and bladder and kidneys in both sexes must be investigated for possible sources of infection, especially the colon bacillus.

In every case, if improvement does not follow appropriate treatment of the suspected source, the bacterins should be given a trial.

The drugs of most value are arsenic and iodine. *Liquor arsenii compositus* (Barclay) has proven of particular service. The sulphocarbolates and a virile culture of the bacillus *bulgaricus* have been used with benefit. One of the most satisfactory combinations is guaiacol carbonate, calcidin, and nuclein. This may be given in alternation with *liquor arsenii comp.* Calomel, podophyllin, and bilein should be administered every second or third night, with preferably a saline the next morning. The salicylates frequently are useful. Our conception of "rheumatism" and the most effective treatment therefor has been outlined fully and often in these pages.

Before we go further into this matter, doctor, let us suggest that you send a specimen of urine (4 ounces from the 24-hour output, stating total quantity voided) to a pathologist for examination; at the same time give us a clear clinical picture, noting particularly the condition of the pelvic organs, area of hepatic dulness, character of stools, condition of tongue, digestive capacity, and so on.

Examine nose, ears, mouth, tonsils, and so on, minutely, and also name and describe fully the condition of the joints involved. Is there any possibility of specific infection?

QUERY 5959.—"Hematuria." G. C. S., Wisconsin, reports a specimen of urine voided by a patient whose first morning urine contains blood, he says. The first attack occurred twenty years ago, and the condition continued, despite treatment, for three months. Another such attack occurred some five years later, and thereafter was repeated every two or three years up to a year ago. Now, about two weeks ago, the hemorrhage commenced again and this time it does not stop. There is no pain at all, and appetite is good, but there is loss of flesh, strength, and ambition. The patient, who is 52 years old, has a very fallow look. No kind of tumor could be discovered in the vicinity of the kidneys or bladder or in the abdominal cavity, our correspondent writes.

The report of the pathologist shows indican and skatol present, together with blood, pus, squamous epithelium, and a few renal cells; also calcium oxalate, uric-acid crystals, and urates. Unfortunately, there is not given us a very clear clinical picture; also, there does not seem to have been made a thorough examination of the prostate gland, the seminal vesicles, deep urethra, and other possible seat of the bleeding. Here are a few general considerations.

Hemorrhage from the anterior urethra may be recognized readily, the blood oozing from the meatus independently of micturition; when the lesion is beyond the cut-off muscle, blood is voided with the urine. The two-glass test will show blood in both glasses, the second containing more than the first, while effort at expulsion brings out any residual fluid present in the posterior urethra.

In hemorrhage from the prostate gland or the prostatic urethra, the urine is bloody, by reason of the blood regurgitating into the bladder. If you will wash the bladder through a soft-rubber catheter until it is clean and then fill it with water, the fluid that then escapes through the instrument while in place will be entirely free from blood; while, if the remainder, when voided naturally, contains blood, then the source of the hemorrhage is below the vesical sphincter.

Hemorrhage inside the bladder reddens the urine throughout, although, if collected by the three-glass method, the last portion will contain relatively more blood.

Bleeding from the ureters is characterized

by the presence of elongated clots, unless the lesion be close to the vesical termination.

Before we can diagnose hemorrhage from the kidney, all other sources must have been excluded. However, in such cases, the blood is uniformly mixed with the urine; that is, if we make the three-glass test, we shall find that the urine in each glass is uniformly tinged. Moreover, in renal hematuria, microscopic examination reveals, besides the blood, casts and renal epithelia; the red blood-cells appear washed-out and are observed as swollen, barely perceptible disks. The absence of casts, in this case and presence of but few renal cells would lead us to exclude hemorrhage from the kidneys. Hence, the probable sources then would be stricture, prostatitis, cystitis, prostatic congestion or hypertrophy, or vesiculitis; possibly calculus.

What about the area of hepatic dulness; condition of tongue; character of stool? Make a thorough examination and give us all the light you can, and it will give us pleasure to make more definite diagnostic and therapeutic suggestions.

QUERY 5960.—“The Preferable Anesthetic for Children.” M. F. M., Georgia, wishes a little information about the use of ether as a general anesthetic for children. He inquires: “Is it advisable to use ether for a child when preceded by ethyl chloride, and, if so, how would one proceed? I was taught in school that chloroform was the better anesthetic for children. If ether can be used with ethyl chloride, what is the age limit? How much ethyl chloride is it safe to give an adult?”

As you are aware, chloroform is not regarded by the majority of American anesthetists as favorably as is ether; on the other hand, in England and on the Continent, chloroform (administered by the drop-method) is considered the most desirable anesthetic for children.

For a great many years English surgeons have resorted to the use of very cumbersome and complicated apparatuses for the administration of chloroform and ether; as a matter of fact, the more simple the procedure, the better the results.

This writer, who has given chloroform many hundreds of times, merely folds a napkin or thin towel so as to form a shallow cup and hold this over, but not in contact with, the patient's nose and mouth, and drops chloroform upon it every few seconds, in slightly increasing amount, until anesthesia is produced; then reduces again to the smallest possible quantity necessary to maintain un-

consciousness. Properly given, half an ounce of chloroform (sometimes even less) will be sufficient for somewhat prolonged operations.

Ethyl chloride is satisfactory especially for short surgical procedures; but it can not be administered properly in an open inhaler, too much air being thus inhaled and anesthesia, therefore, develops so slowly that a condition of excitement may be caused and render the patient difficult of control. A closed cone placed over the mouth and nose, the ethyl chloride being sprayed through an aperture at the apex upon a few thicknesses of gauze, or else a Gebauer, Luke or Clover inhaler will prove satisfactory.

It is impossible, of course, to state (with any degree of exactitude) the amount of ethyl chloride necessary to produce anesthesia. Much depends upon the characteristics of the patient, the amount of air inhaled, and the method by which the vapor is administered. However, from 1 to 2 Cc. suffice, as a rule, to produce anesthesia in children; from 3 to 4 Cc. will anesthetize most adults; but 5 Cc. may be required for stronger men and alcoholics. When chloroform is given carefully by the closed method, anesthesia is produced in from ten to thirty seconds without causing any discomfort; but if the vapor is pushed too freely holding of the breath may occur, while muscular rigidity not infrequently proves troublesome.

It must not be forgotten that the effects of the drug often are more marked after it has been withdrawn (for but a short period only) than while it is being actually inhaled. Should the respiration become stertorous, the administration of the chloroform must be stopped or more air be admitted. The pulse then usually is slow and the blood pressure falls.

Some authorities claim that the use of ethyl chloride prior to the administration of chloroform is inadvisable, on the ground that the transition from a drug that stimulates respiration and lowers blood pressure to another that depresses respiration and the circulation as well presents elements of danger. Still, this writer has administered ethyl chloride and chloroform many times, without provoking any unfavorable symptoms.

It is probable that ethyl chloride, satisfactory anesthetic as it is, is about as dangerous as chloroform. The mortality rate under it is from 1:2000 to 1:3000. Such accidents as do occur generally develop with startling suddenness.

Finally, it may be stated that the chief indication for the use of ethyl chloride is in

minor operations in children, to whom it may be given in the cone or by placing a few folds of lint in the palm of the hands, which is held cupped over the mouth and nose, the ethyl chloride being sprayed upon the gauze through the fingers. In this way, anesthesia is rapidly produced and there is little or no danger of an excess of the drug being administered.

Keen, in his very exhaustive chapter on anesthesia (Keen's "Surgery," Vol. V), states that the employment of ethyl chloride prior to the use of ether or chloroform is not to be regarded with favor. "In cases," he says, "in which the early effect of ether is dreaded and the anesthetist is tempted to employ ethyl chloride, it should be remembered that the chances for the patient are better with ether alone than they are with ethyl-chloride-ether sequence; and it would, therefore, seem that it would be wiser, unless peculiar circumstances exist, to use ethyl chloride for short operations, and chloroform by the drop-method or ether in more prolonged procedure."

Do not forget, doctor, that a very small dose of H-M-C, hypodermically an hour before operation, and a very few drops of chloroform properly administered will produce perfect anesthesia in even young children. This writer has circumcized several youngsters under this method, during the past two years, and in every instance the outcome was all that could be desired.

—
QUERY 5961.—"Circumcision of Infants." M. F. M., Georgia, desires information regarding certain details about the circumcision of infants which he can not find in the books at his command. Thus, he wants to know at what time, and how, the operation should be done; whether any stitches should be taken; and what amount of prepuce is to be removed.

While this writer will, for the benefit of this and some other readers, outline his own method of performing circumcision upon the infant, it may be said that the operation is described in practically every textbook on surgery. Before proceeding, though, we may remark that, as a matter of fact, the majority of operators at present prefer splitting the prepuce dorsally rather than cutting it away; the result being everything that could be desired, while the operation practically is bloodless and almost painless. The procedure is simplicity itself, as well be seen from its description.

First spray the anterior surface of the pre-

puce with ethyl chloride and then inject, drop by drop, a few minims of a sterile solution of stovaine along the line of the proposed incision. Now, with a grooved director, lift up the prepuce and with a sharp bistoury or scissors slit it *almost* down to the corona; then place one stitch exactly in the angle of the incision and two or three stitches on each side, horse-hair or very fine catgut being preferred. Be sure that you get even union between the mucosa and the skin. Now put on a moist antiseptic compress and leave it for twenty-four hours, then dress with any good dusting powder. If the prepuce is redundant, a "U" shaped incision may be made by snipping of the corners, left by the vertical cut, with a slight curve. The foregoing extremely simple procedure permits of the rolling back of the prepuce and its satisfactory retraction in after-years.

Complete circumcision may readily be performed as follows: Draw the prepuce well forward beyond the glans (preferably under chloroform-anesthesia—a very few minims suffice), apply a clamp, then remove the tip with a single sweep of a sharp bistoury, or, if preferred, use scissors. You will find the mucosa untouched. Slit up the prepuce on the dorsal surface to just above the corona, trim off any tags on each side, then approximate and suture the skin and the mucosa with four or five stitches: the first one at the frenum, the second immediately opposite on the anterior surface. A very fine needle should be used, of course.

As you may know, the Jewish "mohel" (the rabbi) pulls forward the prepuce to the utmost extent, removes the superfluous tissue with a sharp razor-like knife, then tears the mucous membrane with his thumb-nails, allowing it to retract. No sutures are placed, and a piece of gauze saturated with red wine is the only dressing. Even under such circumstances very satisfactory results are secured.

We believe that we are not justified in torturing an infant. It is true that the amputation is quickly done, but the pain must be severe for an instant; moreover, the placing of sutures is not exactly a pleasant procedure. Therefore, in order to save the child from suffering and prevent possible accidents, it is well to give a few drops of chloroform and, so, be able to work leisurely and unmolested.

Under ordinary circumstances, the dorsal incision is decidedly preferable. With this, you can either suture, without doing further cutting, or trim away the desired amount of skin and mucosa from each side.

As a rule, it is desirable to snip the frenum and save the individual lots of trouble in after-years; but do not forget the presence of an artery in this location, and you may save yourself trouble by incising between two ligatures. This writer frequently cuts the frenum, however, avoiding the artery. This is not a difficult matter if you make tension upon the part, insert a tenotome edgewise, turn the edge upward and outward, then sever the superposed tissue. Under such circumstances the artery will be back of the blade.

For a detailed description of the various operations, see Remondino's "Circumcision," Wharton's "Minor Surgery," Keen's "Surgery," or any good modern work on surgery.

QUERY 5962.—"Chronic Nephritis." W. S. W., Georgia, is treating a patient, forty years of age, for chronic desquamative nephritis. There is a considerable amount of albumin in the urine. The man, of vigorous habit, goes about freely, but is beginning to tire easily. Complexion rather sallow. Edema of legs comes and goes. He has been treated by three or four physicians with but little benefit. Our correspondent wishes us to give him, "in detail, the very best up to date treatment," indicating dosage and frequency of everything suggested, and outlining diet—the all the particulars, and, make it plain."

We are sorry, doctor, that you did not give us clearer clinical data. Success follows treatment of the pathological conditions present in the individual—not a "named disease."

In chronic desquamative nephritis, the symptoms vary materially, and they develop insidiously. Usually edema appears about the ankles in the evening; while in the morning the eyelids are swollen. The urine may be slightly increased, decreased, or remain normal as to quantity, with specific gravity corresponding; albumin always is present in moderate or large amounts, with at first epithelial casts, but which later become fatty or hyaline. However, if properly managed, this disease need not shorten life.

The diagnosis is established by the presence of albumin, and of epithelial and hyaline casts which later become fatty or hyaline; further, by progressive anemia and hydremia. If additional proof of the disease is desired, methylene-blue may be given, this aniline-dye being arrested by the nephritic kidney, instead of promptly eliminated with the urine, as in health.

The patient must be restricted to skimmed

milk alone, a half glass every four hours, night and day, half an hour to be consumed in the "mastication" and ingestion of this quantity. At first the patient will feel as if this were not enough to sustain life, and then he may be permitted to take more if he will "eat" it in the exact manner described; but biliousness soon will warn him of excessive consumption, and he will settle to about the amount suggested. The milk is to be taken with a teaspoon, and each spoonful held in the mouth and "chewed" until thoroughly incorporated with saliva. As the milk begins to grow distasteful, it may be varied by substituting fresh, nonrancid buttermilk, junket, whey or kumiss in similar proportions. Once a day, instead of milk, an equal quantity of freshly pressed fruit-juice may be taken. Water may be drunk also if the dropsy does not forbid.

This regimen is to be sustained until the albumin has been absent in the urine for one month, when we may begin cautiously to add small quantities of the simplest of other foods, such as toasted stale bread, zwieback, crackers, rice, and other carbohydrates. The fruit-juices may be increased also, and a little coffee allowed. Following these, if albumin does not reappear, the order in which foods are to be added is: fresh fruits and vegetables, but not any that contain volatile oils, like cress, or any oxalic acid, like tomatoes; further, eggs, fish, oysters, chicken, turkey, beef, mutton. But pork, veal, dry beans and peas, as well as cheese are for a long time to be prohibited. Alcohol is to be forever left out of the nephritic's diet-list.

This writer believes that the daily use of from 1 to 3 grains of arbutin, and as much benzoic acid, has an influence in gradually restoring the diseased epithelium to health; and this is the only direct, or dominant, medication advised. High arterial tension is not common, but when present demands the addition of just enough veratrine to restore normality in this respect. Low tension and debility may require sparteine or digitalin. Anemia calls for iron phosphate, a grain a day, in the drinking-water. Basham's mixture is advised in every textbook, but we have never been able to find a physician who could testify to benefit derived from it.

Beyond this, the treatment is that of symptoms and of intercurrent maladies. The presence of red blood-cells in the urine is met by the arbutin, amply. The bowels must be swept out daily by a morning laxative saline, for toxins from retained feces cannot but harm the diseased renal tissues.

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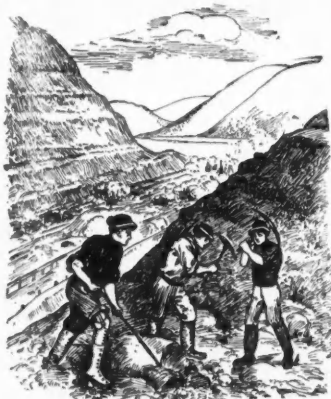
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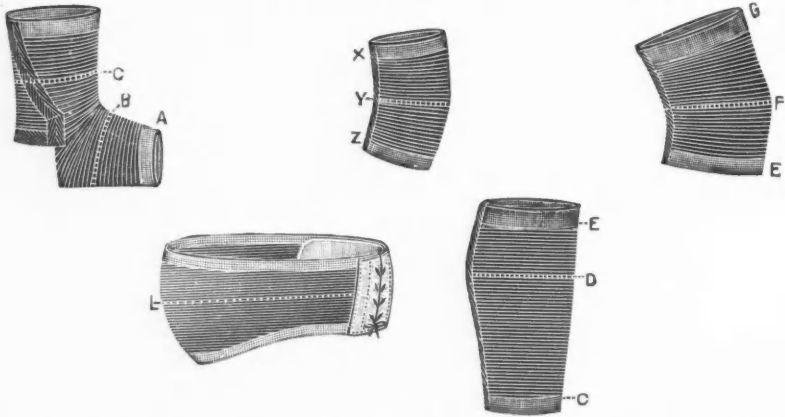
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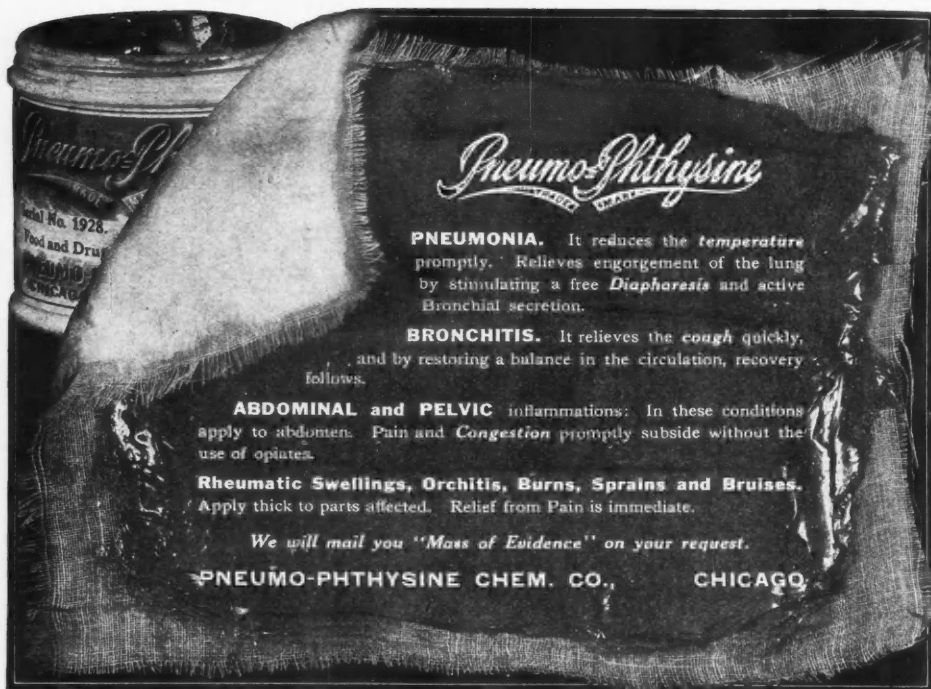
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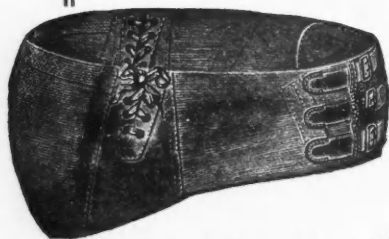
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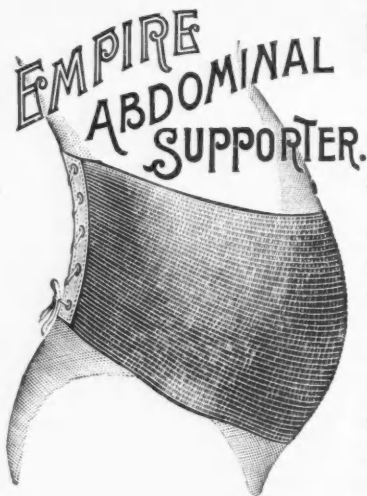
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- 3rd. In pregnancy, corpulency, tumors or other cases of enlargement of abdomen, it supports weight of body from the backbone, relieving the sinews of their overwork.
- 4th. Its easy appliance (lace and draw on over head or feet).
- 5th. It is cheap, durable; it can be washed when soiled, proper care being taken to cleanse in lukewarm water and dry in shade.

In ordering give largest measure of the abdomen.

PRICES

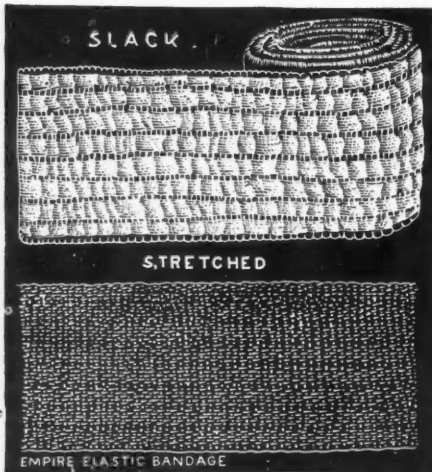
8 inches wide	\$2.50
11 " "	3.00
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11 " " " "	4.50
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We invite the attention of the medical and surgical profession to the various merits combined in our bandages.

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In this day of therapeutic nihilism and substitution of standard remedies this is worth while considering. In

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**New Building New Laboratories
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Write for a trial bottle. It contains abundant proof.

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is the recognized standard of medicinal malt preparations of its class. The materials used in its manufacture are specially selected and safeguarded. Only the choicest Barley-malt and Saazer hops are used, and the finished product contains all of the soluble substances of these two materials.

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PURE MALT PRODUCT
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As a GENERAL SYSTEMIC TONIC
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DOSE: One tablespoonful after each meal.
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Our Bacteriological Wall Chart or our Differential Diagnosis Chart will be sent to any Physician upon request.



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**QUALITY
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EFFICIENCY - RELIABILITY

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Stock vaccines \$3.00 per dozen ampules or \$2.50 per 10-Cc. special container.

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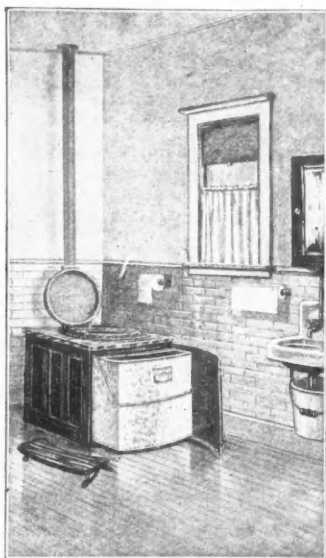
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A sufficient amount for a clinical test sent to Physicians on request

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are preventive measures that reduce the high degree of prevalence of filth diseases. The outdoor privy is an abomination. Too many indoor privies are mere makeshifts. For schools, homes, offices, public places and conveyances unprovided with sanitary plumbing you may safely commend the

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"the closet that's built of steel." Excreta rendered inert by chemical action while in the container. Installation simple. Exterior enameled in mahogany or solid pearl grey. Seals perfectly when not in use. Positively odorless, germicidal, made by

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Listogen is a new scientific combination of *Hydrogen Peroxide, U. S. P. with Thymol, Menthol and Eucalyptol.*

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Advertisers' News Notes

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SPECIFICATIONS: 116 inch wheel-base; quiet Paige motor 4 x 5; unit power plant; silent chain drive for

cam-shaft, pump and generator; multiple cork insert clutch; 34 x 4 inch tires with non-skid in rear; demountable rims; large unit electric starting and lighting system; complete incidental equipment.

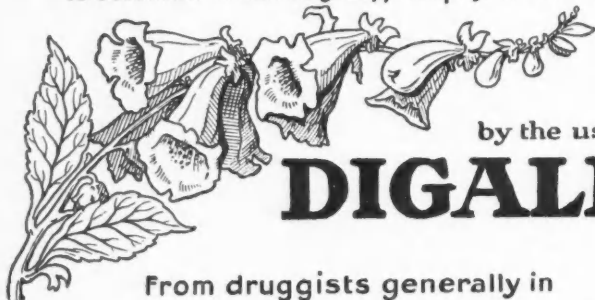
We have more than once confessed that we are not experts in the mechanism of the automobile. To us an automobile is fearfully and wonderfully made. And when a man who is an expert starts in to dilate to us on the anatomy and physiology of a car, we throw up our hands in despair and resignation. But we put it to you, doctor, if the specifications just cited are not simple enough so that he who runs may read? Why, even we can see the merits of such a combination—more we could hardly say. Bully for the car that has such straightforward qualities, and for the concern that can make you see so plainly what you are getting for your money. That's the Paige coupe, made by the Paige-Detroit Motor Car Company. If you want to know still more about it—as, of course, you will if you're an expert, or if you're interested in cars—write to the manufacturers at 502 Twenty-first Street, Detroit, Mich.

EVERY month we receive a large number of inquiries from men in the field concerning pressing practical problems of actual every-day practice—problems they are "up against" in their work. We are glad to answer these inquiries, both personally and through the pages of the journal, and to lend what assistance

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ORALLY-INTRAVENOUSLY
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has cured a multitude of diseases by
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IT'S THE GREAT RECONSTRUCTIVE TONIC

Stimulates Nutrition Improves Metabolism
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supplementary nourishment is often urgently needed to enable her to meet the demands of her offspring. Many and various are the nutrients recommended, but for some time the conspicuous benefits obtained from the use of

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**INVIGORATING
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have focussed attention on this delicious food beverage as **one of the most effective galactagogues at the command of the profession.**

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Send 10 cents for sample and interesting booklet on the uses of *Suchard's Cocoa.*

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we are able in the cracking of these professional nuts; and we hope our readers will feel freer and freer to make use of us in this way.

But we wish to call attention to a perpetual, standing "answers to correspondents" which does not appear in our reading columns, but which may be found in our advertising pages, and is at the service of every reader who desires it—namely, the splendid series of books on active principle therapy, written by the very men who are helping you to work out your daily problems, containing their best, most deliberate and thoughtful effort. These books are worth many times their very moderate price. They contain the essence, the nub, the kernel, of active principle therapeutics, the key to the solution of innumerable problems. Abbott's Therapeutics, Waugh's Practice, Shaller's Principles, Candler's Diseases of Children, and the rest of them, should be on your shelf and in your hands continually.

Not only these, but any and all books reviewed in this journal, will be sent on demand, promptly, delivery charges prepaid; or, for that matter, any medical or surgical work published in the United States.

IN THE infectious diseases, because science has put into our hands the serums and vaccines (most welcome and powerful weapons), there has hitherto been too great a disposition to rely on them altogether and to discard the drug and physiologic treatment of these conditions. This is neither wise nor rational, and the physician is beginning to find it out. The wise physician, in conjunction with his bacterin treatment, strives to raise his blood index by the administration of remedies which will increase the production of the body defenses. One of the best of such remedies is iodine, in proper soluble form, as, for instance, Burnham's Soluble Iodine, which not only combats the

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It
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Made from pure Norwegian
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can be used in *every* case in
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THE CHARLES N. CRITTENTON CO.
115 Fulton Street, New York
Sample will be sent to physicians on request.



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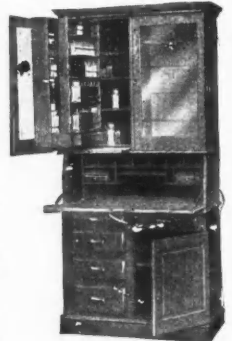


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Let us tell you about these chairs and cabinets. Also about the full line of automatic tables and chairs, medicine and instrument cabinets, stands, stools, waste receptacles, reception room furniture, and other accessories for the aid of busy medical men.

You can't afford to buy equipment without looking over our line. "It pays to investigate." Send for free catalog.

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Style No. 49

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It's a Settled Conviction

with many physicians, based on accurate observation and scientific deduction, that coffee, as a routine daily beverage, causes more or less serious disturbance in the nervous system of many persons.

The amount and degree of this disturbance may not be appreciable for a time in some who are able—perhaps for years—to withstand the over-stimulation of the nerves and heart induced by the regular ingestion of *caffein*—the coffee drug.

The observing physician detects what the layman does not always observe, and he knows that “coffee-heart” is as common in both men and women as “tobacco-heart” is in men.

This condition is met in daily practice, and the physician—better than any one else—knows the quick improvement which should follow when coffee is interdicted and the pure food-drink **Postum**—free from any drug—is used instead.

Postum now comes in two forms:

Regular Postum—must be well boiled.

Instant Postum—(the new form) is a concentrated, soluble powder. A spoonful dissolved in a cup of hot water, with a little sugar and cream, makes a perfect beverage **instantly**.

“There’s a Reason” for Postum

The *Clinical Record*, for Physician’s bedside use, together with samples of **Instant Postum**, **Grape-Nuts** and **Post Toasties** for personal and clinical examination, will be sent on request to any physician who has not yet received them.

POSTUM CEREAL CO., LTD., BATTLE CREEK, MICH., U. S. A.

invading organisms and stimulates anti-toxic forces in the body, but also serves rapidly to eliminate both germs and toxins. Try this drug, doctor, in your next septic case, and you will be pleased with the result.

As OUR observation of pellagra grows wider, and our investigation into its causes and processes goes deeper, it is becoming more and more apparent that the disease is one of metabolic origin, the morbid element consisting in some deep-lying defect in the body-chemistry, either in its anabolic or its catabolic aspects. W. Frank Ashmore, writing in the *Southern Clinic*, says he is convinced that the underlying defect is one of sub-oxidation of the tissues—or at least that a condition of sub-oxidation makes the outbreak possible. He points out that the early symptoms bear this signification very plainly, and cites his experience with reconstructive measures as the main objective in the treatment of pellagra. He prohibits the use of corn as a food, not because of any specific relation it has to the disease, but because it produces too much body-heat. His view of the pathology led him to try the oxyline apparatus made by the Neel-Armstrong Co., Akron, Ohio, in the treatment of these cases, and he cites a number of illustrative instances to show the excellent results that he derived from it. His report would certainly indicate that the oxyline is worth trying out in pellagra, and we would be glad to have communications from other physicians upon the results of this treatment.

DR. W. J. SHOCKLITTLE, of Nolin, Ky., writes as follows regarding Dr. H. C. Bennett's Electrotherapeutic course: "Your course of lessons have exceeded my expectations. I am now convinced that not one out of every ten who have purchased electrical appli-

ances, are capable of using them intelligently or to advantage. I had come to this conclusion from observations, that there was nothing in electrotherapeutics, but since taking your lessons I have changed my mind."

FORMERLY the term "rheumatism" used to cover a multitude of sins. Any and every pain in the muscles and joints and bones for which no evident cause could be found—especially in the lower limbs—was diagnosed as rheumatism and dosed with alkalies. Nowadays it has almost passed out of the scientific physician's vocabulary. Instead of including every obscure pain under the blanket diagnosis of rheumatism, the modern physician traces it to its correct source, and not only gives it a specific name, but assigns it a definite pathology and applies the particular treatment for which it calls.

Cabot, in his "Differential Diagnosis," shows that in pains of the feet and ankles a broken arch leads as a causative factor by more than three to one. That is to say, a broken arch is three times as frequent as all other possible causes put together. So that, out of all cases of foot and ankle pains, three out of every four would be relieved by the simple expedient of applying a proper arch support. Of course, the crux of the matter lies in that word "proper." Many so-called arch supports are arch destroyers, and violate the curve just as badly upward as the collapse does downward. The Venus Arch Support is what its name implies—a flexible, adjustable support for the arch in its natural, physiologic position—and is precisely what you want, doctor, for that three-to-one percentage of your cases of "rheumatism" in the foot. Write to the Venus Arch Support Co., 305 N. 5th Ave., Chicago, for their proposition.

CORRECT SUPPORT

The question of "CORRECT SUPPORT," under discussion in these pages some time ago, has been settled, by some thousands fortunate enough to try the ADONIS Supporter for fifteen years.

It affords natural, scientific support for the scrotum and either upright or reposing for the organ, separate; both decidedly preferable to hanging.

EVERY PHYSICIAN who sees it, adopts it for his personal comfort, health and refined appearance.

In most cases the Adonis does half the work, but the Doctor gets all the credit. Prescribing the Adonis, is just now a mark of distinction.

Prices \$2.00 and \$1.50, post free—large, medium or small.

SOLD ONLY TO PHYSICIANS AND USERS.

DESCRIPTION UPON REQUEST.

CARL C. LANTZ

C-M, 1931 Broadway, NEW YORK



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WORN NEXT THE BODY

EPILEPSIGEN

(SEARLE)

The wide success of this remedy in the treatment of Epilepsy leads us to offer it to the readers of CLINICAL MEDICINE, knowing that they appreciate definite remedies giving positive and well defined results. The use of Epilepsigen in conjunction with careful regulation of diet and general hygiene invariably results in diminishing the frequency and violence of the attacks and generally results in permanent cures. You will find Epilepsigen pleasant to administer and no unpleasant symptoms following its use. We recommend that you give this remedy a thorough trial.

SPECIAL OFFER.

Send one dollar and receive a full sized bottle prepaid, money back if not satisfied.

Formula and literature on request. Please mention CLINICAL MEDICINE.

G. D. SEARLE & CO.

Pharmaceutical Chemists

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In Starch Indigestion

—the most common form of defective alimentation—the digestive process is not only deranged, but in addition, the general metabolism always suffers—with a corresponding depreciation of vital resistance.

For many years the almost specific value of malt extract in this form of indigestion has been generally recognized, especially malt extract of the purity and quality of

TROMMER DIASTASIC MALT EXTRACT

Made from carefully selected barley malt, this pioneer product is exceptionally rich in natural diastase, maltose and other nutrient extractives.

Given in suitable dosage to the patient whose organism is unable to digest and appropriate starchy foods, Trommer Malt Extract serves a double purpose—*First*, it augments the diastasic power of the digestive process, thus aiding the conversion and assimilation of the starch in the regular diet, and *Second*, through its maltose it supplies the body with a readily assimilable carbohydrate thus aiding the nutrition and increasing bodily vitality.

Trommer Malt Extract fills an important place, therefore, in the management of nutritional disorders, and the more it is used the more its tonic reconstructive properties are appreciated.

To countless physicians Trommer Malt Extract is the standard.

THE TROMMER COMPANY
FREMONT, OHIO



VANADIOL

Dose 5 to 10 Drops!
In water 3 to 6 times daily at discretion of the physician.

Professor Osler has stated as his opinion: "Fever alone is not hurtful. The progressive cardiac weakness is, after all, the most important enemy to fight." The same authority states: "So great is the heart's need of an abundant supply of oxygen that it early feels any deficiency and, in consequence, is the first muscle to show nutritional changes." It is evident then that the 42.33 cubic centimeters, by volume of available nascent oxygen in each ten drops of Vanadiol will materially aid in sustaining the vitality of the very important organ in

PNEUMONIA

as well as in all diseases, which have as a common factor, conditions of

DEFECTIVE OXIDATION

as in the Anemias, Tuberculosis, Chlorosis, Diabetes, etc. Vanadiol acts:

1. As an oxygen carrier, performing the function of a catalytic or "oxygen transmitter."
2. Stimulates appetite and by improving the general chemistry of the organism, is a true tonic and reconstructive, fortifying against disease.
3. A synergist cooperating with other elements and promoting their action.

Clinical quantities and descriptive matter on request.

Vanadium Building

VANADIUM CHEMICAL COMPANY

Pittsburgh, Penna.

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THE Egyptian taskmasters stood over the Hebrew slaves with whips, compelling them to make bricks without straw, and lashing them on to work until they dropped. What modern intelligent employer of labor would use such irrational measures? So, also, in former times, to give a man a tonic meant to whip his tired nerves and exhausted functions into forced, exaggerated activity, only to leave him the more exhausted and helpless than ever when the stimulant had expended its effect. But no modern physician perpetrates such folly. We know better. We nowadays furnish the impoverished blood with the actual elements out of which to build fresh tissues and increase the patient's resisting power—to which there is no reaction of depression. Such is the principle upon which Pepto-Mangan (Gude) is based, and such the revitalizing, reconstructive influence that it exercises. It is a rational, scientific systemic reconstituent.

DR. PAUL MATTICK, of Berlin, writing in *Deutsche Medizinische Zeitung*, says he has tried many of the old and more recent sedatives and hypnotics and is convinced that Bromural is an excellent adjuvant in the treatment of nervous affections. As a sedative he prescribes one tablet three times a day; as a hypnotic, two tablets in the evening, to be repeated, if necessary, after four or five hours. The tablets may be taken dissolved in hot sweetened water. Mattick says that in the cases where he used it gastric disturbances were never seen; and even when used over long periods the patients do not become habituated to Bromural, but, on the contrary, show a disposition to the return of natural sleep, with a feeling of refreshment on the following morning. Even where a full quantum of sleep cannot be secured, the short rest procured by the drug is of inestimable benefit to the exhausted patient.

WE ARE just in receipt of an illustrated 48-page booklet descriptive of the Victor Combistat, a combination of "All-In-One" electro-medical apparatus, this being the first and only instrument of its kind to be made in the United States.

The following currents and modalities are obtainable from the Combistat, a single connection to the nearest electric light socket being all that is necessary:

Straight Galvanism.
Compressed Air (tankless)
Rapid Sinusoidal
Endoscopic Light
Surging Galvanism
Interrupted Secondary Faradism
Slow Sinusoidal
Vibratory Massage
Combined Galvanism and Faradism
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Surging Sinusoidal
Multiplex Sinusoidal
Cautery
Deep Section
Primary Faradism
Surging Sinusoidal
Interrupted Primary Faradism
Pneumatic Massage

At first glance we are wonderfully impressed with the general appearance and possibilities of the Combistat on account of its compactness and universality. We urge our readers to send for a booklet descriptive of the apparatus. Requests for same should be made direct to the manufacturers, Victor Electric Company, Jackson Blvd. and Robey St., Chicago.

SHALER'S Guide to Therapeutics is fine.

W. C. DAVIS.

Summerfield, N. C.



Physicians Approve of My Work for Women

I wish every physician to know what my personal work for women really is, and does, because physicians who fully understand it frankly welcome my help—they send me hundreds of patients.

Every physician has cases in which an individual, scientific personally directed course in proper exercise, breathing, bathing and diet would greatly assist to build up.

My exercises will materially help your cases of Chronic Constipation, Torpid Liver, Indigestion, Anemia, Neurasthenia, Weakened Heart Muscles, Undeveloped Lungs, Poor Circulation, Uterine Displacement, increase the oxygen-carrying power of the blood, by building up and strengthening the physical and nervous system.

I teach women how to walk, how to stand correctly, how to breathe, how to exercise normally, so that no organ is displaced by over or improper exercise or imperfect poise.

The mental interest and incentive developed by the individual lessons dispel that languor and indifference which physicians often find hard to cope with.

I study each pupil's special requirements, and prescribe for her individually, just as you prescribe for your patients. I give no promiscuous exercise, but direct each woman according to her needs and her strength. I have spent years in the study of anatomy and physiology, and accept no cases where pronounced pathological conditions are present, as I know the possibilities of my work and know its limitations.

In many cases I insist that the pupil have the consent and advice of her physician; in others, I require a regular weekly examination by physicians.

For 12 years I gave personal instructions to women before attempting instructions by mail. Upon request, I will send you, with information concerning my work, any one of the following lectures: A Good Figure; Circulation; Body Manikin and Position of the Vital Organs; Ideals and Privileges of Woman; Character as Expressed in the Body; Mind Over Matter—The Nervous System—Effect of Habit Upon Life—Foods; Self-Sufficiency—Mental Poise; Motherhood; Vital Organs—Their Uses and Abuse.

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NO MORE striking example of the truth of the above proverb occurs to us than the new life that has been given creosote through the fortunate discovery that when chemically combined with calcium, as in CALCREOSE, it accomplishes that for which it was fitted, after being discarded for newer and less valuable drugs, because science was unable to devise ways by which its value could be utilized.

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While creosote can be given in small doses only and in few cases, when combined, as in CALCREOSE, it can be safely given in large doses and nearly all cases.

As high as 120 minims of creosote has been given daily—through Calcreose—without difficulty and with no unfavorable results.

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Thousands of physicians have proven the value of CALCREOSE over and over again. While a few enthusiastic doctors might make statements, honestly intended, that were exaggerated, the same reports come from every direction and from doctors who are recognized for their ability and their carefulness; good, all round conservative doctors; hence there can be no question that the value of CALCREOSE is not overestimated; its value is so great, in fact, that it is difficult to overestimate it.

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Dr. N., Mo., writes: Please send me two pounds of Calcreose. Could not do without it; has been a great success.

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NOW IS THE TIME TO ACT

Winter will soon be upon you and we cannot too strongly urge every reader of CLINICAL MEDICINE, who has not already given CALCREOSE a trial, to order a good supply on approval. You should not hesitate a moment, because if it does not prove satisfactory you need not pay a penny for it; you are to be the sole judge and if after giving it a most thorough and careful trial, you are not well pleased with results, you have only to write the manufacturers to that effect and they will at once cancel the bill in full and without question. The publishers of CLINICAL MEDICINE will tell you that The Maltbie Chemical Co. will do exactly as they agree.

CALCREOSE is inexpensive. A pound of powder costing at the most \$1.75, will make a gallon of solution by adding water only.

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Calcreose Powder. A reddish brown powder, containing approximately 50 per cent. pure beechwood creosote in chemical combinations with calcium. A solution is prepared by adding a pound of calcreose powder to one gallon of water.

Calcreose Tablets, coated brown, representing 4 grs. Dose, 1 to 4.

Calcreose Tablets, Salol Coated. Enhances the direct action of Calcreose on the intestines.

Calcreose No. 2 Tablets, coated yellow, Calcreose 4 grs.; Iron, $\frac{1}{2}$ gr.; Arsenic 1-150 gr.; Strychnine 1-150 gr.

Per pound, prepaid, \$1.75

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THE MALTBIE CHEMICAL CO., Newark, New Jersey

C. M. 11

Please send me all charges prepaid:

1 lb. Calcreose Powder, Price \$1.75

500 Calcreose Tablets, Price \$1.20

500 Calcreose Tablets, No. 2 \$1.40

I will remit in 60 days if results are satisfactory.

Nothing to be returned, nothing to be paid, if results are not satisfactory.

Dr. Address

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Not least among the disadvantages of the ordinary forms of digitalis glucosides is the irritation which they produce in the mucosa of the stomach. This objection is overcome in Digipuratum by the fact that it is not dissolved in the stomach juices, but passes through them in the shape of an insoluble tannic compound, which is not decomposed until it reaches the alkaline medium of the small intestine. Not only does this avoid gastric irritation, but it insures that every bit of the drug that is given by mouth will be absorbed and therapeutically active—another great desideratum in digitalis therapy. Because of this, the drug can be accurately controlled as to dosage, and the danger of cumulative effects is reduced to almost zero, while, at the same time, one can avoid the use of those too small doses which, as every physician knows, do more harm than good. The tablets in which Digipuratum is put up are in many ways a most convenient and adaptable form in which to administer the remedy.

EVERY once in a while we read in the columns of the papers queries as to what has become of the mother who used to spank her boy with her slipper, or the boy who used to steal jam out of the pantry, or some other traditional figure of the good old days? We add to these another inquiry—what has become of the one-legged man who used to stump around on a wooden peg? Unlike most of the questioners, however, we can furnish an answer to our own query. The answer is—Marks of New York. The truth is, Marks has made it so cheap and easy for the unfortunate individual who has lost a leg or an arm or almost any other part of his motor anatomy to conceal his loss that we don't know, nowadays, who are the cripples and who are not. This is sure the age of

miracles. And if Marks cannot wave a wand and bid the amputated limb grow out again, he can do what is practically just as wonderful and just as effectual; he can put an artificial limb in its place so perfect in its contour and mechanism that you can't tell the difference. If you think we are exaggerating, just send for Marks' illustrated booklet—his address is 701 Broadway—and see for yourself.

It is to be borne in mind that nine-tenths of the distressing cough in a case of pulmonary tuberculosis is due to the accompanying bronchitis and to the local irritation of the larynx and trachea which always attend a case of phthisis! And the cough which this irritation sets up is, as we all know, damaging to the lung tissue. Therefore, it not only ought to be stopped, but can be stopped to a large extent by the use of some soothing agent which will allay the inflammation of the mucous membranes of the respiratory tract. For this purpose you will find Fitchmul an excellent remedy. If you will send fifty cents to the manufacturer, A. Perley Fitch, Concord, N. H., he will send you a dollar bottle, so that you may try it out. Of course, its usefulness is not confined to phthisis, but extends to every acute and chronic condition of the respiratory tract.

"IN MAJOR operations," says Henry Beates Jr., "absolutely essential for the eradication of malignant diseases, the removal of neoplasms and similar shock producing procedures, occurring in individuals afflicted with advanced organic, cardiac and arterial disease, by subjecting such patients to a course of Digalen treatment for from four to six weeks, circulatory equilibrium is established upon a sufficiently firm basis to enable these cases to withstand serious operations

Respiratory Affections

especially Chronic Bronchitis, Asthma, Convalescence from Influenza and Pneumonia, etc.—are among the leading indications for

BURNHAM'S SOLUBLE IODINE

In fact, there is hardly any group of pathologic conditions that respond more satisfactorily to the tonic action of this effective remedy than the foregoing. This is due not alone to its almost specific reconstructive effect on the mucous membrane of the air passages, or to the little or no embarrassment offered to the gastrointestinal functions, but in a large degree to the impetus it gives to physiologic processes throughout the whole body.

Directions—To promote rapid and complete recovery from acute or chronic respiratory diseases give 5 to 15 minims of Burnham's Soluble Iodine in water three or four times daily. Children in proportion.

Send for notes on dosage.

BURNHAM SOLUBLE IODINE CO.
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MULYPTOL

A SPECIAL preparation of Eucalyptus possessing antiseptic, disinfectant, deodorant, hemostatic, and local stimulating, tonic and healing properties not found in any other remedy. Few remedies have had a wider or more extensive use than oil of eucalyptus, but it remained for Mulyptol to demonstrate the remarkable antiseptic and healing virtues of this balsamic product. Used in

Cancer, Consumption, Diphtheria, Hay Fever, Asthma, Catarrh, Influenza, Typhoid, Pulmonary Affections and Specific Fevers

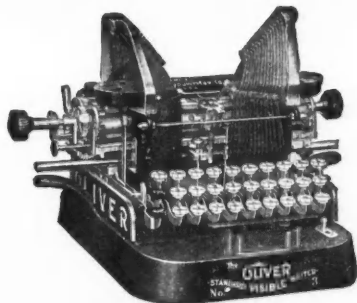
it produces results of the most gratifying character.

Clinical reports from the highest authorities indicate that Mulyptol is of especial value in the treatment of inoperable cancers, tuberculosis of the larynx and skin, chronic ulcers and many other local affections of an intractable nature.

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Made For Doctors

WRITES IN SIGHT—PRINTS MEDICAL SYMBOLS

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Visible Oliver For 13 Cents a Day

We have supplied these machines to more than 2,000 Doctors. We sell direct without salesmen, saving in this manner \$41.50, which we deduct from the catalog price.

Special for Doctors This typewriter prints, in addition to the regular characters, the medical symbols—is designed with special paper fingers to hold labels and prescription blanks securely. Each machine completely equipped—everything that is needed is supplied. It is warranted to be as perfect as any typewriter regardless of price—to be the equal in quality of any—to be superior for Doctors' usage. It is guaranteed against defect of material or workmanship for twenty years.

Blind Typewriters On the Medical Oliver each letter is in plain view as printed. One who had never seen a typewriter could learn to operate this simple machine with ten minutes' instruction from the Book supplied with the machine.

Don't waste your money on an old style blind typewriter—that is one that prints from underneath with an upward stroke of the type bar instead of a downward stroke, necessitating the raising of the carriage to inspect the printing each time.

Don't waste either your money or your time on such a typewriter—this style of machine is now obsolete, none are being made, they are exactly in the same class as a ten-year-old one-cylinder automobile, with a step and entrance door in the back.

These machines are not bargains at any price or any terms.

Most Attractive Offer Over 2,000 Doctors bought Medical Olivers from us because we made unusual inducements. We offer a proposition that is utterly impossible to any distributor selling through salesmen. Our net profit on each sale is less than a salesman's one-night hotel bill. Our price is less than the usual wholesale.

Take all the Time You Need Our purpose is to make it so easy to own one of these typewriters, that practically every Doctor will have one.

Fairness Our offer is more than fair. We place one of these splendid machines in your office on approval.

Positively No Money Down NO C. O. D.—NO REFERENCES REQUIRED—WE EMPLOY NO SALESMEN—NO COLLECTORS—NO MORTGAGES—NO RED TAPE—you simply give us permission to place the typewriter in your office on trial. If you decide to keep it send us \$4.00—you can have thirteen months to pay the balance—you can pay it just as convenient, even as little as \$4.00 a month. If you need extra time simply ask for it.

Total Price to You for Everything only \$56.00

We make the assertion without fear of contradiction that this is a lower price than can be obtained on a typewriter of equal quality through any other source.

Authorized Distributors

We are the sole authorized distributors of the Famous Model No. 3 Oliver, which in our judgment is the best machine for your purpose that the market affords.

Write your name and address on the attached coupon—mail it to us today and the typewriter will be in your possession in a very few days for examination.

Typewriters Distributing Syndicate

166 L57 North Michigan Boulevard, CHICAGO

Typewriters Distributing Syndicate

166 L57 North Michigan Blvd., Chicago

Gentlemen: You may send me a No. 3 Medical Oliver Typewriter on trial.

If the typewriter is entirely satisfactory and I decide to keep it, I agree to send you \$4.00 within five days from date of delivery as full payment for one month's rental and \$4.00 each month thereafter that I keep the typewriter.

When I have paid you \$56.00 in this manner, the typewriter is to become mine. Until then title to the typewriter to remain in you.

It is understood that if for any reason I wish to return the typewriter during the life of this contract, I am under no obligation to pay anything except the \$4.00 a month for the use of the machine for the time which I keep it.

Otherwise I agree to notify you within 5 days that I do not want it and I will then repack it carefully and will hold it until I receive your shipping instructions which I will follow promptly.

Name.....

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successfully. In the impending collapse, during major operations the injection of from 2 to 4 Cc. of Digalen after a few minutes' cessation of operative procedure, has rendered it practicable to successfully terminate an otherwise fatal operation. So marked have been the results following this especial use of Digalen that I have almost become routine in its administration in anticipating and preventing, to a large degree, surgical shock in major operations.

At THIS season of the year when people spend so much time in the open air, especially in riding, driving and automobiling, there is always a great increase in nose and throat troubles traceable to dust inhalation. Inasmuch as the dust cannot be avoided, the next best thing is to protect the mucous membrane of the air passages as effectively as possible. For this purpose nothing gives such efficient service as Sabalol Spray.

This well known balsamic preparation not only cleanses the nasal mucous membrane, freeing it from dust and scaly accumulations, but it exerts a mild astringency and thus prevents the ingress of dust and germs to the deeper tissues. It is tonic and raises the resistance of the mucous membrane. Used before and after automobiling or any trip leading to exposure

to dust, Sabalol Spray will give the exact protection needed to insure avoidance of the nose and throat irritations that are so apt to lead to graver affections.

A fair proportion of the nose and throat conditions in the early winter, considered—in their incipency at least—to be colds, are in reality nothing but the immediate effect of dust inhalation.

Sabalol Spray may be applied on cotton pledgets or sprayed with an oil atomizer. For sample and valuable literature address T. C. Morgan & Co., 102 John St., New York City.

It is going on toward 20 years since Gray's Glycerine Tonic Comp. was first placed at the service of the medical profession. During all this period Gray's Glycerine Tonic Comp. has maintained the standards that first attracted attention and the busy practitioner has ever found it an ally worthy of confidence. It never disappoints and in the treatment of atonic conditions, particularly of the gastrointestinal tract, it is often the one remedy that will produce tangible and satisfactory results. The physician who does not use it in his practice is denying his patient many benefits that can be obtained in no other way.

FOR NASAL CATARRH

and inflamed mucous membrane in any part of the body.

Cleanses the nasal chambers and protects the mucous membrane of the nose and throat from dust and pollen rendering them less sensitive to colds and climatic changes.

Laryngologists will find Sabalol Spray invaluable in the treatment of the throats of actors, singers and public speakers.

If you do not know Sabalol Spray send for sample

T. C. MORGAN & CO.

102 John Street, New York City.

SABALOL
SPRAY

If this were your little girl, Doctor, what would you do?



What *wouldn't* you do?

You would search unceasingly for a method of cure. You would emphatically reject all means of treatment of questionable benefit, the antiquated instruments of torture, the plaster cast, the steel and leather jackets, and other unscientific apparatus.

You would be gentle, you would be **CERTAIN** of success. You would save the child from life-long misery and disfigurement. *Exhaustive investigation* would lead you to adopt a

Sheldon Spinal Appliance

Many physicians have *found out* what the Sheldon Appliance accomplishes, and they are now using it in all their cases of spinal weakness, irritation and curvature. The judgment of these physicians has been justified by our record of treating successfully over 18,000 cases in the past ten years, a record that even the most conservative practitioner must recognize as conclusive evidence of worth.

The Sheldon Appliance provides the required support, giving a gentle, firm pressure where needed, yet permitting full respiration, normal heart action and free play of the muscles. It lifts the weight of the head and shoulders off the spine, and corrects any deflection in the vertebrae.

30-DAY GUARANTEED TRIAL

Every Sheldon Appliance is made to order according to measurements taken by the Physician, and is delivered subject to a 30-day guaranteed trial.

Let us send you our plan of co-operation and full information about the Sheldon Appliance. Address
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The Doctor's Strongest Argument—

"I wear them myself—and find them indispensable from every standpoint of hygiene and comfort."



O'Sullivan's
HEELS
of New Live Rubber

"Grateful and necessary as they are to those with hypersensitive nerves and easily tired muscles," continues the doctor, "they are none the less essential for the healthy and strong. The relief afforded from jar and shock, the reduction of abnormal muscular tension and fatigue, and the saving of nervous energy, make them an important factor in the prevention of that physical depression that all too often invites graver disease."

An interesting booklet on "Rubber Heels from the Medical Viewpoint" sent on request.

O'SULLIVAN RUBBER CO., 131 Hudson Street, New York City

The Tour was won by the Metz team of three regular stock cars. Many makes and prices of cars competed, including the pick of America's best, but the Metz was the *only* team that went through the entire eight days of the contest with a perfect score.

It was not "luck" or "team work" that enabled the Metz to establish this splendid record, but practical and solid construction. There were three regular Metz stock cars in the contest, and each and every one of these cars maintained a *perfect* score, checking in at every control without additional allowance or time extension of any kind, throughout the entire eight days of the Tour.



On the final day of the contest the Metz cars were last to leave noon control, but they overtook all the cars ahead, and, when ten miles from the finish, caught the pacemaker and crowded him over the last mountain range, finishing with twenty minutes to spare.

The Metz cars were the *only* cars in the contest that were equipped with gearless transmission. The gearless transmission of the Metz "22" entirely does away with gear troubles. Concisely stated it means—No clutch to slip, no gears to strip.

Metz price, \$475.00, completely equipped.

Prices of other cars that competed in the Tour—from five to ten times as much.

The Metz is the lowest-priced four-cylinder automobile in the world, and it is a strictly high class, fully guaranteed car, Roadster type, torpedo body, left-hand drive and center control.

UNDER the caption, "Clinical Results with the Phylacogens," Dr. R. W. Locher, Grafton, West Virginia, in the *Memphis Medical Monthly*, has this to say: "In judging the therapeutic value of a new preparation, it is advisable that a great number of case reports be considered; and in order that the medical profession may have a great number of cases from which to judge, it is the duty of every physician to report such results as he may have. The Phylacogens are of comparatively recent origin, and yet even at this early date they have displayed their ability to produce satisfactory and in some cases remarkable results in the treatment of a great variety of pathological conditions.

"We are informed that the Phylacogens are not claimed to be a 'cure-all' in any sense of the word, but simply valuable therapeutic agents in the treatment of numerous infectious conditions. From the very fact that all but Mixed Infection Phylacogen are to be directed against specific infections, it is necessary, before employing them, to make an accurate etiological diagnosis. For obvious reasons one cannot expect to produce results if Rheumatism Phylacogen is administered in a case that is really one of gonorrhoeal arthritis. Neither will an osteomyelitis or a syphilitic periostitis yield to Rheumatism Phylacogen, but the former may be logically treated with Mixed Infection Phylacogen. It would seem that this latter Phylacogen will ultimately prove of great value to the surgeon in combating postoperative infections, as well as infections following injuries of all kinds."

The writer then details fourteen case reports, cover-



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GLYCO= THYMOLINE

FOR

CATARRHAL CONDITIONS

Nasal, Throat

Intestinal

Stomach, Rectal

and Utero-Vaginal

KRESS & OWEN COMPANY

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The Mulford Biologicals

were awarded the Gold Medal at the Seventeenth
International Congress of Medicine,
held in London, August 1913.

Physicians should bear in mind that different brands of pharmaceutical and biological products differ widely in regard to their therapeutic value. This variation accounts for many of the failures to secure results from the administration of well-known products.

The proper preparation and standardization of pharmaceuticals and biologicals requires exceptional technical skill and expert knowledge, together with unlimited facilities for scientific research.

The H. K. Mulford Company are leaders in drug standardization, and today the Mulford brand is recognized as a guarantee of superiority throughout the world.

Our large staff of scientists and experts and extensive connections with hospitals and other institutions enable us not only to keep in constant touch with the progress of bacteriological science but also to obtain the various strains of pathogenic microorganisms so absolutely necessary to the production of effective and polyvalent serums and bacterins.

*Dependable results are assured by
specifying the Mulford Brand*

H. K. MULFORD CO., Philadelphia

Pharmaceutical and Biological Chemists

New York	Boston	Kansas City	St. Louis	New Orleans	San Francisco
Chicago	Atlanta	Dallas	Seattle	Minneapolis	Toronto

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ing a variety of diseases, and adds this by way of comment:

"From the foregoing cases it would be possible to draw numerous conclusions. What is especially striking, however, is that the Phylacogen treatment is apparently successful in the vast majority of cases and seems to give prompter and more definite results than is possible to secure with the usual recognized treatments. As a physician's experience increases he finds a greater number of cases in which each of the Phylacogens may be used, with the expectation of great benefit resulting therefrom. In any event, it must be conceded that Phylacogen in its various forms presents great possibilities and must be classed as a therapeutic agent which is more than worthy of trial."

THE wave of accidental poisoning from bichloride tablets that seems to be sweeping the country ought to receive a set-back from the Coffin Shaped Tablets the Norwich Pharmacal Company of Norwich, New York, are just introducing.



Their Bichloride Tablets are made in the shape of a coffin with "Poison" in raised letters on one side and skull and cross-bones on the other. The container is a coffin-shaped bottle whose entire surface, with the exception of the label space, is covered with well defined, diamond-shaped projections. An attractive two-color label calls renewed attention to the dangerous contents of the bottle.

This unusual and gruesome shape, both of tablet

and bottle, certainly ought to halt any one but an imbecile by its suggestive character, while the sharp projections on the bottle, in daylight or darkness, are bound to call instant attention to the unusual and poisonous character of its contents. As it is impossible to pick up one of these bottles without feeling these projections, its advantages as a precautionary container are obvious.

The Norwich people have always been alert in anticipating the demands of the professional public, and this latest product from their laboratories indicates that they still have their ears to the ground.

THE AMERICAN JOURNAL OF CLINICAL MEDICINE is second to none, and I cannot do without it.

S. D. LOGAN, M. D.

Middletown, O.

NOW READY

George Whitfield Overall's New Book

**EVOLUTIONARY PRACTICE OF
MEDICINE AND SURGERY**

**CAUSES AND DIAGNOSIS OF
CHRONIC DISEASES**

*Especially of Prostate, Kidney, Heart, Stomach,
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<i>B. typhosus</i>	1.0	20.0
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* It has been found necessary to substitute the term Rideal-Walker Co-efficient for that originally introduced by the authors, viz., Carbolic-Acid Co-efficient, owing to the abuse of the latter on the part of unscrupulous manufacturers and vendors.—Vide British Medical Journal, 6th April, 1907.

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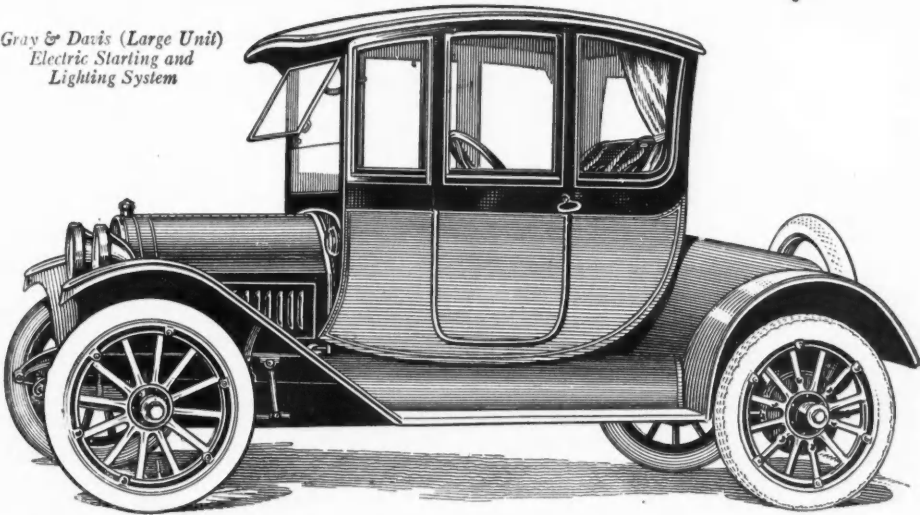
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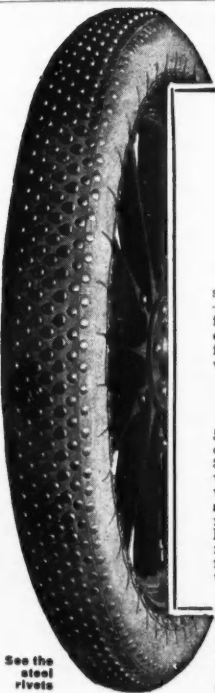
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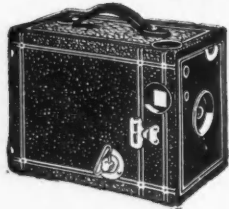
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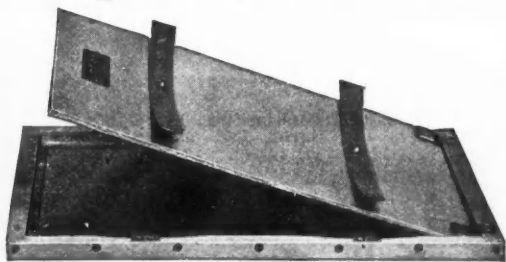
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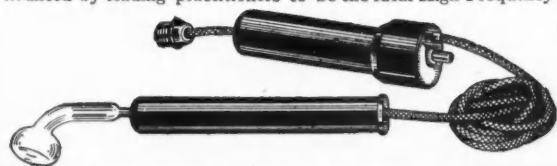
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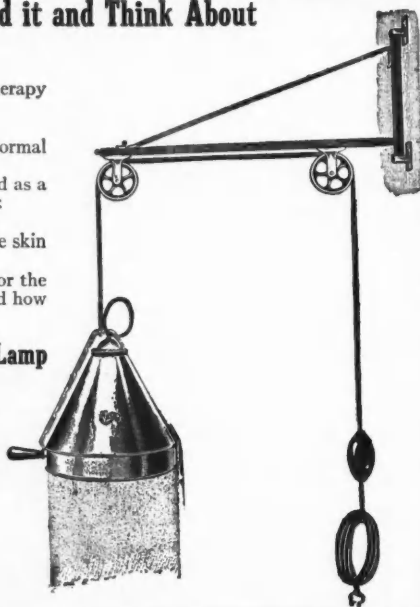
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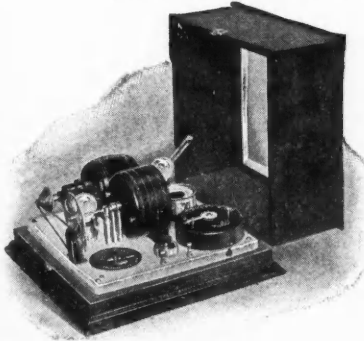
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 Per doz. boxes of six ampules each....\$15.00
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One of the most important uses of Synol Soap is in the sick-room—in typhoid, for example. The danger from soiled hands and clothing, to the nurse and to the physician, is always present. A bottle of Synol Soap in constant use can be depended upon to destroy the typhoid organism. A three per cent solution of Synol Soap kills the typhoid bacillus in two minutes. Of course this is a bacteriological laboratory report and it is often stated by physicians that in practice, materials are not used under the clean pure conditions of the laboratory. That is correct, but note this: Synol is a soap and soap emulsifies and mixes with organic matter, such as feces, etc., thus allowing the germicidal action to take place.

Entirely aside from its cleansing value, Synol Soap is a remarkable germicide.

The combination is irresistible.

Equally efficient in other diseases and for the surgeon's hands.

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Prepared in 4 oz. and 10 oz. bottles.

Samples mailed upon request.

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DESCRIPTION: The first fold carries 13 shell, cork-stoppered vials admitting any tablet not larger than an average 5-grain size. The lower fold carries one row of 12 vials of about one-dram capacity and 14 vials of half-dram capacity, each, for granules or alkaloidal tablets as desired. Dimensions: 8 1-2 x 4 1-2 x 1 3-4 inches. This case, containing 39 remedies and weighing, when filled, a little over one pound, should be seen to be appreciated. Thousands of them are doing service daily; in fact, it is our best seller, but for those with a large practice we recommend the No. 8 Case (see Price List).

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Acetanilid, gr. 1	Digitalin, gr. 1-64
Aconitine Hydrobromide, gr. 1-800	Echinacoid, gr. 1-2
Ammonium Chloride Comp. with Codeine	Emetoid, gr. 1-64
Anodyne for Infants (Waugh)	Gelseminine Hydrobromide, gr. 1-250
Anticonstipation (Waugh)	Glonoin, gr. 1-250
Arbutin, gr. 1-6	Hyoscyamine Sulphate, gr. 1-1000
Atropine Sulphate, gr. 1-250	H-M-C Modified, No. 2
Cactoid, gr. 1-64	Migraine
Caleidin, gr. 1-3	Neutral Cordial
Calcium Sulphide, gr. 1-6	Nuclein Tablets, minims 5
Calomel, gr. 1-6	Nucleinated Phosphates
Calomel with Aromatics	Podophyllin, gr. 1-6
Calomel, Podophyllin and Bilein Comp.	Quinine Arsenate, gr. 1-128
Campbor, Monobromated, gr. 1-6	Strychnine Arsenate, gr. 1-128
Catarrh Bronchial	Triple Arsenates, No. 1
Chlorodyne	Triple Arsenates with Nuclein, No. 1
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Copper Arsenate, gr. 1-250	Veratrine Hydrochloride, gr. 1-128
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Should this selection not suit you, you are at liberty to substitute from our list, in any instance, similar priced goods. New therapeutic price-list (1913-1914), if not yet received, will be sent on request.

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Simply write us on your professional letter-head and one of these beautiful calendars will at once be sent you without charge.

The illustration herewith gives but a faint idea of the beauty of this handsome calendar. Picture in your mind's eye, the real calendar in panel form, seven inches wide and thirty-six inches long, printed in twelve harmoniously blended colors. The shape lends itself to the decoration of those odd places so hard to fill; and the color scheme is sure to harmonize with the furnishings of any room.



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Two distinctly desirable characteristics of

PLUTO WATER

Especially effective in gastro-intestinal disturbance. Specifically indicated in uric acid diathesis, gout, chronic rheumatism, constipation, obesity, nephritis.

A constantly increasing number of practitioners direct patients to the Springs for complete treatment.

Attractive literature, detailing delightful surroundings, scientific methods, with clinical data and all desired information relative to America's famous Spa.




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Sodium Sulphate	50.005
Magnesium sulphate	30.971
Calcium sulphate	2.817
Sodium chloride	2.503
Magnesium carbonate	.352
Iron oxid and alumina	.016
Silica	.005
Total Solids	86.669

The water was excellent from a sanitary standpoint.
Respectfully submitted,
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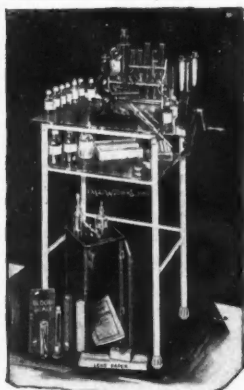
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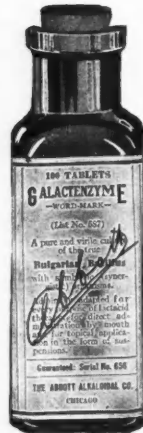
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500, \$1.20; 1000,
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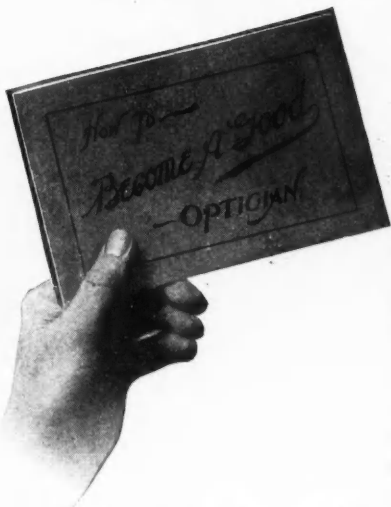
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It tells how the classes are conducted, the subjects that are covered and how you can become an expert optician without losing a day from your practice.

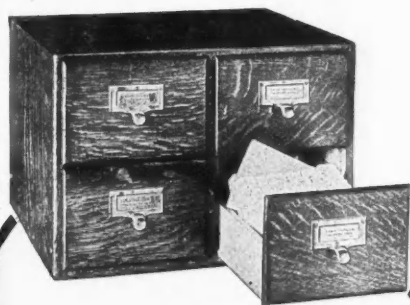
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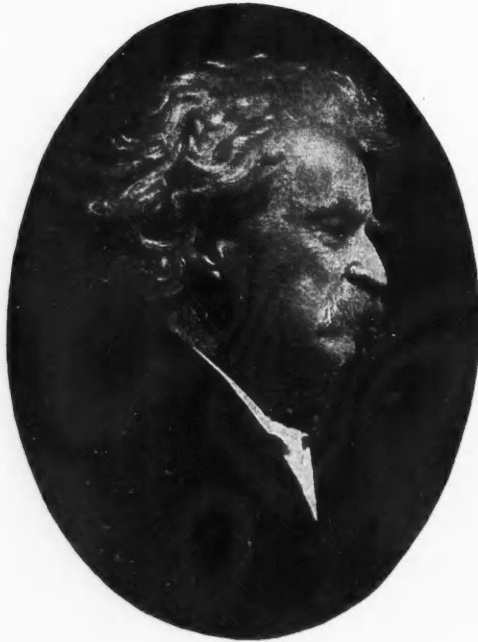
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ALLAYS the aggravating coughs of Phthisis, and is curative in Broncho-Pneumonia.

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Manufacturer of **DENTAL SPECIALTIES** and Headquarters for **STRIPS** and **DISKS**

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Most satisfactory for the removal of dandruff.

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Samples submitted to Hospitals or
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BY USING
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NURSING BOTTLE

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Saline Laxative with colchicine and lithium added. Both are sold in generous packages.
Per dozen (8-oz. bottles, filled)..... \$4.00
In less than 1/2-do. quantities, each..... .40

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Aloin, gr. 1-25; strychnine sulphate, gr. 1-500; atropine sulphate, gr. 1-2500; capsicum oleoresin, gr. 1-500; emetoid, gr. 1-500; bilein, gr. 1-250.
Indicated in all forms of chronic constipation.
100, 16c; 500, 49c; 1000, 65c

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(Phenolphthalein Compound)

Phenolphthalein, grs. 1-1-2, with senna, sulphur and aromatics.

Termed by many physicians "the laxative de luxe." Thus combined, this small dose of phenolphthalein proves more efficacious, without griping, than five grains of the drug alone.

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A mixture of alkali salts of the bile acids as found normally in ox gall (fel bovis).

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(Sodium and Xanthoxyloid Compound)

A remarkably active antacid and depurant hepatic stimulant and intestinal antiseptic. Particularly indicated in the various manifestations of an underlying acidemia and auto-intoxication. Should be pushed to effect in all such conditions, or wherever the urinary acidity is high and there is a reduced output of urea with or without indicanuria.

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Nuclein is one of if not the most important of the defensive proteins of the body. It markedly increases the number and activity of the white blood-corpuscles. In appropriate cases the exhibition of Nuclein also causes rejuvenation or disappearance of diseased red blood-corpuscles, increasing the number and vitality of the essential reds. Nuclein may therefore be regarded as a reconstructive of extreme value, to be used with full confidence that excellent results will follow.

It is indicated in all disorganized conditions of the blood, in infections of all kinds (especially tuberculosis), in anemia, chlorosis, general debility, etc.

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In less than 1/2-do. quantities, each..... .40

Solution (special hypodermic), per doz. 1-oz. bottles..... 5.00

In less than 1/2-do. quantities, each..... .50

2-min. Tablets, 100, 23c; 500, 75c; 1000, \$1.35

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NEURO-LECTHIN

This product is an ester of the fatty acids (stearic, oleic, palmitic), with glycerophosphoric acid in chemical combination with choline. It is prepared from the brain and spinal cord of healthy animals.

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Calcidin contains 15% of available iodine with 85% of calcium compounds, starch and water.

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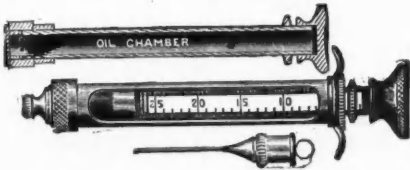
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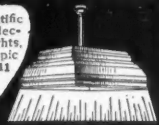
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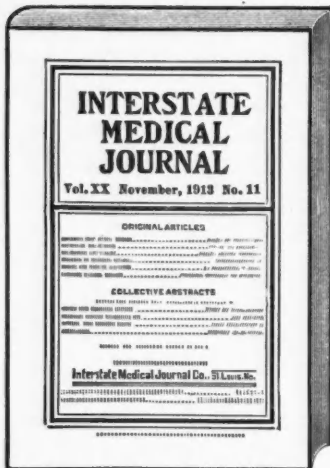
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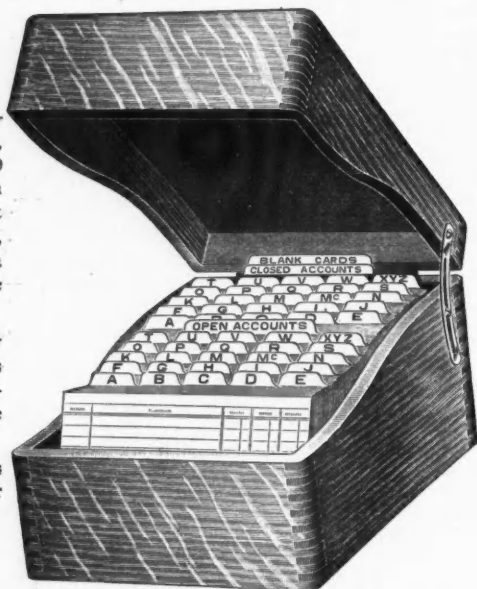
The card ledger is the up-to-date bookkeeping system and is being used for all kinds of accounts. It is the simplest and best method a doctor can use. With it there are no dead accounts to handle (when an account is paid the card is transferred to the closed accounts); no indexing to do, the cards being filed in alphabetical order; there is a great economy of time, the statement of an account is always ready when a client asks for it; because of this, collections are made prompter and easier

The Physician's Account System

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And we will pay 50 cents of the charges.

See our rating in the Commercial Agencies, or write any bank or firm in our town.

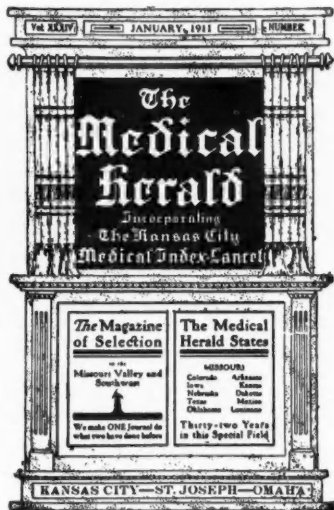
We produce our wines from Choice well ripened grapes; ship our entire product direct to physicians and to the consumer and guarantee them to conform to all Pure Food Laws. However after sampling the wines, if not satisfied, inform us or the Advertising Manager of this Journal and your money will be refunded.

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- "Diabetic Problems," Alfred C. Croftan.
- "Local Foci of Infection Causing General Systemic Disturbances," Chas. H. Mayo.
- "Nephritis, its Modern French Conception," L. W. Littig.
- "Auto-Intoxication and Dis-Intoxication in Relation to the Etiology and Treatment of Disease," Henry S. Munro.
- "A Plea for the Prompt Diagnosis and Energetic Treatment of the Initial Lesion of Syphilis," Thomas M. Paul.
- "Cysts of Bone" (Illustrated), A. F. Tyler.
- "The Pathogenesis of Membranous Pericollitis," Michael J. Ford.
- "External Eye Diseases of Apparent Nasal Origin," Jas. M. Patton.
- "New Plastic Operation for Entropion" (Illustrated), Flavel B. Tiffany.

SYMPOSIUM ON PREGNANCY

- "Diagnosis, Course and Management of Normal Pregnancy," A. B. Somers.
 - "Accidental and Criminal Abortion, Diagnosis and Treatment," A. L. Gray.
 - "Ectopic Pregnancy," Palmer Findley.
 - "Advice to the Expectant Mother," C. W. Pollard.
 - "The Medical and Hygienic Management of Moderately Abnormal Cases of Pregnancy," Mary Strong.
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2 1-2-grain tablets.....	100,	.54;	500,	2.30;	1000,	4.45
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Pure powder, in 1-ounce packages, per dozen.....						5.00
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Delivery prepaid for cash with order. Money back if not satisfied.

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FORMULA: Arsenicum Sulph. Rub. 1-100 gr. Nux Vomica 1-20 gr.
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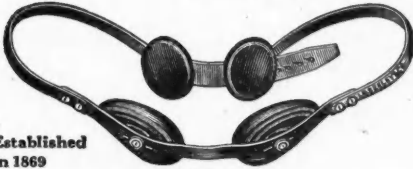
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THIS MAY BE ACCEPTED AS A DEFINITE PHYSIOLOGIC RULE


All constructive body-processes, in their activities, are alkaline; all destructive processes, acid. Practically all digestive enzymes act only under conditions of alkalinity. Practically all excretions are acid. All muscle-nerve function demands alkalinity. Fatigue is always attended by acidity—often extreme.

The blood, the parent issue, is alkaline in health; acid in disease. Microbic action usually produces organic acids. Defenses are alkaline.

According to Hayem and others, the more serious diarrheas are the result of the presence of organic acids due to microbic action.

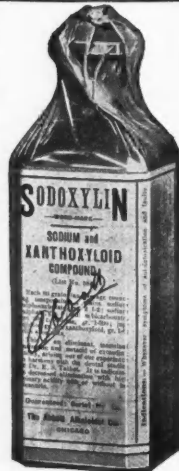
Aulde, in his recent work on *The Chemic Problem in Nutrition*, shows that, the body-fluids being normally alkaline, acidity necessarily leads to metabolic disorders which ultimately register themselves in organic disease. He states, as the first principle in the treatment of every infectious and metabolic disease, "Neutralize acid excess with alkaline-saline medication."

THE ACIDIMETER




A simple little instrument for the rapid and accurate estimation of acidemia as shown by the urine. So simple that anyone can use it. So rapid that but a minute or two is all the time taken. A most convenient, portable and valuable addition to your equipment; leading, through accurate diagnosis, to more accurate practice.

Price \$1.15 — With generous, necessary reagents \$1.75.



THE INDICANMETER



Another very useful instrument which permits of a close approximate estimation of the amount of indican in the urine; a very essential test, giving to the doctor information of inestimable value. Just as easy to handle as the acidimeter. Eliminates the bother and inconvenience of all other methods and will help you materially in your practice.

Price \$0.75 — With generous, necessary reagents \$1.75.

Sodoxylin is for acidemia—it promotes elimination and neutralizes acidity. Each 60 grains contains sodium sulphocarbonate, grs. 2½; sodium sulphate, grs. 5; sodium bicarbonate, grs. 20; colchicine, gr. 1-500; juglandoid, gr. 1-6; and xanthoxyloid, gr. 1-6, with sodium chloride and aromatics.

Acidemia shows itself by excessive acidity of the urine and by the presence of indican. The **Acidimeter** and **Indicanmeter** afford simple but trustworthy means of detecting these symptoms and of guiding the administration of the best remedy—Sodoxylin.

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The Trade is Supplied.

Special: Both test outfits complete and one-half dozen packages Sodoxylin \$5.00 net, express paid.

Send for our very interesting and instructive booklet on Acidemia. Let us know if your druggist is not in stock.

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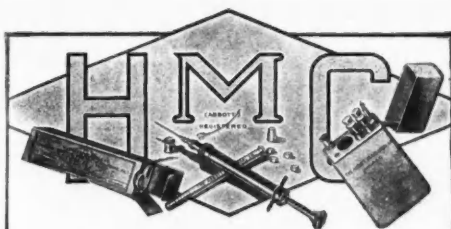
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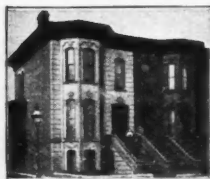
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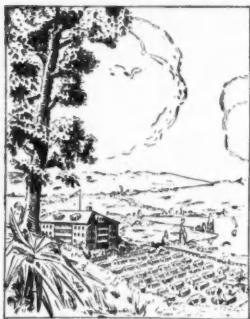
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