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CONTENTS OF VOLUME XXV.

SURGERY.

OBSTETRICS.

GYNÆCOLOGY.

PATHOLOGY.

PHARMACOLOGY AND THERAPEUTICS.

OPHTHALMOLOGY.

LARYNGOLOGY.

MEDICAL SOCIETY PROCEEDINGS.

EDITORIAL.

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NURSING THE INSANE.

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I appreciate the honor conferred in the invitation to tell you something of what the nurse has to do in the care of insane patients, a subject long neglected, for only within the past few years have attendants on the insane been specially instructed in their duties, and risen above the level of mere "keepers." Yet, there is no class of cases in which the role of the nurse is of greater importance.

I shall assume that modesty alone did not prompt the confession that you know nothing about this branch of nursing. Nothing shall therefore be passed over because it seems too elementary.

It will be a pleasure to disabuse your minds of misconceptions, to raise the cloud of calumny from the sick in mind, for certainly those can have no idea of how interesting and satisfactory the work is, who have told me with a suggestive gesture they would not take charge of the insane for anything, as if it were similar to caring for some wild beast instead of our own flesh and blood.

To make my words valuable, I shall have to tell you something of what insanity is, or at least acquaint you with some of the evidences of mental diseases with which you will have to deal if you nurse such cases, so that a fitting title for these remarks might be "the insane and their care."

A lecture delivered to the Nurses' Association, Montreal.

I shall not attempt that wherein so many able men have failed, viz., to give you a definition of insanity. It is hard to define, because what indicates insanity in one man may be perfectly consistent with sanity in another. So variable are its manifestations, that it is simply impossible to give a brief description of it that will include all the insane and exclude all who are sane. But fortunately for practical purposes it matters little if you do not carry a definition away with you.

Nor shall I venture to discuss what mind is. Suffice it to say that a man's mind, whatever it be, is revealed to us through his conduct, through what he says and does. We can diagnose the mind diseased only by observation of the speech and actions. We speak of the "mind diseased." This is not quite true, as it is the brain, the organ of the mind, that is affected, whence arises disturbed mental action. It is only for convenience we say insanity is a disease. It is really only a symptom of a disordered bodily state.

It may be difficult to detect any difference between your patient and sane people. The essential thing in insanity is the change in the man. To see that, he is not to be compared with others, but with his former self. It may be so slight that only his intimates will note it, or so marked as to attract everybody's attention. Those who knew him all his life may observe his departure from health more than will you. The insane are not all fashioned in one mould. Just as there are no two faces alike, so no two minds are quite alike in disease or health. But when a man goes crazy there is always a change in him, a change from his natural way of thinking, feeling or acting—the modest becoming obscene, the villain religious.

The lunatic of the popular mind, of the story book, you will seldom see, that raving madman who is supposed to be chained, beaten and otherwise ill-treated by the credulous world, which world will sympathize with the maniac in all his rashness till in his blind fury some day he commit murder, of which act he is perhaps unconscious, when with one accord it will turn and cry "Hang him! Hang him!"

Insanity is not one but a number of diseases. The classifications of mental disorders are puzzlingly numerous but you need not freight your brains with them. For prac-

tical purposes, insane cases may nearly all be grouped in a simple way under a few general mental states, one of which being present gives the character and name to the disease. The faculties of the mind are said to be feeling, thinking and the will. The term feeling must not be confounded with the sensation arising from the special sense of touch. What it means cannot well be put in words, but we all know what is meant by pleasurable or painful feelings. According as the feelings are unnaturally painful or pleasurable we classify many cases of insanity.

So we will make three grand divisions of the insane:

1st, There is the melancholy class, whose minds are in a depressed state; 2nd, the maniacal, whose minds are in an elated state; and 3rd, the demented, whose minds are in a state of enfeeblement. The melancholy are the most numerous, although not so according to hospital figures, for more of them are kept at home for treatment. You may often tell from the patient's face that the characteristic of the disease is depressed feeling. His head may be bowed, or his eyes cast down, and every feature indicate unhappiness. He talks little, or may refuse to speak. The mind seems to act slowly, the memory dazed. In some cases you can detect little else wrong. He may be able to talk like others about his symptoms. Indeed that is the trouble, the patient thinks of nothing but himself, his unworthiness, etc. Self is the prominent characteristic. He interests himself in nothing else. But all are not quiet. The patient may groan, or cry (for he can shed tears), pacing the floor and wringing his hands. His thoughts may plainly show disorder, his mind being full of painful delusions of which he may talk much. Tortured with fear, he may be as frenzied and violent as any maniac. The melancholiac is often suicidal.

In mania we find the opposite condition. The feelings of the maniac are exalted, often excited. Thus the fundamental difference between the two is in the state of the feelings. They may have other symptoms in common. The maniacal patient's mind is usually overactive, unbridled. His thoughts come too rapidly for utterance, and his speech may be a jumble of words. He talks rapidly, and his loquaciousness is often trying. His memory is acute, his imagination

fired. There may be constant restlessness, or his excitement may come in spells with periods of comparative mental quiet between. He may wander up and down like a tiger in a cage, or laugh, sing, dance or cry, or all in turn. He tends to excess in all things. He may drink heavily in the beginning of his illness, and this is often set down wrongly as the cause. He is often irritable, unreasonable, perhaps threatening, and grows violent when interfered with. His self control may be altogether gone, and he becomes the raving maniac. If, in addition to his feeling of well-being, there are delusions, they are mostly of self-exaltation. He thinks of himself more highly than he ought. He is a Pope, or king, or God himself. Mania is commonest in young subjects. Sometimes there is an acute delirium, the patient recognizes nothing about him, the temperature rises, and the patient is prone to become rapidly exhausted. But mania may be of all degrees. Some patients may be so slightly touched that we cannot say more than that they are on the borderland. In popular language, all the insane are maniacs. Your newspaper will tell even of *suicidal* mania. But you will now see that mania and insanity are not synonymous terms.

Dementia, or the state of mental enfeeblement, usually results from mania or melancholia. It is the goal of all chronic insanity. It comes on often in old age without antecedent mental disease,—an exaggerated second childhood. All the dement's mental powers are impaired almost completely or only slightly. His mind may be so blank that he remembers not yesterday. He is careless as to the necessities and decencies of life, and may need care like a child. He differs from the *imbecile* often only in that he once possessed a developed mind.

The paralytic dement or general paretic is generally put in a class by himself, and is a most interesting patient. In his case, in addition to the mental weakness, there are signs of partial paralysis, and often delusions of enormous power and wealth possessed. He is usually happy, and on his inevitable death-bed will insist he is "first rate." In the beginning he may seem more maniacal than demented.

But you may meet with cases that will not come under the above divisions. There is alternating insanity, in which

the mind is one time maniacal, at another, depressed. There are some in whom the feelings do not seem to be disordered so much as the thoughts, in whom the mind is never free from delusions, especially of persecution, of whom, beware! There are yet others whose wills seem mainly affected, in whom loss of self-control is the prominent feature. Such patients may talk very cleverly, and so the public will say they are sane.

That terrible calamity which attacks the new-made mother, puerperal insanity, may at any time fall to your lot to nurse, whether you desire to undertake it or not, in which emergency you may be a perfect God-send. The form it usually takes is mania, akin to that already referred to, qualified by the lying-in condition.

But it is foreign to our purpose to deal further with the forms insanity takes, especially as doctors differ about them considerably. We will pass on to consider symptoms, the things insane patients say and do, by which they are adjudged of unsound mind. It seems to me very necessary that you should be familiar with at least the ordinary signs of insanity, so that you may be able to look for and recognize them and properly report them. For in no other disease may so much depend on the nurse, who, being constantly with the patient, may elicit symptoms that are never revealed to the doctor in charge. I shall try to be practical, and tell you how to deal with them when they are met with.

It may be well for you to know, especially in obstetric cases, in what way insanity begins. As a rule, insanity comes on gradually. It may *seem* to come on all at once, but when one looks back in such cases, many unheeded warnings that pointed to the disease can generally be noted. It may be weeks coming on before there is anything thought serious enough to consult a doctor about. In nearly every incipient case sleeplessness exists, and the bodily health declines. There is little dread of insanity in any one who sleeps well and holds his own in weight. In puerperal cases it begins more suddenly than usual. Although here again this is more apparent than real. Generally within a fortnight of the confinement, you will note some day as the first sign the patient's self-absorption and neglect of her babe. Then, after a bad,

sleepless night, she is restless. Soon she begins to talk ceaselessly, foolishly, and becomes violent, when you have a fully developed case of mania. Such is the typical picture.

The first, most interesting and common symptoms we shall take up are the delusions of the insane. These may be simply defined as false beliefs due to disease. It is needful to say due to disease, because there are thousands of false beliefs in the world due rather to faulty education. These errors may be called delusions, but not insane ones, because disease does not cause them. Such, for example, is the belief in witches, Mohammedanism, and homœopathy from our way of thinking. You cannot always tell errors from insane delusions. Indeed, the only difference may be in their causes and consequences. The millionaire who fancies himself a pauper, and the pauper who counts himself a millionaire, have both insane delusions.

A delusion is a new belief in the patient's mind, something he did not hold formerly, nor was he taught it in youth, whereas the errors of the sane are usually things they have held all their lives. A delusion is a belief usually in which the patient only is concerned, which refers only to himself, and which affects his conduct, whereas sane errors are held by many men in common, they pertain to other things than themselves, and may not interfere with their conduct to any extent. Delusions are errors that those of the patient's own set do not and cannot endorse, so they isolate him from his fellows. Much depends on the character of the patient whether you suspect he is delusional or not. Thus you would doubt a philosopher's sanity more than an illiterate man's if they both believed in witches. Don't imagine delusions are always silly and impossible. Oftener they are not essentially so, but are contrary to fact in the mouth of the patient uttering them. One says his head is glass, and treads gently lest it break; one, that he is made of butter, and keeps out of the sun; and yet another that he is dead. Such delusions are absurd enough. But suppose a man believes poverty is impending. There is nothing impossible about that. You must see that it has no foundation in fact before it is called a delusion. Such beliefs in possibilities are delusions only when they have no other reason for their existence than that they

are caused by disease. Sometimes injustice is done patients by classing true statements as delusions. You should not without investigation set down every strange thing the patient tells you as a delusion. There are more wonderful things in real life than in fiction. He may tell you true stories his friends would like to hide, stories he would never tell if he were himself; and it is very easy for his family to attribute them all to fancy. Delusions are of all kinds. You may hear a new one every day in a hospital. Some are called dangerous, because they lead the lunatic to harm others. Some are fixed, and cling to the man unchanged through life. Others are fleeting, never two days alike, which is the better omen. They may prate about them continually or they may suppress them so that you can know they have them only from their actions. You must not expect to find delusions in every insane case. They are not essential to it, but are most important corroborative evidence, as our "learned friends" will tell you. On the other hand, it is doubtful if you will find delusions in any case in which other symptoms do not co-exist. The feelings are more or less altered even before delusions indicate derangement of the thought.

When your patient has delusions and talks about them, simply say, if you say anything, that you cannot see as he does, and then change the subject. Be frank with him, but don't antagonize. Patients should not only be discouraged in talking about their delusions, but about all their symptoms. The melancholy especially want to talk a great deal about themselves and their horrible, unprecedented case. The only time discussion of delusions may be advisable is when a patient is on the mend, and the mental cloud is lifting, then something may be done to reason away the fancies that still hover about. Above all, they should never be ridiculed, nor should a patient be nicknamed after his delusion, as the Queen, or President, or the like, for that would only serve to keep it in mind. Neither argument, nor ridicule, nor flat contradiction will show him his error. They will only annoy him. Experience will soon teach that his fancies are as real to him as is your existence to you. Ignore them as much as you can. Try to divert his mind with other thoughts, and get him to act as if the delusions did not exist. You

will find that he does not follow them out to logical conclusions; thus a patient may declare himself a king, and yet he will obey you and do any work you wish. Encourage him in this, and thus ignore his delusion. In home treatment it is always better to select some room other than the one he is used to for the patient while he is sick, as his accustomed room may be associated with his delusions. Also when you wish the assistance of any of the household, you should call on those who irritate him least, those who are not involved in his delusions. Often those nearest to the patient and whom he loved most are the ones on whom he vents the greatest dislike. Keep them out of sight. Don't let the friends try to overcome this by argument. Explain to them it is a symptom of his illness, which will pass off with the others.

Hallucinations and illusions are also often symptomatic of insanity, and demand attention. We say a patient has an hallucination when he hears something when all is still, and there is nothing but his disordered brain to account for the sound. Firmly as he believes in its reality, it is a creation of his mind.

The poet depicts them in the lines

> "I hear a voice you cannot hear which says I must not stay;
> "I see a hand you cannot see which beckons me away."

Any of us may have hallucinations, especially in the time between sleeping and waking; but once aroused we do not believe in the reality of our dreams, hence they do not indicate insanity. Lincoln used to see a sailing ship at critical periods of his life. Scott at times saw phantoms of the dead Byron. Dr. Johnson says he often heard his dead mother calling him.

Hallucinations occur in many forms of insanity. There are as many varieties of them as there are senses. Hallucinations of hearing are the ones commonly met with, and are of grave import, for patients having them are often dangerous, and should be closely watched. They are often accompanied by delusions of persecution, and patients hear their enemies threatening, and may retaliate. At first your patient may hear only confused noises, but these are apt soon to become articulate, and, to use the terms of the patient, "he hears voices." Sometimes, however, the sounds may be of music

groaning or crying. These voices may be strange or foreign even, or recognized as those of friends. They may be ones unfamiliar to him, and ascribed to God, the devil or animals. The voices may say pleasant things, but usually not. Some are incensed at hearing their innermost thoughts repeated aloud. They may come from any distance, and the patient is usually definite about it. One man in Ottawa wrote a threatening letter to Dr. Burgess, because of voices he heard from Verdun. They may come from any direction, even from the patient's own body, giving rise to the idea in his mind that there are two of him. They are so natural that the most intelligent patient cannot be argued out of his belief in their existence, though he may explain them as due to telephones, etc. Patients that converse with these imaginary persons have a characteristic look. You may notice them laughing at something heard, or frowning, or making reply aloud, or moving the lips. I have gone thus minutely into hallucinations of hearing, for it is important to recognize them, patients entertaining them being liable to do sudden, dangerous deeds. Thus one man who attempted murder said: "I do not want to do this, but when God whispers in my ear it must be done, I must obey, and even sacrifice my whole family." Don't be less cautious because they may talk as reasonably as yourself on other topics.

Hallucinations of sight are less common and less serious. You have a familiar example of them in delirium tremens, when the imaginary objects are of a terrifying character; but the insane may fancy they see pleasing things. The patient who tells you he sees flies in the pure milk you offer has hallucinations of seeing, and may refuse food on that account.

Hallucinations of smell and taste are the least common, and are often combined with delusions of poisoning. Sometimes they fancy their own skins emit foul odors, and hence live apart from their friends.

Hallucinations of touch are frequent, consisting in sensations of electric shocks, irritation of the skin by powders, etc. Only last week I had a woman of 50, who firmly believed she was frequently violated by certain men, distorting God's promise to be a husband to the fatherless. She claimed that

a machine was used which could be operated from any distance. Here was an hallucination of the genital sense. That woman is liable to do harm to her imaginary persecutors.

Illusions differ somewhat from hallucinations, and are more frequent in the sane. When a person hears a bell and believes it a voice, he has an illusion. His mind does not correctly perceive what the ear hears. He is mistaken. If for a moment seeing yourself in a mirror, you think it is someone else, that is an illusion. If you persisted in saying it was not your reflection, one would doubt your sanity. An illusion then is based on truth, but the man is deceived, whereas we saw an hallucination is a pure invention of the mind; there is no truth in it. Illusions are common in insanity, but are not so serious as hallucinations, being often seen in curable cases. Those of sight are the most frequent, but they may be connected with any of the senses. A patient may misinterpret sensations coming from the stomach so as to believe some animal is being entertained in his abdomen. One thin woman feeling the pulsations of the aorta assured me a lizard was growing within her.

The term insane delusion is sometimes used to cover both hallucinations and illusions. Once these cannot be corrected by the mind they may be called delusions, and indicate insanity. Insane patients cannot be argued out of their belief in them, however absurd they be. Hallucinations and illusions are to be dealt with in the same way as delusions.

Among the acts of the insane, suicide should have a place in your thoughts, that every precaution may be taken to avert so dire a calamity. It may occur in any case of insanity, no matter what the form. But melancholic patients especially have suicidal tendencies. With some of them death seems the one idea of life, so miserable does their intense mental pain make them. There are few depressed patients in whom suicide does not at some time have a place either in wish, intention or act. The determination to end life is sometimes arrived at in a logical way. The poor wretch argues, "I am utterly miserable, I shan't get well; why should I continue thus?" A patient may have the greatest fear of death, and yet constantly woo it. He suicides from seemingly illogical

motives, as the desire to escape from fancied plots woven to destroy him. Many who fancy they are to be poisoned, or are being hounded, anticipate death by suicide. Have care, therefore, that you are not deceived, thinking that because they live in dread of others they will not injure themselves. Soldiers have fallen by their own hands in battle. Self-destruction is often the outcome of delusions : one dies that he may save others; another, in obedience to God's command ; some, because they fancy they are taking their children's bread ; others have at times an intense longing to die, and may run to you imploring protection from themselves till it passes off. It may come on as a sudden impulse in a patient who has shown no tendency to it.

Patients may talk of it freely, but some of the most determined cases say the least about it and make us most anxious. They may even assume cheerfulness to throw you off the scent, and profess recovery to get you to relax your watchfulness. Many have the keenest inclination to suicide in the earliest stages of their disease, perhaps it may be committed before any other symptoms have been observed. But while the chronics seem to think less about it, make it a rule to trust no melancholic.

The *methods* of committing suicide are as varied as mind can conceive. The unexpected often happens. Some will swallow pins, stones, or glass, or use braces, garters or torn linen to choke themselves. They will take steel from their corsets, or break dishes or glass to get something to cut their throats. Patients have suicided by keeping their faces beneath water in a basin, so a river is not needed. They will hang by anything,—by towels or sheets from the windows, by yarn from the gas fixtures. I remember one man in Dixmont, Pa., who carried it out successfully in the daytime by tying his handkerchief in the wire screen on the balcony, his toes almost touching the floor. They may try to starve to death, or save up their medicine till they get a fatal quantity. Precipitation is a frequent resort of those weary of life, so that you must be careful with some outdoors, to avoid heights or bridges, or the neighborhood of cars, before which they may cast themselves, and in the house have special care on staircases and all dangerous elevations.

The suicide's ways are often peculiar. He may repeatedly attempt suicide by one method, eschewing all others. He may avoid sure methods, and choose the one least suspected and which does not offer the best chance of success. Thus he may hang from a picture nail so low that he has to bend to keep off the ground.

One of your most important duties then will be to frustrate suicidal attempts. Whenever the propensity is even suspected in a patient he should be under supervision constant but unobtrusive as can be. When you are busy, say getting his meal, that is the time he is most apt to seize on as favorable. Few, however, are constantly meditating it. The opportunity offered often prompts the desire, as the sight of water or a knife. Remember he may need but a moment to finish himself, as when the throat is cut. See to it, then, that the bath-room, fire-places and other risky places are secured and the use of matches restricted. Look with care after everything that may cut, as scissors, knives and broken glass. Medicines should be kept in a safe place; but while putting such things out of reach, avoid doing it in a way to attract attention, and perhaps suggest the suicidal idea for the first time. While outdoors, see that he picks up nothing harmful, and search the bedding and clothing frequently to see that nothing suspicious is hidden there. Suicides are commonest at dawn or at dusk. Patients are often most depressed in the morning before they breakfast, after which they grow brighter, and may even be cheerful when the lamps are lit. A hot drink, as of coffee, given on waking may be helpful in dissipating the gloom of such patients. Your suicidal patient should have his day well occupied. By night there should be some one near by. At no time should he be shut alone in his room. In hospitals the dormitory is a great precautionary measure, for rarely will the suicidal try to destroy themselves before witnesses. Yet extreme measures should seldom be used to save the trouble of close watching. A patient should not be tied up, for example. Better indeed to take some chances than to resort to such treatment as would stand in the way of recovery. If you and I were given a choice in the matter, we would certainly choose to take some risk of suicide to avoid the living death of the

dement, who must drag out long years of useless animal existence in asylum corridors. I cannot impress on you too earnestly the importance of practising eternal vigilance with those supposed to be suicidal. Their care is the greatest responsibility you can have. You can't tell when the suggestion may come from without or within. Suicide is the most terrible thing that can happen to your patient. It hurts your reputation and shocks the community. It puts our consciences on the rack, and we ask, "Have we done our best to anticipate this calamity? Have we been blind to warnings that showed the lurking tendency?" Bitter remorse may come on finding we neglected to observe the straws that indicated the mind's direction.

Another symptom at times displayed by the insane, and which it may tax your skill to combat, is a *disposition to violence*. But it is probably not as common as you expect. Violence usually consists of wanton outbreaks of noise, tearing clothing, breaking glass and furniture, biting, scratching, striking, hair pulling, kicking, or attacking with weapons. Maniacs are most given to it, but not always, and insane epileptics are subject to it, especially in the dazed condition after the fits. Indeed many hospital nurses dread the epileptic more than any other class. To manage such patients successfully, study each one, his habits and delusions, the way he shows violence, and what is apt to provoke it. Each violent one has his own way of manifesting it. By ascertaining the cause, you may remove it; or by watching, you may see its approach, and thus avoid a paroxysm. The irritation which gives rise to the outbreak may often be removed by a word or a joke, or by letting the patient alone, or by a firm show of authority. Most are subject to firm, kind control. Few are continuously violent. Many may be employed in some way, especially in the open air, and thus become calmer. When force is needed, do not tackle the patient single-handed, unless it be to prevent some calamity. He will often meekly submit on seeing resistance is useless against superior numbers, and if he does struggle he can then be mastered so as to run little risk of injury in the scuffle. Three persons should be able to take care of the most violent, if they go about it properly. Inexperienced nurses sometimes fancy it is a weak act to summon

help. This is a great mistake, and leads to personal struggles, often dangerous to both, and creates bad feelings, and your influence is thus lost. Sometimes, when a patient can be safely left alone, it is wiser to get out of his way, if he's aching for a fight, and let him cool off. Force may be necessary to oblige some patients to go to bed, to get up, to dress and undress, or to take a bath, obstinacy being once in a while a leading insane symptom. Force may be dispensed with in such a patient sometimes by letting him alone. The whim may wear off speedily, or he may do your bidding when next requested. A nurse's capacity is well shown in the way she manages such cases. There is here grand scope for tact. When force must be used, be as gentle as you can, and keep your temper. You can more easily do this when you recollect that his fury or stubbornness is a symptom of disease. Fear is the lowest motive to govern the insane by, though much thought of when poor King George was in a tyrannical keeper's care. After the brunt of a violent storm has passed, though the patient continues scolding, let him alone as soon as you can. Don't stop his noise, as it often replaces the violence and lets the steam thus escape, as it were. Mere noise and a certain amount of activity are not harmful, so unless there is some good reason, they need not be repressed. The more patients are restricted and confined, the less exercise they have, the more violence is intensified. Indeed you can thus create unruly patients, if you wish. When a lad, I remember one patient particularly who used to appear to me the devil incarnate. She was in Rockwood Asylum, where under the old regime it was thought proper to keep her arms continually buckled in a leather muff, her body fastened to a wooden bench. Even thus restrained she sent terror to my youthful heart, and I gave her always a wide berth. When the more merciful days came, I was surprised to see this same patient quiet, neatly clad, and working industriously. And this transformation from the wild, noisy demon of former days was solely brought about by the removal of the cruel shackles and the substitution of employment and the watchfulness of improved nurses.

If the violent patient is in his room, and you must go to him, and an attack is feared, after unlocking the door put the

key in your pocket, that both hands may be free, then open it slowly, holding the knob so that it can be quickly closed. He will generally make an attack at once, and before ready for a second he can be overpowered. If needed, a mattress is the best protection by which to crowd him back. As good assistants are necessary in such cases, the persistently violent can seldom be treated at home, but you may have to deal with such an outbreak before he can be got to a hospital.

A more alarming symptom is the *homicidal* tendency that exists in some. Patients may be homicidal from mere frenzy, committing murder by chance rather than design. Maniacs who are full of energy, and perhaps violent, are rarely dangerous in reality. This, again, is in opposition to the popular belief. They may break things, but do not often deliberately injure anyone. As is said of the mad dog, if you keep out of his track, he will not turn aside to harm you. Much more to be dreaded are those who have certain delusions, and secretly harbor murderous intentions. One deluded mortal will kill others to protect himself from fancied assaults, another from ideas of conspiracy. It is safe to assume that any man with delusions of persecution is dangerous. Certain they are wronged, they take to defending themselves. Of such stuff are the assassins of Presidents and Royalty often made. Some hear voices telling them to act; a father, Abraham-like, to offer up his son; a mother, her children to save them from sin. Some think they are God, and so have a right to take the life they gave. All inspired patients are dangerous. Often these are the quietest of cases, and you are deceived. They will lay careful plans, and make the attempt only when they are sure it will succeed. Dr. Metcalfe received a fatal stab from a weakly old man, who was privileged to go in and out as he pleased at Rockwood, and of whom a city doctor had said he was not more insane than many who walk the streets. Yet this patient carefully made ready a knife to slay the doctor, because he imagined him one of a gang of persecutors.

Homicide may also result from a patient's having a morbid desire to kill, or during an attempt to escape, or it may be an impulsive act. Homicidal assaults are best guarded against by having your patient suitably occupied, by judicious super-

vision, and plenty of help at hand to control. All dangerous tools should be kept out of his way. He should sleep by himself. When such patients are at their worst, you had better keep anything out of their way that could serve as a weapon. Even chamber utensils may have to be withdrawn. There was a dent of thrilling depth on a door in Dixmont, when I left there, made by a ragged-edged fragment of crockery at a spot which my head stood in the way of but a second before it was hurled by an irate woman. The circumstance also made some impression on me, hence this warning. Again we say, learn all you can about each patient so as to be on the alert if homicidal tendencies exist. Vigilance is the best preventative. Be sure to warn all against whom the patient has dislikes or delusions. When unusually irritable, it may be well to have the patient remain in bed away from others. You may break up a quarrel by taking one of the participants off to help you at something, or other artifice.

Some patients who stop short of violence may be constantly restless. In the insanity of old age this is often the case, and combined with bodily frailty, they are exposed to accidents. This restlessness may exhaust them so that they should be kept as quiet as can be. The night care of these senile cases which are often treated at home is troublesome, for they are poor sleepers, and apt to wander at night. Rather than struggle with them, let them get up occasionally and go about, if you can keep them warm.

In the violent, the suicidal, and others, the question of mechanical restraint may arise. By that is meant the use of some sort of apparatus to inhibit muscular movements. In days not yet olden it was thought necessary to use, on slight provocation very often, cribs, leather belts and muffs, buckles and irons. Occupation, improved environment, and above all the educated nurse have so done away with it, that to-day in progressive hospitals it is conspicuous by its absence. There are volumes of proof that patients do better without it. The mortality from acute insanity has been lessened, and the comfort of those who survive promoted. I am proud to say that Canadian Asylums are in the van on this continent as regards the non-restraint system of treatment. Cases may crop up when it cannot be dispensed with in a mild form,

especially if the patient be treated at home; but they grow fewer daily. It would be better to send such cases to the hospital, where there is more help, and they are more likely to get along without resorting to its use. Patients fume and fret so under mechanical restraint that it increases exhaustion and they are as apt to get injured with it as without. The effect on ourselves is also bad. When we tie a man up like an animal it is harder to regard him as a patient. Our finer feelings are benumbed by such practices.

Manual restraint, the laying on of hands, is preferable when some forcible control is necessary, as it may be at times to protect a patient from himself or others from him, to prevent improper acts or wearing restlessness. In hospitals a nurse may sit by an unruly patient for hours. If you employ this judiciously without anger or irritation, a patient needing it will rarely harbor a grudge against you, and good may result. Acute excited cases that must be held a great deal do not usually continue long in this way. They go on either to recovery or exhaustion.

Seclusion is another form of restraint, and means shutting up a patient in a room by himself for his own or others' good. The need for it cannot occur often in cases that may be kept at home, though in hospitals it is occasionally resorted to on account of disorderly conduct, etc. The objections to seclusion are the dangers of suicide and of increasing wayward-ness.

The question of restraint, of any kind is quite a live one and most hospitals now boast of having reduced it to a minimum. But you must remember that it has not been altogether banished, nor can it be. All asylum restriction is restraint. Custodial care is one of the advantages of insane hospitals. You will be called to a case of insanity partly for the same purpose. Your presence will mean that the patient is deprived of at least some of his liberty, for not many can be left to do as they like in all things. However, no more restraint should be applied than is absolutely needful. It is a harsh measure at best, and whatever form it takes it must be used with a single eye to the patient's benefit, and never to save your own exertions. Many patients feel it keenly, for over-sensitiveness is another symptom you may encounter.

While patients should have all the liberty possible, you must be watchful to prevent escapes which may mean a suicide or horrible crime. Most new patients want to get away from a hospital, but some are also as prone to get away from home prompted by delusion or dislike.

No form of punishment should be tolerated with the insane, and restraint should never be so abused. Punishment is the infliction of pain for a crime or fault. The words and deeds of the insane are due to disease, and are therefore not faults. Partially responsible they may be at times for their conduct, but none but God can judge in how far they are responsible.

Moreover, punishment would have no control over most patients. You may sometimes use with discretion such motives to self-control as the denial of some luxury as tobacco for petty offences. But necessaries, such as food, should never be withheld. Trifling rewards may be justifiable.

(To be continued.)

AFEBRILE TYPHOID FEVER.*

By ROBERT WILSON, M.D.,
Professor of Pharmacology and Therapeutics, University of Bishop's College, Montreal.

"Cases of typhoid fever which run an afebrile course are reported. I myself have not seen such a case."—W. Osler. In the face of the guarded statement of the eminent authority quoted, it behooves one to be extremely cautious, and to collect all the collateral evidence available, in dealing with a case of supposed afebrile typhoid. Yet at the outset I have to admit that the scientific proof is wanting in three important particulars: first, Ehrlich's test of the urine was not used, for the reason that my sulphanilic acid was finished, and I neglected to obtain more; second, Widal's serum test had not been brought to my attention at that time; and third, the stools were not examined microscopically—three omissions that would not have occurred in hospital practice. The case, however, presented such a

* Read before the Montreal Clinical Society, November, 1896.

clinical picture of a typical typhoid attack of moderate severity, that I am tempted to report it.

E. W., aged 30, brass finisher; first seen Oct. 13, 1896, complaining of pain in right hypogastrium and left side. Present illness commenced nine days previous to my visit (*i.e.*, Oct. 4), with headache, lassitude, pains in the back and side, stomach felt upset, appetite failed, and sight of food was repulsive. Slept well,—in fact, was drowsy all day, but sleep brought no refreshment. Took some opening medicine, but frontal headache and pain in left side persisted, and finally had to give up work on the 13th. He thought he must have caught cold, and tried to get a good sweat, but failed.

When seen on the 13th Oct., the appearance was typically typhoid. Face dull, eyes heavy, forehead drawn, tongue coated white with raw red edges, but large and moist. Abdomen tympanitic on right side, duller on left side, gurgling distinct in right iliac fossa, with marked tenderness on pressure with flat hand. Spleen enlarged and felt at margin of ribs, dullness extending up to 8th rib, axillary line tender to pressure. There was a profuse eruption of raised papules discreet, from a mere point to a little larger than a pin head, bright rose-red, inclined in places to be semi-pustular, disappearing on pressure (except latter), coming out in successive crops (marked). Patient says they were there two days previous to my first call (*i.e.*, October 11th, 1896). Particularly profuse on abdomen, tapering off towards flanks and upper chest. Temperature 98⅗ (two thermometers), pulse 64, respiration not counted, but apparently normal. Examination of lungs and heart negative, no cough, never felt feverish or hot, but simply dull and stupid, with the pains in right iliac region and left side. Bowels constipated. I placed the patient on liquid diet for four days, and gave no medication, anxious to watch the case. The temperature and pulse did not vary a fifth of a degree. On the 5th day, the tongue becoming very foul, gave a teaspoonful of Epsom salts well diluted. Movement very free and offensive—repeated for three days till movements became loose and yellow. At the same time ordered a mixture containing dilute nitro-muriatic acid and nux vomica. On the 21st October the spots had practically all gone, and on the 25th had improved

sufficiently to be allowed up. On November 1st was allowed soda biscuits in milk, and on 4th began light food, returning to work on the 10th of November,—four weeks and six days from onset. At no time did the temperature vary more than $\frac{1}{5}$ of a degree F., although at one time three thermometers were used as controls. Whether the case was one of genuine typhoid, or one of those obscure cases of gastro-intestinal disturbances associated with obstinate constipation, in the absence of bacteriological proof, is hard to say; the clinical condition was that of typhoid, whether induced by the poison of Eberth's bacillus, is another matter. Absence of proof does not necessarily negative the possibility, though it undoubtedly invalidates it for statistical use.

PECULIAR TEMPERATURE IN A PARTURIANT.*

By ROBERT WILSON, M.D.,

Professor of Pharmacology and Therapeutics, University of Bishop's College, Montreal.

I submit the following case, not so much because there is an unusually low temperature to report, as to emphasize the importance of bacteriological examination whenever there is a rise of temperature in the puerperal patient at all resembling septic infection.

I was engaged early in June of this year to confine Mrs. J. H., a healthy primipara of 24. Accouchement due about the 26th of August. At 11.30 p.m., July 31, was called by the husband, who stated his wife had been very ill all afternoon. At 12 p.m. reached the house, and examined the patient, having taken the usual precautions as to asepsis, etc., and found the head well down on the perineum, preceded by the intact membranes! At 12.30 p.m. delivered a well-formed healthy female child of about six pounds. Placenta expressed by Credé's method in twenty minutes, complete, without hemorrhage, and perfectly normal. For the next four days the case progressed well, temperature exactly 98 2-5 pulse 80, respirations 24, no pain, no tympanites, breasts in good condition, milk appearing the 3rd day; bowels moving freely, no tear of cervix or perineum; lochia abundant, and

* Read before the Montreal Clinical Society, November, 1896.

normal; patient feeling well, and anxious to be up. I did not visit on the 5th, 6th and 7th days, convinced that things were progressing favorably. On the 8th day was hastily summoned by husband, wife said to be very sick. When seen, the patient was suffering no pain, but complaining of weakness and prostration, and great heat (it was the commencement of the hot spell for which the first two weeks in August will be remembered). Her temperature was 101 4-5 F., pulse 150, resp. 26, lochia almost stopped. Hot poultices and hot creolin douches ordered. Ninth day, the temperature was 104 3-5, pulse 155, fairly good, compressible, regular. Patient apparently very weak, no tenderness or pain, no chill, lochia returning slightly, urine acid, 1028, no sugar or albumin. A rigid examination of patient, bedroom, cellar, yard, etc., revealed nothing unhygienic. Patient extremely nervous and irritable. On the same afternoon (9th day) made a vaginal examination with the speculum; found a virgin os, and everything normal. Took four smear cultures with a sterile glass rod from the internal os, and then curetted with the sharp curette. It brought nothing away, and obtained the characteristic hard grating sound all over the uterine cavity On the 10th day, temperature still 104 2-5, pulse 155, resp. 26, lochia scanty; poultices continued. The slides examined by Dr. A. J. Richer showed a few scattered staphylococci, and some diplococci, but no streptococci. Douches continued. Evening temperature 101 2-5, pulse 150, resp. 24. Next day (11th) consultation with Sir W. Hingston, and changed nurses. Result of consultation negative, but the patient steadily improved until the 13th day, when the temperature registered 96 1-5° F. Thinking it an error of nurse, verified it myself. Patient up on the 16th day, feeling a little weak, temperature still 96 1 5. Twenty-six days later, temperature 97°. F., pulse 82, resp. 20, feeling well, eating well, assisting in housework (temperature always taken in mouth under the tongue). Have not seen patient since, but hear she is well. Points of interest are:—(*a*) rise of temperature without appreciable cause; (*b*) absence of rigors, and appearance of temperture chart assuming the bacteriological examination to be in error; (*c*) persistent high temperature, without much bodily discomfort; (*d*) drop by crisis in 48 hours to subnormal; (*e*)

and persistance for 26 days of a temperature from 104·5° to 1° below normal. Three explanations might be offered: (1) that it was a septic intoxication; (2) that it was due to the great heat prevailing, and partaking of the nature of heat-stroke; (3) that it was nervous in origin. Reviewing the facts of the case, I am inclined to the latter view. I attach temp. chart.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF
J. BRADFORD McCONNELL, M.D.,
Associate Professor of Medicine and Neurology University of Bishop's College, Physician Western Hospital.

THE MEDICAL TREATMENT OF TIC DOLOUREUX IN CONNECTION WITH THE QUESTION AS TO OPERATION.

This interesting paper by William Ewart, M.D., F.R.C.P., appears in the *British Medical Journal*, Nov. 21st, 1896.

He first speaks of the tendency to at once resort to operation in this disease, rather than trust to medical treatment, which would be right if all cases were due to mechanical pressure or overgrowth of fibrous tissues; but some constitutional cause exists apart from these. Surgery has shown that the pain is in the peripheral sensory function as much as with the central, and that the gasserian ganglion is the bridge, the cutting of which permanently arrests the pain, hence it is not mainly central.

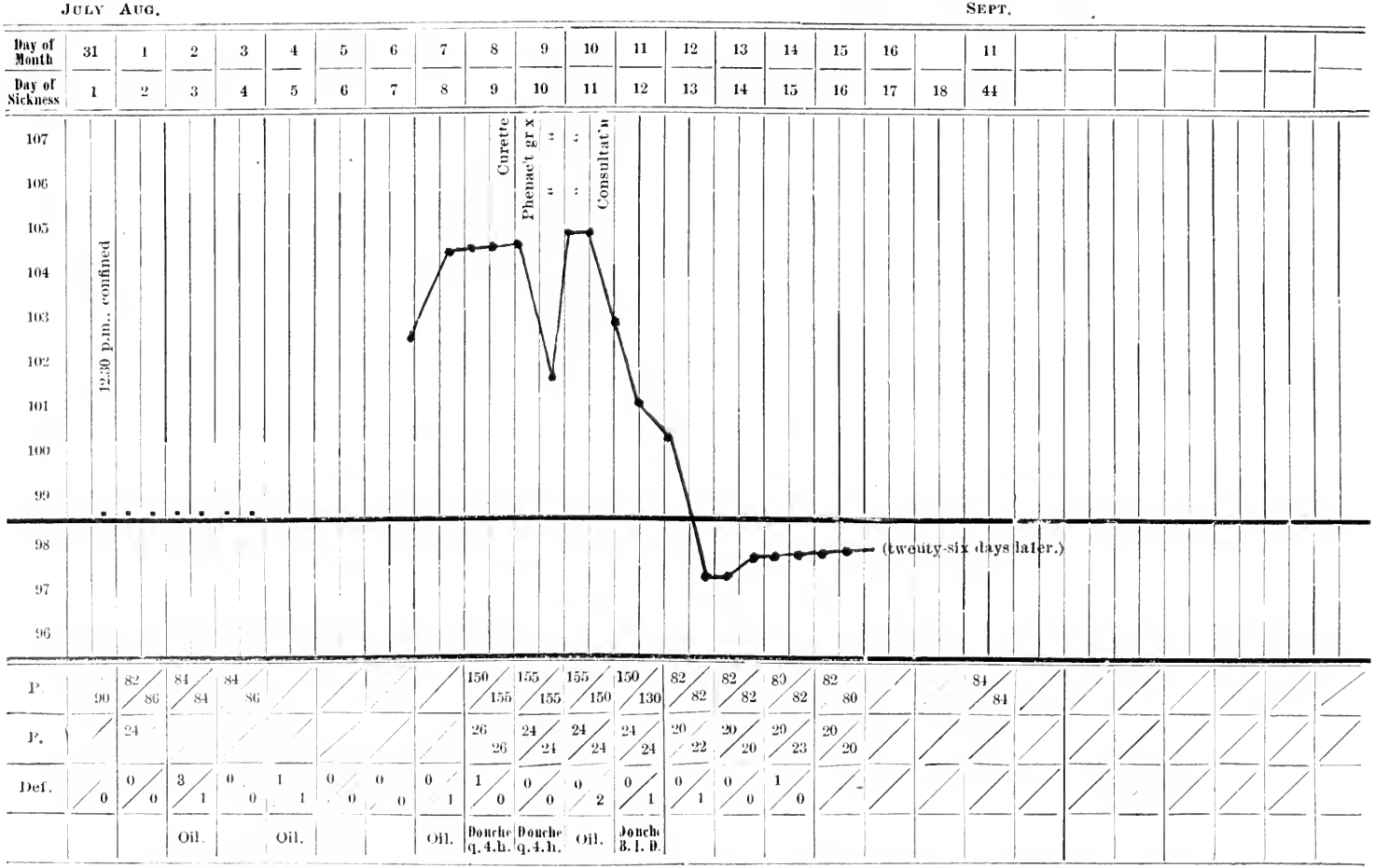
The constitutional cause is, he thinks, of a gouty nature. He classifies cases into: 1st, those obviously gouty; 2nd, those in which the gouty association is rendered probable by the family as well as the personal history; 3rd, those in which the family history is unknown, but the previous history includes visceral affections analogous to those we recognize as gouty, and in which the personal aspect also speaks of gout. These three groups probably make up a large proportion of cases; a 4th group contains cases not obviously connected with gout, except those due to syphilis and growths.

It is the exception for articular symptoms to be associated with the neuralgia. There is present rather a gouty tendency recognized by the healthy and ruddy complexion, the presence of Heberden's nodules, or of tophi in the ears, a pre-

MRS. J. H.

Confined July 31, 1896, 12.30 p.m. (GIRL.)

Nurse—M. BULLOCK.



PHENACETINE—Grs. x. T I D on 10th and 11th days. Hot creolin douches on 9th, 10th and 11th days, q. 4. h., then twice daily till 16th day.

vious history of gravel or stone, a long history of gastric intestinal and hepatic disturbances of a nervous type; the abiding strength of the pulse, which strikes us no less remarkable than the resistance of the patient to the effects of long continued pain and insomnia; the adverse influence of alcohol and of certain forms of diet; the presence of uric acid sand in the urine; the distant influence of gout is evidenced in the inherited irritability of the nervous system and perversion of the juices.

In regard to treatment, tic is not benefited by the remedies found to be beneficial in neuralgia, regard must be directed to the following indications: sedative, restorative, alterative and tonic.

Sleep is to be procured by chloral and morphine, rest in bed, and alimentation, in which a vegetarian diet, with moderate nitrogenous additions, is recommended; alcohol is to be avoided. The alterative treatment consists of such remedies as the salicylates, benzoates, sulphur, chloride of ammonium and taraxacum, and the salts of iodine and mercury, especially the combination of 20 to 30 m. of solution of per-chloride of mercury with 6 to 10 grains of iodide of potassium, or the iodide alone, with 15 to 30 min. tincture of iodine which promotes its action. Guaiacum is also recommended. Tonic measures are the vegetable tonics, and especially muscular exercise. Massage should succeed the first long rest in bed, then resistance and Swedish movements, also salt baths and climatic treatment. All his cases improved under this treatment, and operative measures were rendered unnecessary, which may be permanent, or, in the case of relapse, a similar course may again succeed.

THE PSYCHICAL NERVE CELL IN HEALTH AND IN DISEASE.

Dr. H. J. Berkley in the *Johns Hopkins Bulletin* (No. 65) publishes a paper on this subject. The psychical cells in the cortex of all mammals are of two varieties, small and large; the primordial process branches like a tree towards the surface, and an extension from the basal portion resembles the roots. The uppermost branches communicate with the numerous nerve fibres that arise from the medullated masses at the foot of the convolution. The dendritic branches of the neurons have lateral gemmu'æ resembling a round-headed pin. The mass of branching nerve fibres around these end in little bulbs, which come into very close approximation with the globular ending of the gemmules; external impressions pass from the former to the latter, creating thought or motion.

The axon from the basal end also gives off collateral branches, which return toward the cortex and connect the

bulbar endings of one cortical psychical neuron with a number of others, and thus the whole cortex becomes intricately united. Dr. Berkley has studied the action of certain poisons on these cells, especially alcohol, ricin and bacterial toxins which develop in hydrophobia ; all lead to loss of function and parenchymatous degeneration. The protoplasmic changes are first observed in its bulbous endings of the dendrites, the gemmules fall off, and then the branches disappear, and finally the corpus and axon of the cell ; the axon is the most resistant portion, the nuclear substance and nucleolus also become altered, and the cell can thus no longer communicate with others, or properly perform its functions, and inco-ordinate motor impulses will result.

These changes explain the dementia and mental obtundities which follow infectious fevers. In chronic insanities, dementia and idiocy, fewness and atrophy of the branches and gemmules was found by him to be present.

THE BLOOD IN CHOREA.

Dr. Charles W. Burr reports in the *University Medical Magazine*, December, 1896, the results of the examination of the blood in thirty-six cases of Sydenham's chorea.

The percentage of hæmoglobin and the number of red corpuscles only are given. This investigation would be of more value if other characters of the blood had also been observed, such as the enumeration and character of the leucocytes, percentage of fibrin, etc.

In summarizing, he states that patients are often assumed to be anæmic, because pale and scant of fat, sensitive and precocious ; but this is not sufficient evidence of anæmia,—an examination of the blood is necessary.

He gives the following conclusions :—

The blood is rarely absolutely normal in amount of coloring matter and number of red corpuscles during an attack of chorea. There is usually a moderate diminution in the hæmoglobin, and a relatively still smaller decrease in the number of red corpuscles. The anæmia is therefore chlorotic in type. There is no relation between the severity of the chorea and the severity of the anæmia. When the anæmia is severe there is usually some complication competent to explain it. All things considered, we feel justified in believing that anæmia is not an immediate, direct, exciting cause of chorea, and but infrequently a predisposing cause In the great mass of choreas with very moderate anæmia, it most probably is a result of the chorea, a secondary condition. As to the mechanism of its production, we know no more than we do of the method of action of other profound functional nervous disturbances, for example, emotional shock in reducing the

blood count,—namely, nothing. In the cases caused by bacterial poisoning, which so far have not been proven to be numerous, it is possible that the anæmia is toxic.

There is one form of anæmia the existence of which cannot be shown by any means at present at clinical command, —namely, the condition in which there is an equal decrease in all the elements of the blood, solid and liquid, a quantitative anæmia. This may exist and be the cause of some cases of chorea, but it is not susceptible of proof. Against the probability of such causation is the fact that hemorrhage due, for example, to trauma (which, of course, causes a temporary quantitative anæmia) is not followed by chorea, and the improbability that a quantitative anæmia due to congenital or internal causes would be cured by rest in bed for a few weeks, regulation of diet, and the administration of a small amount of arsenic, a method of treatment of chorea which so often is followed by recovery.

IS THERE A URIC ACID DIATHESIS?

In spite of multitudinous researches into the nature and causation of gout and allied manifestations, so much obscurity remains, that inquirers on fresh lines are welcome, even when one is unable altogether to acquiesce in their "statement of claim." To Dr. Haig, we believe, is due the credit of having been the first to call attention to the fact that large quantities of uric acid are directly introduced with and in the ordinary food of man. This may be eliminated in the urine, failing which, over-saturation of the blood is followed by the deposition of the acid in the tissues. This is a distinct advance in our knowledge of the pathology of gout, and what may be termed uric acid manifestations; but Dr. Haig proclaims that virtually *all* the mischief-making uric acid is thus introduced, the quantities produced in the normal healthy human body being inadequate to the production of morbid symptoms. He admits, however, that uric acid may be, and indeed is, normally produced in the normal organism, in the proportion of 1 part to 33 of urea. He believes the ratio to be unalterable, but this can only be proved by prolonged observation by independent observers. In any event, the fact that uric acid can be elaborated in the human body renders it possible, if not probable, that under particular conditions the output may be so increased as to constitute a pathological condition. We are not concerned to deny the importance of discarding any avoidable addition to the proportion of uric acid already present in a given case, but it has not yet been conclusively proved that it is impossible, even in the absence of alimentary uric acid, for sufficient quantities to be formed to give rise to a deviation from

health. All animal tissues contain uric acid or substances of the xanthin group, and the alkaloids of tea, coffee, and cocoa are also xanthins, and therefore to be avoided. The ideal diet of a person who would still be currently described as suffering from the effects of the uric acid diathesis would have to be restricted to milk and cheese, bread stuffs and cereal foods and the pulses, such as peas, beans, lentils and the like. The exclusion of articles of food containing uric acid, in association with the administration of drugs which are recognized to facilitate the solution of this intractable substance, allows of the excretion of arrears of uric acid, and when the surplus has been disposed of the effects disappear. *Sublatâ causâ tollitur effectus.* There are, however, a number of facts which do not fit in with Dr. Haig's hypothesis. Stone, for instance, is very common in certain parts of India, where the natives nevertheless live exclusively on just such a diet as that recommended by him by reason of its freedom from uric acid constituents. Then, again, certain subjects, especially children, continue to excrete large quantities of uric acid in spite of the most careful dieting, and in certain diseases, such as leucocytnæmia for instance, the excretion is always largely in excess, whatever the diet. The first thing to do in elaborating such a hypothesis is to obtain a general agreement as to the facts on which it is based, and sufficient time has not yet elapsed since these ideas were promulgated for this to have been accomplished in respect of the conditions under which uric acid production is modified by diet. It is quite possible, as suggested by one of the speakers during the recent discussion at the Medical Society of London, that there are two distinct conditions which have as a common factor an excessive excretion of uric acid, one in which the over-production is the result of dietetic errors, and is consequently readily amenable to dietetic measures, and a second in which the over-production is due to a hereditary defect in tissue metabolism, and is only modified by diet to a limited and variable extent. If this be so, the term diathesis will have to be restricted to cases coming into the second group.—*Medical Press*, Dec., 1896.

THE ESTIMATION OF THE SIZE AND SHAPE OF THE HEART BY THE ROENTGEN RAYS.

H. Campbell Thomson, M.D., M.R.C.P. London, Medical Registrar to the Middlesex Hospital, in the *London Lancet*, says:

It has now become an accepted fact that the outline of the heart, and to some extent its movements, can be seen by the aid of the Roentgen rays and fluorescent screen. A shadow of the heart may be photographed, but this does not

so readily lend itself to clinical purposes, on account of the time which is necessarily taken up with the exposure and development of the picture. It may be said that with the method of percussion at the disposal of the physician it is not necessary to use anything else, but one has only to read the literature on the Schott treatment, and it will at once be understood how various are the discrepancies which arise between those who, it must be acknowledged, have both skill and experience. It is on account of these differences of opinion, which must always occur, owing to the numerous personal factors which enter into percussion, that any further means of corroboration must be welcomed, not necessarily to be held up dogmatically as superior to everything else, but merely to be regarded as an additional clinical fact, which may be weighed with the others in judging of the total aspect of the case. Sir William Broadent, in criticizing auscultatory percussion, says : "To ascertain the position and dimensions of the heart, we must continue to employ the sober method of carefully collating the evidence afforded by palpation, percussion and auscultation." To these methods I would now venture to add that of vision. The difficulties in many cases of irregular outlines, of dullness produced by cardiac aneurisms, aneurisms of the first part of the aorta, etc., cannot fail in many cases to be cleared up by a view of the shape of the organ, and certainly thus take the place of surmises. A little practice will enable a permanent tracing of the cardiac outline to be easily taken, and as the ribs can, of course, be seen, a few extra lines will give any relations that may be required. If desirable, a metallic button may be fixed over the nipple, so as to afford a further landmark. The method that I have at present is as follows : A piece of white paper is fixed to the back of the fluorescent screen. This, of course, in no way affects the rays, which pass through it and are seen as usual on the screen. The screen is then put in such a position that a clear outline of the heart is seen, and this outline is then traced on the paper (which is fixed to the back of the screen) by a pin introduced between the screen and the chest of the subject. A metallic pen or pencil should be used for tracing purposes, as it shows up well, and its position can easily be seen as to whether it is on the edge of the shadow or not. Also the marker should be of a flat shape, as it is then more easily introduced between the screen and the chest without shifting either. I hope shortly to be able to produce some tracings of diseased conditions taken by this method, as hitherto my attention has been chiefly given to normal hearts, as it is necessary to become acquainted with the little technical difficulties which must always arise in a subject like this. In concluding this preliminary communication, I must express my best thanks to Dr. Sidney Coupland for kind suggestions and help in my experiments.—*Medical Examiner.*

THE TREATMENT OF RESPIRATORY DISEASES BY WARM BATHS.

Dr. E. LEMOINE makes use of baths of a temperature of 95.8° to 100.4° F. The tub should be large enough for the child to be immersed to his neck, in order that local chilling may be avoided. To prevent congestion of the face and head, which is readily produced during a warm bath, especially in those suffering from fever, a folded napkin, wet in cold water, is placed upon the head, and renewed as often as it becomes warm. The duration of the bath should be about ten minutes, rarely more. If the child is feeble, its pulse should be carefully watched in order to avoid syncope. If necessary, a tea-spoonful of stimulant or a dose of caffeine may be administered before the bath. As soon as it is finished the patient is wrapped in a woollen blanket, rapidly rubbed, and left to sleep well wrapped up in bed for a half-hour. After this a woollen shirt is put on, in which he remains until the next bath. Baths with mustard are valuable on account of their revulsive action, and are prepared by placing eight ounces of powdered mustard in cold water in the tub, which is subsequently filled with warm water. The cold compresses to the head are, in these baths, imperatively necessary. The bath should be continued until the skin is rose-tinted. An inconvenience is the painful nasal and ocular irritation of both patient and assistants, which may be obviated by placing a sheet, through which the head of the patient emerges, over the tub. During eight years, sixty-three patients have been treated without a death—fifty-five children and eight adults. Of the children there were of simple bronchitis, 9; capillary bronchitis, 5; lobar pneumonia, 3; broncho pneumonia, 38. Of the adults there were of pneumonia, 3; severe grippal congestion, 3; general bronchitis, 2 cases. From these baths the revulsion which is obtained affects the whole body, carrying the blood to the surface far more effectually than any local application. Auscultation shows that the râles are larger, more plentiful, and the mucus becomes more fluid, and in the case of pneumonia, the affected lobules more permeable to air.—*Journal des Praticiens*, 1896, No. 39, p. 612. *American Journal of Medical Sciences.*

GOUTY HEART.

TH. SCHOTT (*Berlin. klin. Wochenschrift*, 1896, Nos. 21 und 23) (*American Journal of the Medical Sciences*) is a firm believer in the existence of gouty affections of the heart though admitting that these are less rarely observed in pure cases of gout than in the irregular forms. In the concretions in sclerosed aortic valves, urates can sometimes be demon-

strated by the murexid-reaction, along with calcium phosphate and carbonate. More frequently gout causes valvular lesions indirectly as the result of sclerotic changes, but in this process other factors, such as abuse of alcohol or tobacco, lues, or over-eating, assist. Gout is more prone to cause motor and sensory cardiac neuroses. Beginning with palpitation, soon followed by tachycardia, dilatation of the ventricles develops with all its consequences. The sensory disturbances vary from mild, pricking pain in the region of the apex or more severe radiating pains to paroxysmal pain, with tenderness on pressure over the sternum or the base of the heart. The latter condition is often associated with symptoms of heart-weakness, and can lead to angina pectoris. The prognosis in pure cases, not too far advanced, is good under proper treatment.

THE BLOOD IN TUBERCULOSIS OF THE BONES.

The *Boston Medical & Surgical Journal* contains a paper on this subject by Dr. John Dane, of Boston; the following are his conclusions:—

(1) Most cases of tuberculosis of the bones and joints do not decrease the number of the red corpuscles in the blood. (2) They do, however, affect the percentage of hæmoglobin, giving rise, in fact, to a mild degree of chlorosis. (3) The leucocyte count seems to bear no direct relation to the temperature. (4) High counts, especially in hip disease, point to the probability that there is or shortly will be an abscess formation; but low counts do not preclude the presence of abscess, especially in cases of long standing. (5) When, in connection with a low leucocyte count, an abscess is found to exist, the pus from it is sterile, and the case is generally one of long standing. (5) In the presence of an abscess, a low leucocyte count generally indicates the absence, and a high count the presence, of a secondary infection with pyogenic organisms. (7) Cases in which, at the primary operation, the pus has proved sterile, show an increase in the leucocyte count when the wound becomes infected with pyogenic organisms. (8) High leucocyte counts do not always affect the differential count. (9) Cases with a traumatic origin are generally accompanied by a high leucocyte count, and run a more severe course. This is especially shown in cases of hip disease. That more of the cases which entered with a developed abscess did not give a definite history of trauma is due no doubt to the fact that the length of time the disease had been progressing had caused a lack of accurate detail at the beginning being remembered.

GYNÆCOLOGY.

IN CHARGE OF

A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. England.

Fellow of the American Gynæcological Society, and of the London Obstetrical Society; Gynæcologist to the Montreal Dispensary, and to the Western Hospital; Surgeon in Chief of the Samaritan Hospital for Women; Professor of Clinical Gynæcology in Bishop's University, Montreal.

THE TREATMENT OF DYSMENORRHŒA.*

Taking it for granted that we all recognize the fact that dysmenorrhœa is not a disease, but rather a symptom, of many and varied pathological conditions, it follows that the treatment will depend entirely upon the diagnosis of the disease. On looking over my records of three thousand three hundred cases, of whom one thousand and thirty were seen at my private office, and two thousand two hundred and seventy came to the Montreal Dispensary, I find that dysmenorrhœa is a very common symptom, almost one-fourth of all the patients complaining of it. It appears most frequently among unmarried girls, and a little less so among married women who have not had a child. Next to these in order of frequency come married women, who have had one child, and who have a scanty flow at the period; while it is also met with, but still less frequently, among married women who have had several children, and who lose profusely, and during a prolonged period of time.

These observations, which I presume correspond with the experience of others engaged in this department, are, I think, important, because they throw a good deal of light on the causation, and consequently upon the treatment of the symptom. Why do unmarried girls suffer in the greatest number from menstrual pain? Evidently because there are more of them than of any other who are suffering from stenosis of the os uteri. When these same girls become married women, the majority of them become pregnant, then menstruation ceases for at least nine, but often for eighteen or twenty-four, months, and when at the end of that time it reappears, it flows through a widely opened uterine canal. There is another reason, however, why unmarried girls suffer more than married women who become pregnant, and I mention it, as it has an important bearing upon treatment, namely, because at each menstrual period a congestion of the ovaries, tubes and uterus takes place, which is generally relieved by the flow; but in many women a little congestion remains over unrelieved, to be

* Read before the Medico-Chirurgical Society of Montreal, Dec. 18, 1896.

added to the next monthly one, until little by little the external layers of the ovary become thickened, and the mucous membrane lining the uterus becomes swollen, so that the canal becomes blocked up. In married women who are childless, either because their husbands are sterile, or because they resort to measures for the prevention of pregnancy, this congestion becomes still greater than in single women, because there is added the more frequently repeated congestions of intercourse. Pregnancy cures the majority of cases not only of stenosis of the uterus but also of congestive dysmenorrhœa, because as a rule it puts a stop alike to menstruation and the repeated congestions accompanying it and intercourse. Pregnancy therefore may be called nature's remedy for dysmenorrhœa, because it both dilates the uterine canal, and gives the ovaries a more or less complete rest. Remember, I do not say that marriage is a cure for dysmenorrhœa ; on the contrary, marriage without pregnancy often makes it worse. We now come to those women who, though married, and mothers of children, still continue to suffer at their periods. What is their dysmenorrhœa a symptom of ? Many of these women I find by my records have never suffered before their marriage, but only since their first child ; in many of these cases a careful examination of their histories will reveal the fact that at their marriage or at their confinement, or soon afterwards, they acquired an acute septic or gonorrhœal endometritis, which subsequently has become chronic, leaving the mucous membrane of the cervical canal swollen with distended glands which block it up, or the tubes and ovaries become diseased enough to make menstruation painful without in every case preventing conception. The fourth and smallest class of cases losing profusely and suffering severely, if less acutely than the former, will generally be found on examination to be affected with some form of displacement, generally a backward one, which seriously interferes with the circulation of the uterus. The blood is pumped into it by the arteries, but cannot get out of it by the veins, and so the generative organs become swollen and sensitive, the cervical canal becomes blocked, and in these cases the discharge, which is pure blood instead of debris of mucous membrane, coagulates, the clots having to be expelled by means of what might almost be termed labor pains.

Besides these four large classes, I find many scattered cases, in which the pain was due to other causes, such as fibroid tumors blocking up the internal os, and the closure of either the uterine end or the fimbriated extremity of the fallopian tube, or both, not without interest, and of the treatment of which I shall speak later on.

What is the best treatment of obstructive dysmenorrhœa

due to stenosis of the cervical canal? Shall we open it up by means of laminaria or tupelo tents? Or shall we place the patient under an anæsthetic, and rapidly dilate the cervix with Hegar's or Hank's graduated sounds, or with Wylie's or Goodell's dilators? Or shall we resort to the relaxing and dilating effects of the negative pole of the galvanic current in order to make a free passage for the ovarian, tubal and uterine secretions? Or should we first try the effects of drugs, especially in the case of young girls?

My own procedure in cases of dysmenorrhœa is generally as follows: 1st. To improve the circulation of the uterus by curing constipation, and ordering exercise in the open air and sunshine, at the same time correcting errors in diet and dress. In addition to these hygienic measures, I have found great satisfaction from the use of iron, strychnine and phosphoric acid. In my experience, about half the cases of dysmenorrhœa are cured without any surgical treatment or any other local treatment whatever. As many of the patients are virgins, I do not even make an examination until the above treatment continued faithfully for a couple of months has failed. It seems to make no difference whether the patients lose very scantily or very profusely; in both cases they have been either cured or greatly relieved. I have often asked myself the question: How does this treatment cure the pain? And my explanation is that a toned up, well fed uterus, well fed both as regards its nerves and its muscles, will be less liable to suffer from obstructing flexures, while the starved ovaries will be less likely to suffer at the menstrual flow from neuralgia, which I define as the cry of the nerves for better nourishment. 2nd. To relieve the spasmodic contraction of the sphincter of the internal os by ten grain doses of acetanilid repeated three times a day for one or two days, although sometimes a single powder is all that is required. In employing this drug, it is advisable either to administer it in strong coffee or weak whiskey and water, or to combine citrate of caffeine with it, as I have occasionally witnessed some alarming effects on the circulation when this precaution had not been taken. Although acetanilid does not cure, I cannot recollect a case in which it has failed to relieve, although I have employed it in over a hundred cases. There are other drugs of considerable value, although they sometimes fail even to relieve; among these, the best, because quite harmless, I consider viburnum prunifolium. In the form of liquor sedans prepared by Parke Davis, I have found it to help about half of the cases; the same may be said of Hayden's viburnum compound, the cost of which, however, is prohibitive. But in speaking of the medical treatment of dysmenorrhœa, I wish to warn my

brethren against two drugs of surpassing danger, namely, opium and alcohol. I have seen some sad cases of shipwrecked homes and blasted futures, in which the drink or opium habits were acquired by the thoughtless though well meant prescription of opium or morphine, or the advice to take a glass of alcoholic liquor. These cases rarely consult the doctor again until when it is often too late to save them from the thraldom of these drugs, except by incarcerating their victims in an asylum for inebriates and opium eaters. Compared with the treatment by opium or alcohol, I consider that by surgical operation to be immeasurably to be preferred. There is another means of relaxing spasm which at least deserves mention, namely, sitting in a bath of very hot water for half an hour, and splashing the water on the lower abdomen. I have learned this some years ago, like many other good things, from our Nestor, Sir William Hingston, since which I have often employed it with advantage. Hot douches and rest in bed have helped a few cases, but I have not known this alone to cure any. 3rd. If these measures fail, we must turn, although in the case of unmarried girls with reluctance, to some treatment which entails examination of the uterus. The most effective, although the simplest and least dangerous among them, I have found to be the negative pole of the galvanic current. Five years ago I published in the *American Journal of Obstetrics* a report of nine cases of severe dysmenorrhœa cured by this means, which excited considerable comment throughout the United States, as was evinced by the large number of letters I received asking for further details in carrying out the treatment.

As some of these patients had been treated in vain by many other methods, including rapid dilatation, which in one case was repeated twice, and as three of them subsequently bore children after periods of sterility as long as ten years after marriage, doubts were freely raised as to the accuracy of my observations. Since then, however, many other independent observers, including Dr. William Gardner of Montreal, have assured me that their results had been equally surprising. It is due to Dr. Gardner to say that he was obtaining these results before I knew anything about electricity for dysmenorrhœa, although I am not aware of his having reported them. Since reporting those nine cases I have treated nearly a hundred others by this means, which, with a few exceptions, were equally satisfactory. I will not occupy your time in describing the method now, as I have done so in minute detail in my article on "Disorders of Menstruation" in the International System of Electro-Therapeutics, which was published three years ago by Davis of Philadelphia. I will only say that it is marvellous to see how easily a sound will

glide into the uterus when the negative wire is made to touch it, when that same sound cannot be made to enter even by force before the electrical connection was made. If there is anyone who doubts it, I will gladly demonstrate it for him at my office, if he will provide me with a patient into whose uterus he will admit that he could not pass the sound. In the majority of cases the second or third period following the treatment comes on without the patient's knowing it, while in the cases in which it fails there probably exists some disease of the appendages, as I was able to demonstrate in several of them in whom I eventually had to open the abdomen when the tubes were found occluded at one or both ends, and the ovaries diseased.

4th. For those who are not conversant with the electrical treatment, or who are not supplied with the simple outfit necessary for its use, rapid dilatation comes next in value after therapeutic measures have failed. I will probably prepare a list of cases I have so treated, with their results, for the British Medical Meeting; but until I have collected all the cases, I can only estimate approximately that I have treated about three hundred in this way, with about 100 failures. With the exception of five or six of them, in which Hegar's conical dilators or bougies were used, all were dilated first with Wylie's and afterwards with Goodell's dilator. This is not the safe and simple operation that one might suppose it to be. The patient must be profoundly narcotized in order to paralyze the circular muscles in the cervix; and unless you are in a position to carry out absolute asepsis in the minutest details, it were better not to attempt it at all. Among the untoward results I have seen are general peritonitis and death; one perforation of the posterior wall of the uterus, which, thanks to asepsis and subsequent laparotomy and suture, caused no ill effects; several considerable lacerations of the cervix, and quite a number of cases of quiescent pelvic peritonitis relighted by the manipulations. The rather common practice of using the dilator in the office without antiseptic precautions cannot be too severely condemned. When dilatation is performed it must be done thoroughly, at least half an hour being spent in separating the blades to a width of an inch and a half, and all the while a stream of sterilized water should be allowed to flow over the field of operation. Dilatation should in every case, in my opinion, be followed by curetting, especially of the thickened mucous membrane around the internal os, which acts like a valve over the opening and prevents the exit of the menstrual flow. The whole inside of the uterus is then to be coated liberally with a mixture of equal parts of Churchill's iodine and carbolic acid, partly as an antiseptic, and partly because it helps to cure

the endometritis which so often co-exists with and perhaps may be one of the causes of the pain.

Sometimes the dilatation and curetting either fail completely, or only relieve for the immediately succeeding period. What shall we do in these cases? My custom is to repeat it at least once more; some repeat dilatation twice. If the cervix is very long and conical, I have occasionally amputated it by Schroeder's method, and with good results. Should we employ a stem pessary in order to keep the canal open? I am entirely opposed to its use; if they are employed it must be only with the greatest precautions, the patient being kept in bed, and carefully watched for symptoms of peritonitis.

What should be our course in those rare cases which after all this treatment still remain unrelieved? My experience has been that in nearly every case which has been carefully treated during a year's time with these various measures unsuccessfully, there is some incurable disease of the ovaries and tubes which will demand their removal. I place the duration of treatment somewhat arbitrarily at a year, because on the one hand I am opposed to removing the ovaries until ample time has been devoted to other measures of treatment, and on the other I like to give my patients some definite promise of cure, as without some hope being held out they will become discouraged, and abandon treatment altogether. In only five per cent. of my cases, or about forty times, have I been compelled to fall back upon this *dernier ressort*, when on opening the abdomen I have found more than enough to explain why the case resisted all ordinary measures of treatment. In most of them the tubes were found to be bound down with adhesions, and closed at one or both ends.

In eight cases I have found a hydrosalpinx of one or both sides, and in about twenty the ovaries were sclerotic, so that the follicles were unable to rupture without great pressure. The result in all the operative cases has been very satisfactory; care was taken to tie the pedicle close to the corner of the uterus, and to remove all of the ovarian tissue, as neglect of these precautions would have caused the operation to fail to attain its object, namely, the immediate and complete arrest of menstruation. I must not forget to mention a remarkable little group of six cases of severe dysmenorrhœa, due to retroversion with fixation, the ovaries being buried in adhesions and the fimbriated ends of the tubes closed. At the urgent request of the patients who were married, not to remove the ovaries, I have in these cases carefully freed the uterus, then dug the ovaries and tubes out of Douglas' cul-de-sac, in some cases lacerating them in the process, then tearing the pavillion of the tube off the ovary and opening it up, and finally fastened the uterus to the abdominal

wall. One of these was done at the Samaritan only a week ago, in the presence of several members of this Society, who can testify to the number and density of the adhesions which were binding the ovaries down; but five of them date back from six months to two years, and are now menstruating without pain. This method has, I think, a good future, as we are coming more and more to realize that the ovaries should never be sacrificed if it is possible to save them.

To sum up my experience:—

50 per cent. were cured by therapeutic and hygienic measures, including pregnancy.

25 per cent. were cured by rapid dilatation and curetting.

12½ per cent. were cured by electricity negative pole.

5 per cent. were cured by removal of appendages.

7½ per cent. being impatient went to other institutions, where eventually most of them had the appendages removed.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Oct. 16th, 1896.

GEORGE WILKINS, M.D., President, in the Chair.

MALFORMATION OF THE HANDS AND FEET.

Dr. A. E. GARROW exhibited a child with malformation of the hands and feet, and showed an excellent skiagraph of the hands taken by Professor Callendar, of McGill University.

Dr. JAS. BELL pointed out the fact that here the usual history of heredity was wanting. No other members of the family or of former generations had been similarly affected. He contrasted this with a case exhibited by himself on a previous occasion, in which several members of one family had a similar malformation.

MOUTH CONCRETION.

Dr. JAS. BELL exhibited a large mass of calcareous matter which he had removed from the mouth of a patient under his care.

A CASE OF ACUTE HODGKIN'S DISEASE.

Dr. J. T. ARGUE read for Dr. G. D. Robins and himself a paper on a case of this disease.

Dr. H. A. LAFLEUR thought that we had been attaching too much importance to the microscopic appearances of the blood in such cases; and judging of the disease by the state of the white corpuscles, leukæmia might exist without much increase of the leucocytes, and at times where the patient had been under treatment, as far as the blood examination went, it was no longer eukæmic blood, though the other signs of the disease are present, such as enlargement of the spleen, liver and lymphatic glands.

SYPHILITIC NEPHRITIS—FATAL.

Dr. N. D. GUNN reported the following case :—

J. L., aged 25, traveller, consulted me on July 17th 1896, for swelling of the face and fullness of the abdomen, which he had noticed four days before, for the first time.

His family history was good, and his personal history revealed nothing bearing on the case, save that he had contracted syphilis six months previously, and had been under treatment ever since, taking large doses of bichloride of mercury with good results so far as secondaries were concerned, as the rash and sore throat were of the mildest type.

On examination I found general anasarca, temperature 99⅖° pulse 92, slight accentuation of the second sound of the heart. The liver seemed slightly enlarged, but was difficult to palpate owing to tension in the abdomen. The urine was acid, in consistence like thin linseed tea, of S. G. 1022, and solid on boiling.

The patient was put to bed on a milk diet with the administration of citrate of potash and digitalis. The urine in 24 hours was in amount 10 ounces of S. G. 1020, and albumin over the line marked 12 on Esbach's albuminometer ; it contained no blood but plenty of epithelial casts.

4th day. Urine 20 oz., no change in albumin.

6th day. The œdema was greatly increased. Temperature 102½°, pain and tenderness in both groins, slight diarrhœa, urine 10 oz. Hot baths every six hours with hot abdominal compresses in the intervals were ordered.

7th day. Urine increased to 24 oz., temperature 100°, some delirium and twitching of the eyelids present.

8th day. Temperature normal, pulse 88, no pain, great distension of the abdomen, slight tenderness over the liver, bowels active, urine 27 oz., S. G. 1010, no change in the amount of albumin.

It is not necessary to give daily details after this, but only the marked changes in the case.

On the 12th day mercury was given, and the digitalis stopped; by the 20th day urine was 40 oz., albumin down to line 4 (Esbach).

30th day. Urine 80 oz. Albumin again increased even above line 12, S. G. 1006.

32nd day. Urine 18 oz. No chemical or microscopic changes.

The mercury was suspended, and digitalis and strychnine supplied instead, hot packs and hot air baths were continued as before. From this to the death of the patient on the 12th of October there was a gradual decline. Great ascites developed, with liver tenderness pointing to organic disease of liver ; the urine varied between 25 and 50 oz., S. G. never above 1008. Casts were numerous.

The damage to the kidneys was evidently irreparable. No uræmic symptoms developed until 3 days before death, when a semi-coma, which gradually deepened, came on; there were no convulsions. Death resulted from heart failure.

The interesting points about this case are :

1st. Could this nephritis have been induced by the large doses of bichloride of mercury which this man was taking at the time it developed ?

2nd. The treatment hinged on whether this complication was a medicinal irritation or a manifestation of the original disease. Should I have increased the dose of mercury above ½ grain a day, which he was taking when the disease developed? I stopped it for two weeks, then began again with the small doses, which seemed to do some good for a few days, then a change for the worse came, and I stopped it again. I believe I should have continued with mercury from the beginning in doses sufficient to produce the ordinary constitutional symptoms.

POISONING BY A BELLADONNA OINTMENT.

Dr. F. W. CAMPBELL related the following case in practice: An acute rash is sometimes difficult to decide as to its character, especially in a defective or artificial light.

The other night he was called to a woman who had been confined three or four days previously. On examination he found a slight rash, universal all over the body, which had the appearance of measles, and somewhat cresentic in its character. Her temperature was a little over 101°. He forgot the exact figure, and the pulse was somewhat quickened. The patient was being treated with a view of getting rid of her milk. On enquiry he learned that an ointment containing extract of belladonna was being used on the breasts. All was then clear to him. He had a belladonna rash to deal with. Dr. Campbell also mentioned several cases of belladonna poisoning from the local application of belladonna liniment in small quantity.

Stated Meeting, Oct. 30th, 1896.

GEORGE WILKINS, M.D., President, in the Chair.

GANGRENE OF THE FOOT.

Dr. G. E. ARMSTRONG showed a young woman 24 years of age with spots of gangrene on the dorsum and inner and outer border of the left foot. These spots were seven in number, and varied from the size of a 5 cent piece to an area 2½ inches in diameter.

He said: the patient was admitted to the Montreal General Hospital ten days before.

Four years ago she suffered from typhoid fever, and during convalescence her left leg became painful and swollen, and remained so for several weeks, ultimately returning to its normal shape and size. This is the fourth time that spots of gangrene have appeared on the left foot and leg during the past two years. One patch occurred just behind and a little below the left knee joint.

About six months ago the patient had been under Dr. Kirkpatrick's care in the Montreal General Hospital for a similar condition.

Her father, mother, and several brothers and sisters are living and well.

The onset occurred suddenly without any recognizable symptoms, and, so far as I can ascertain, without any probable exciting cause. She denies having worn tight shoes, or having received any injury to the foot, and says she has not been taking medicine of any kind.

Her heart and lungs are normal. Urine high colored, sp. gr. 1030, acid, and contains no albumin or sugar. Microscope shows amorphous urate and crystals of uric acid.

It is as yet impossible to say how deep these sloughs will prove to be. At any rate, it is quite evident that they involve the whole of the true skin.

I am inclined to think that quite possibly the phlebitis or end-arteritis following the typhoid may have had an etiological influence. It may also be of the nature of Raynaud's disease. It has been suggested that the condition is self-inflicted. I don't know how she could have produced this condition if she had tried. I am quite sure that I could not do it. I don't know what I could use to gain this result. This is the fourth time that she had suffered from a similar condition, and always on the same foot and leg. There is not, so far as I know, any other evidence of hysteria about her.

These patches do not all lie within the area supplied by any one artery or any one nerve.

Dr. R. C. KIRKPATRICK said that the patient had been under his care some months before, and the leg was then in a much less marked but somewhat similar condition. There were two or three spots of gangrene on the foot, which were quite superficial, and his impression had been that they were self-inflicted.

As bearing on this case he had brought another patient somewhat similarly affected, the condition in this case being undoubtedly due to a burn from a hot water can. He thought that a lesion was more likely to have been produced by the patient than due to an arrest of the arterial circulation.

Dr. F. J. SHEPHERD had come to the same conclusion after seeing the case, and referred to several other cases that he had met with, notably one in which a series of rings of gangrene appeared, following each other at short intervals. As soon as a watch was set upon this patient and her hands kept tied, the eruption ceased appearing.

Dr. D. F. GURD referred to a case which had come under his notice. A slough appeared on the skin of the leg in a child during convalescence from scarlet fever, although no hot applications could have been the cause.

Dr. JAS. STEWART asked if the patient showed any evidence of hysterical stigmata. He did not know of any means either from heart or irritants that could induce such a condition. He considered it neurotic in origin.

Dr. ARMSTRONG replied, that so far as known the patient showed no evidence of hysteria, and he agreed with Dr. Stewart that no artificial means that he knew of could produce deep sloughs of such a character.

ANEURISM OF THE ASCENDING PORTION OF THE AORTIC ARCH, LEADING TO EXTERNAL RUPTURE.

Dr. JAS. STEWART and Dr. J. G. ADAMI reported this case.

LIMITATIONS OF THE VISUAL FIELD OF INTRA-CRANIAL ORIGIN.

Dr. J. W. STIRLING read a paper on this subject.

Dr. JAS. STEWART referred to one of the cases mentioned by Dr. Stirling as showing the great value of a thorough examination

of the eyes and ocular muscles in determining the nature of intracranial disease.

HÆMORRHAGE OF THE BOWELS IN A VERY YOUNG TYPHOID PATIENT.

Dr. D. F. GURD read the following case report: Typhoid fever is seen in persons of all ages, but is much less frequent at the extremes of life. Authentic cases have been reported at the ages of 70, 80 and even 90, and Dr. Murchison exhibited the specific lesion in the intestines of an infant of six months. Previous to 1840 it was thought that young children were exempt from this disease, but Ribbot and Tampin demonstrated conclusively that they were not, and that most of the cases previously known as infantile remittent were typhoid fever.

Hæmorrhage of the bowels is a rare complaint in young children. This fact is my apology for calling your attention to a case which occurred in my practice.

On Nov. 8, 1895, I was called to see Lizzie H., aged 27 months, who was suffering with fever and slight tickling cough. From the history of the case, as obtained from her mother, an intelligent lady, I judged she was then in her sixth day of fever. The case ran a mild course till the evening of the twelfth day, when she had a bloody stool; this made me anxious, and I got a trained nurse in attendance. At 8 a.m. the next day she had another, which the nurse said contained about 2 oz. of blood. At 2.30 the following morning, *i.e.*, the 14th day of fever, she had a small stool, having about an ounce of blood in it. From this time on the temperature rapidly declined, so that it reached normal on the 21st day, and never again went above it. The blood in the stools was bright.

A CASE OF CEPHALHÆMATOMA CAUSING BONY DEFORMITY; GRADUAL ABSORPTION.

On Sept. 16, 1895, G. H. was born with the aid of forceps after a fairly tedious labor. No excessive force was needed. The child had what looked like an ordinary caput succedaneum, the size of a large orange.

Next day the nurse called my attention to baby's head, which I examined, and found over the left parieto-occipital region the commonest form of hæmatoma, that is, a blood tumor between the periosteum and the bone. I assured the anxious mother that it might take some weeks, but that it would entirely disappear.

After about three weeks, flakes or plates of bone could be felt over the tumor, and those slowly grew larger. When pressure was made over them they would bend inwards, giving a peculiar crackling sound and feel. These plates, perhaps four or five in number, gradually united, and finally completely covered the tumor, which by this time had lessened by absorption to about three-quarters of its original size. The child's head at three months was very unsightly, having this large, firm, bony prominence. I saw the child this week, and found the deformity much lessened, owing to the greatly increased size of the head during the past ten months, and this, with a fair growth of hair, has masked almost all appearance of anything wrong in the shape of the little fellow's

head. I might have removed the contents of the tumor when I found that it was being absorbed so slowly, either by aspiration or excision, but I think the already greatly diminished deformity has justified my leaving the case severely alone.

This condition is said to occur once in 250 new-born infants. I have seen several, but never one before which had a firm bony covering form over it.

RESECTION OF THE BOWEL.

Dr. R. C. KIRKPATRICK read the following report, to which is appended the pathological report of Dr. W. H. JAMIESON, who exhibited the specimen.

J. C., aged 63, was admitted to the Montreal General Hospital on Sept. 18, 1896. He said that for three weeks he had not had a motion of the bowels, and that for a week before that he had been much constipated. Previous to this time (four weeks before the date of his admission) he had been well. He had been treated by all sorts of purgatives and injections before he came to the hospital.

The abdomen was evenly distended (37 inches in circumference at umbilicus), and tympanitic throughout. Liver dullness present (1½ inches on mammary line). No tenderness. Digital examination of the rectum revealed nothing abnormal. The case being urgent, the abdomen was opened in the middle line. The small intestines presented and were distended.

On drawing over the sigmoid flexure it was found to be distended until the lower part was reached, where a constriction was found. This was resected, and the ends of the bowel united by a double row of silk sutures. As soon as the rubber tubing (which had been tied round the bowel above and below the field of operation, to prevent the escape of fæces) was removed, the bowels commenced to act. A large rubber tube was inserted into the rectum, and a copious motion was passed, I should think a couple of quarts of fluid fæces. This line of union being apparently tight, the abdominal wound was closed. The patient died forty-nine hours after the operation, the highest temperature being 100° and the pulse 100. The abdomen remained soft and flaccid throughout. He had a slight bronchitis before the operation, and the ether made this worse, so that I was inclined to look on the pulmonary condition as the cause of death. However, the pathologist has another story to tell, namely, leakage from the line of the re-section, and septic peritonitis.

How should such cases be treated? Looking back on this case, I feel strongly that the best treatment would be a temporary inguinal colotomy. Then, when the enormous collection in the bowels had been got rid of, a resection could be done with much greater prospect of success. The bowel could be opened at once, or if the patient's condition would permit of it, after twenty-four or forty-eight hours, when there would be no danger of infecting the peritoneum by the discharges.

The strain put upon the line of union by the contents of the bowel is very apt to be too much for the sutures or whatever device is used to approximate the cut ends, especially as there is a chronic

inflammation going on, and consequently leakage takes place. Again, such patients have very little resisting power, the absorption from the bowel having already depressed the vital powers.

Pathologist's report.—On opening the abdomen there was evidence of fibrino-purulent peritonitis. The abdominal cavity contained abour ℥viii of greyish-yellow purulent fluid with fæcal odor. In the region of the sigmoid flexure of the colon a line of sutures extends around the circumference, a portion evidently having been removed. The omentum is stitched to this at one point. The contents of the bowel escape here. On opening the bowel the edges are found in apposition. No leakage taking place anywhere except from a small spot corresponding to where the omentum is attached; the edges of the wound here are un-united and gangrenous. A perforation, through which a good sized probe can be passed, leads through a mass of omental tissue between the sutured edges, and allows the escape of the contents of the bowel.

Anatomical diagnosis.—Resection of bowel for adenocarcinoma. Incomplete union of edges with escape of bowel contents into peritoneal cavity. General septic peritonitis. Broncho-pneumonia. Brown atrophy of the heart, and some fatty change. Chronic interstitial nephritis. Fatty degeneration of the liver. Infection by streptococcus and colon bacillus.

MONTREAL BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

The annual meeting of this branch was held on the 2nd December, at 9 o'clock, in the rooms of the Association, Dr. Roddick in the chair. We take the report of the meeting from the Montreal *Medical Journal*, December, 1896. There were present Drs. J. A. Hutchison, Wm. Gardner, James Perrigo, G. G. Campbell, K. Cameron, Morrow, E. P. Blackader, J. G. Adami, Kirkpatrick, Proudfoot, G. T. Ross, Birkett.

The President reviewed the work of the past year as follows:

The year about to terminate has been an eventful one in the history of this Branch. Your Council has been called to meet many times during the year. Quarterly meetings have been regularly held, and we are indebted to Drs. Adami, Johnson, Macphail, and Martin for pathological specimens shown at each meeting. We are also indebted to the following gentlemen for contributions towards the programme of each meeting: Drs. Armstrong, Kirkpatrick, Evans, Alloway, James Stewart and others, for many interesting specimens shown.

During the past year, By-law No. 4 was amended so that five instead of three ordinary members are in future to be elected to Council.

The following new members were elected during the year: Drs. Edward Semple, G. A. Berwick, H. B. W. Carmichael, F. J. Hackett, R. C. Kirkpatrick, George Fisk, S. F. Wilson, and J. A. Henderson, making 85 present members.

On January the 18th, the British Medical Association was invited unanimously by the Branch to hold its Annual Meeting for 1896 here, provided Carlisle would forego her claim. The invitation was cabled to England, but it was found to be impossible, as

arrangements had already been made in that city. However, at the next meeting, April the 15th, a further invitation was tendered the Council in London to meet here in 1897, and at a meeting on June 26th following, Drs. Armstrong and Adami were elected delegates to the annual meeting at Carlisle, to further press the matter, the result being that the invitation was accepted, and Dr. T. G. Roddick, President of this Branch, was elected to the distinguished position of President-elect. As a consequence of this, your Council immediately set to work to organize for the coming event, and at a meeting on September 14th, presented a representative list of names that might constitute desirable committees to carry on the various branches of such an organization.

The following have applied for membership: Drs. R. F. Rorke, South Woodslee, Ont.; Charles F. Martin, Montreal; George A. Dickinson, Port Hope, Ont.; William McDermid, Vankleek Hill, Que.; Robert B. Martin, Cleveland, Ohio; W. B. Nesbitt, Toronto, Ont.; John A. Hutchinson, Westmount; George E. Josephs, Pembroke, Ont.; J. V. Clemesha, Port Hope, Ont.; Joachim Guimane, Toronto, Ont.; James Ross, Dundas, Ont.; T. P. Shaw, Montreal; Henry Lunan, Campbellton, N.B.; A. L. DeMartigny, Montreal; William Burnett, Montreal; A. G. Morphy, Lachine; H. J. Harrison, Cornwall, Ont.; Grosvenor Hayes, Barre, Vermont; William Mason, Montreal; George Villeneuve, Montreal; Ridley Mackenzie, Montreal; H. D. Hamilton, Montreal; Ahern, Quebec; David A. Hart, St. Lambert's, Que; W. H. Jamieson, Montreal; J. C. Webster, Montreal; Jas. Warburton, Charlottetown, P.E.I.; A. F. Garrow, Montreal; Henry Beaumonte Small, Ottawa. These 29 new members were elected.

Dr. Hutchison, the Treasurer, then read his report, which was duly adopted, and showed a balance of $37.03 on hand. Drs. E. P. Blackader and K. Cameron were nominated auditors by the chairman.

The question then came up as to what should be the annual fee to this Branch, including the subscription to the *Journal*, and after much discussion it was moved by Dr. Hutchison, and seconded by Dr. Kirkpatrick, that the sum of $5.25 be the fee for 1897 for new members living outside the city and its suburbs.—Carried.

The election of officers for the ensuing year was then proceeded with. It having been suggested by the meeting, that in view of the fact that the present officers having already in hand the preparations for the coming meeting here next August, it would be advisable that the same officers be elected again for the ensuing year. This was adopted by the meeting. President, Dr. T. G. Roddick; Vice-President, Dr. E. P. Lachapelle; Treasurer Dr. J. Alex. Hutchison; Secretary, Dr. J. A. Springle. Council—Drs. F. J. Shepherd, James Perrigo, Sir William Hingston, George E. Armstrong and J. George Adami.

In view of the fact that a large number of members would be elected for the ensuing year, and it would be impossible to call together the Branch for such elections, it was moved by Dr. Gardner, seconded by Dr. G. G. Campbell, that the Council be empowered to elect such members for the present year and 1897.—Carried.

THE

CANADA MEDICAL RECORD

PUBLISHED MONTHLY.

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Editorial.

THE TWENTY-FIFTH VOLUME OF THE CANADA MEDICAL RECORD.

In order that the business year of the publishers may end with each volume in December, it has been decided to continue this volume until December next, thus giving to our subscribers this year fifteen numbers instead of twelve.

While making the announcement, we would take the opportunity of urging the claims of the RECORD among our readers for their influence in helping towards a more extended circulation. As heretofore the various departments will reflect the general progress made, and a resumé of the papers and discussions at the Medico-Chirurgical Society and British Medical Association branch in Montreal will be given, which represents the work done at the different English hospitals here.

There will be much of interest to record during this present year, owing to the meeting of the British Medical Association in this city, and as we trust to keep our readers fully posted, medical men throughout Canada and the United States should subscribe now for the RECORD, which has been placed at a nominal subscription price in order that its constituency may be enlarged.

THE TALLERMAN SHEFFIELD PATENT LOCALIZED HOT AIR APPARATUS.

Through the kindness of Dr. James Stewart, the members of the profession in Montreal and its vicinity had an opportunity of witnessing at the Royal Victoria Hospital an exhibition of the application of this method to cases of chronic rheumatism and gonorrhœal arthritis. The condition of the patients was described by Dr. Stewart. Mr. Tallerman, the inventor of the apparatus, who is a retired merchant from England, then explained the mechanism of, and method of using the invention. There are two pieces, one a cylindrical oven for single limbs, the other similar to a cot with a half cylinder top enclosure over the central part. The joints were covered with strips of lint, and lightly bandaged, and the body wrapped in sheets and blankets. The gas jets were lit, and a thermometer at the top registered the temperature of the air surrounding it. It registered as high as 240° F, the patient remained some 40 to 50 minutes. Little change occurred in the body temperature as taken in the mouth, the volume of the pulse was increased and the patients perspired freely. After removal, the patients admitted feeling a decided relief in the affected joints. We understand that Mr. Tallerman is giving exhibitions of this kind in the chief cities of Canada and the United States, the object being to induce hospitals and practitioners to use the method and his patented apparatus, for which a somewhat exorbitant price is asked. Mr. Tallerman has not given any very scientific explanation as to how this local application of dry heat cures these chronic affections. We understand that fairy good results followed the use of the method here. We must feel grateful to the authorities at the Royal Victoria Hospital for the privilege of witnessing a demonstration of this method of treating a class of affections which respond but poorly to medicinal treatment, and feel assured that much benefit will accrue from indicating a line of therapy which has been somewhat neglected by the profession, and suggesting a thorough scientific examination of the action of the local application of superheated air. But we do not see anything very striking about this patented apparatus in distinguishing it from somewhat similar methods which have

been in vogue for centuries. It is but a modification of the Turkish bath, where the temperature of the air ranges from 210° to 300°, and a still slighter modification of the old household remedies of raising the bed clothes by a few barrel hoops, and using a spirit lamp for heating the air ; or using a cane-bottomed chair, and surrounding the patient with blankets. We do not object to this plan of treatment being modified and developed to the full extent of the benefit that may be possibly obtained from it, but we hope that the patent will not prevent the use of hot air by the numerous contrivances which may suggest themselves to any physician of a mechanical turn of mind ; if so, we should be sorry to encourage the introduction of this expensive so called invention any further than its mechanical worth as a piece of convenient apparatus.

For some months back, without any knowledge of Mr. Tallerman's apparatus or methods, a somewhat similar method has been in use at the Western Hospital here in the medical wards. A number of cases of chronic rheumatism having been but little benefited by the ordinary methods, an attempt was made to imitate the Turkish bath by using the large ward bath tub. The patient is surrounded with a sheet and blanket, and placed in a semi-prone position in the tub, which is covered with blankets and rubber sheeting, the body being entirely covered in except the head ; a Bunsen's burner enclosed in a wire basket was used to heat the air, and temperatures of 200° to 285° were obtained. Very free perspiration is induced, and surprising results have been obtained in some stubborn articular cases, which we hope to publish shortly in detail.

OUR SELF-PRESCRIBING PATIENTS.

At no time in the history of Medicine has it become so imperative for the members of our profession to take into serious consideration matters which affect their financial interests ; more especially the general practitioner, who has so many difficulties to contend with, which all tend to lessen his income. Specialism takes from him some of his most remunerative cases, many of which he could take care of as successfully as the specialist. The surgeons connected with

our Hospitals become prominent by success in some brilliant surgical operation, but they all practise medicine as well, and hence handicap the general and medical practitioners.

The multiplicity of drug stores, which occupy every prominent corner in the city, are most of them depots for numerous patent medicines and cure-alls; these, owing to crafty advertising, are the resource of hosts.

Druggists not only recommend these to their patrons, but even prescribe the preparations of drugs learned from the prescriptions of physicians. Our patients, learning the value of certain prescriptions or methods of treatment, repeat them when like conditions arise, and even recommend them to their friends. The community at large is gradually becoming divided up into benefit societies, employing physicians at mere nominal fees, and creating a condition of bondage and subserviency among those holding the appointments which is not creditable to the profession. Nor would the slight advantage to the young and struggling practitioner be at all missed were the custom entirely abolished, and all practitioners in good standing prohibited from holding such position, which, on the whole, means cheapening of medical services, and in most cases where the recipients are not in need of medical charity. Then again the abuse of our Hospitals is a constant menace to the interests of the young practitioner, owing to the numbers who throng to the wards and out-door clinics for advice and medicine who are in a position to adequately remunerate a physician.

When these facts are placed beside that of the ever increasing numbers of those entering the ranks of the profession, and depending for an existence upon the support of the community in which they reside, it becomes a subject worthy of consideration in the interest of the practitioner, as well as of the members of the community, to consider the best means of mitigating the effects of the evils above indicated. The following editorial in the MEDICAL RECORD, September, 1896, under the above heading, which suggested these comments, is very *apropos* :—

To such as have studied the causes of the present decline in professional work, it becomes a serious question whether there are not other elements than those attributable

to stringent business relations that explain the condition. While the science of medicine has made great progress in the methods of diagnosis and treatment, the physician finds that his vocation, although more honorable and useful, is really less remunerative, and his legitimate practice is proportionately curtailed. There is no less sickness in the world, but the number of patients has markedly decreased. In fact, the sick ones are inclined to get the better of the doctor, and to act more or less independently of his direct ministrations. It is not difficult to understand why this is so, when we consider the vast number of persons who willingly yield to the growing habit of prescribing for themselves. This tendency is fostered by the belief, in the majority of cases, that such prescribing is tacitly sanctioned by the profession itself by the use of many of the legitimate remedies so frequently ordered for the relief of the more common ailments. There is a very reasonable foundation for this conviction, and its responsibility rests more or less on the prescriber himself. At the bottom of the whole business is the prevailing practice of delivering private clinical lectures to the patient on the nature, extent, progress, and outlook of his malady, and the indications for the use of special drugs in the treatment of certain conditions. While this may give evidence of remarkable learning on the part of the medical adviser, and may help for the time being to establish his methods in the confidence of his client, it too often educates the recipient into the presumption of thinking and acting for himself. The most superficial knowledge is all that is necessary to this end, and, easily persuading himself that he has a repetition of the malady of which he has had such an authoritative opinion, he either repeats the prescription at will or purchases his former remedy in open market at the counter of the obliging pharmacist. Quinine, phenacetin, salol, morphine, pepsin, the mineral laxatives, and a host of other much-used medicines are given the currency of indispensable household articles. To such persons a diagnosis is a useless refinement, it being sufficient for their special purpose that their physician has given explicit directions how to use the supposed harmless remedies under what the patient believes to be similar circumstances. Not only this, but the remedy is freely prescribed to all his friends who are willing to trust to the blind chances of having a like ailment.

With shame be it said, that very many of the pharmacists, far from discouraging such practices, not only willingly abet them, but offer special inducements to purchasers by peddling the favorite prescriptions of well-known physicians. These drug sellers, for they deserve no more dignified title, do not prescribe themselves, but are willing to

recommend the prescription of another, charging a round price for the trouble of dispensing it. When it is understood that the physician knows of this, it is not difficult to explain why so few prescriptions are written and why so many prescribers deal out their own medicines.

Aside from the purely business aspects of the question, this inconsiderate self-prescribing is in the highest degree detrimental to the community at large in stimulating an unnecessary consumption of drugs, in the formation of habits which eventually undermine health, and in directly jeopardizing life by the loss of valuable time in the prompt recognition and scientific treatment of many of the dangerous and insidious maladies of which the ordinary patient has no possible knowledge. The profession should always be ready with any information tending toward the prevention of disease, but any attempt directly or indirectly to teach therapeutics is fraught with untold evil to the giver and the receiver. The more the patient is kept in ignorance of the remedies prescribed, the better for him, and certainly, under the circumstances already named, the better for the prescriber. The physician is never called in consultation with his patient, as the very nature of the case precludes the necessity of more than one opinion. The moment any argument is allowed on this point all proper respect for purely professional opinion is lost. This is one of the results of selling the birthright for a mess of pottage. The lesson is one which many of the too-obliging practitioners can take to heart.

ANOMALIES AND CURIOSITIES OF MEDICINE.

This is the title of what promises to be one of the most important works of the present year. It will be published by W. B. Saunders, who has, during the last few years, enriched our medical libraries with such a large variety of valuable works. It will be an encyclopædic collection of rare and extraordinary cases and of the most striking instances of abnormality in all branches of medicine and surgery, derived from an exhaustive research of medical literature from its origin to the present day, abstracted, classified, annotated and indexed by George M. Gould, A.M., M.D., and Walter L. Pyle, A.M., M.D. Several years of exhaustive research have been spent by the authors in the great medical libraries of the United States and Europe in collecting the material for the work. The work, it is said, will be of general interest, outside the profession, to all who

are interested in general scientific, sociologic and medico-legal topics. It will be sold by subscription, and will be issued during the present month.

Book Reviews.

A System of Gynæcology. By many writers. Edited by Thomas Clifford Allbutt, M.A., M.D., LL.D., F.R.C.P., F.R.S., F.L.S., F.S.A., Regius Professor of Physics in the University of Cambridge ; Fellow of Gonville and Caius College ; and W. L. Playfair, M.D., LL.D , F.R.C.P., Professor of Obstetric Medicine in King's College, and Obstetric Physician to King's College Hospital. London: McMillan & Company, Ltd. New York : The McMillan Co., 1896.

This is a volume of nearly one thousand pages, being a part of the New System of Medicine. We must begin by congratulating Dr. Playfair, who had the choosing of the contributors, upon the excellence of his choice. Anyone familiar with the names of leading gynæcological writers of the day will at once recognize such names as Berry Hart, Freeland Barbour, Milne Murray, Halliday Croome, Armand Routh, George Hermann, Bland Sutton, Haultain, Cullingworth, Priestly, Knowsley-Thornton, Alban Doran, and Greig Smith ; indeed, many of these gentlemen, including Playfair, are authors of text-books which are recognized as standard ones throughout the world. The whole subject of gynæcology is one of recent development. Even the work of its pioneers is within the recollection of the oldest among us, while works written twenty years ago are absolutely useless as guides to the practice of to-day, not containing even a reference to the burning gynæcological questions of the hour. On the other hand, many opinions and methods of treatment then largely taught and practised have justly passed into oblivion. Much of this great progress is undoubtedly on the surgical aspect of the subject. The increasing frequency of abdominal sections has directed attention to the diseased states thus revealed, and to methods of treating them, previously quite unknown. Owing to the greater conservatism of the gynæcologists of Great Britain, they have been considered by their American and Continental brethren as being rather backward in recent advances. This volume has been the means of quite changing the reviewer's opinions at least on this point, for it contains full and frequent references to all the most recent work in this department, and shows that they not only preach but themselves practise the same line of treatment as is advocated by the majority of the gynæcologists of this continent. They are opposed, but not more so than we are, to the wholesale removal of organs without first having exhausted all hygienic and medicinal treatment, and in this they cannot be too highly commended. A good many years have passed since any complete work on Gynæcology has appeared in England, so that we had no means of knowing what progress that art and science had made there ; but from a careful perusal of the volume before us, we can safely say that British gynæcology will compare favorably with

European or American. We do not agree with all the statements of the various authors, neither does the editor, neither do all the authors' opinions coincide with each other ; but this is not objectionable ; it is surely better that in vexed and disputed questions, both sides should be fairly considered. Among the finest and most interesting chapters are: The Etiology of the Diseases of the Female Genital Organs, by Balls-Headly ; The Nervous System in Relation to Gynæcology, by W. S. Playfair ; Disorders of Menstruation, by Halliday Croome ; and Ovariotomy, by Greig Smith. It is impossible in our limited space to notice all of the many excellencies of the work, we must content ourselves by saying that the type, paper and binding are unusually good, while all the writers have presented their material in such clear and graphic manner that it is a pleasure to take it up to read it. We can confidently recommend it to practitioners of medicine as one of the safest guides for them that has appeared since several years.

Remsen's Theoretical Chemistry.—New (fifth) edition. Principles of Theoretical Chemistry, with special reference to the Constitution of Chemical Compounds. By Ira Remsen, M.D., Ph.D., Professor of Chemistry in the Johns Hopkins University, Baltimore. New (fifth) and thoroughly revised edition. In one royal 12mo. vol. of 328 pages. Cloth, $2.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

No book hitherto published has given a more clear and comprehensive explanation of the fundamental principles of chemistry as they are accepted now than this. Mr. Remsen, than whom no one is better known in this country in connection with the study of chemistry, has endeavored to make clear in this treatise those facts and speculations that have to deal especially with the problem of the constitution of chemical compounds. In his introduction the author says his object has been and is to help students to get clear ideas in regard to the foundations of chemistry. Many students go through their courses in chemistry, merely learning the formulæ, equations, etc., by rote, without any definite idea about the principles; now this book read well will bridge over that difficulty. Its having gone through 5 editions, besides being translated into German and Italian, shows how warmly it has been received, and is a good criterion of its worth.

PUBLISHERS DEPARTMENT

THE POPULAR ÆSTHETICS OF COLOR.

While *blue* is pre-eminently and overwhelmingly the masculine favorite, it is by no means so general a feminine favorite. The favorite woman's color, standing at the head of the female list, is *red*. Roughly speaking, of every *thirty* masculine votes, *ten* would be for *blue*, and *three* for *red* ; while of every *thirty* feminine votes, *four* would be for *blue*, and *five* for *red*. Red and blue are thus much more nearly equally popular among women than among men. Other relatively marked masculine preferences are for the colors related to blue (blue violet and violet), and other feminine preferences are for lighter red (or pink), and, to a less extent, for green and yellow. Further, men confine their selections to relatively fewer colors than do women ; and finally, while all men and

women alike are much more apt to choose a normal than a transitional color and a darker than a lighter shade, yet the tendency to do so (about the same in the former direction) is markedly different in the latter respect; of a *dozen* men, *ten* whould choose among the darker colors and only *two* among the lighter for the most pleasing color; while of a *dozen* women, *seven* would choose among the darker and *five* among the lighter shades. This feminine fondness for the lighter and daintier shades appears also in other respects, to be noted presently.

Passing next to the discussion of the preferences among the combinations of colors enumerated above, the first noteworthy result is that no combination of colors occupies the position of a decided favorite as did blue among the single colors; but that preferences for the several combinations vary gradually from the most to the least favorite. The two most frequently (and about equally) preferred combinations are *red with violet* and *red with blue*, which are somewhat similar in effect (the violet being very dark in appearance); more than *one-fifth* of all the persons contributing to the results choose one or the other of these combinations. —Prof. JOSEPH JASTROW, *in Appletons' Popular Science Monthly for January.*

THE UNTOWARD EFFECT OF SUBSTITUTES.

A. M. Collins, A.M., M.D., of Shelbyville, Ills., writes under date of November 2nd, 1896: "I never realized the vast difference between genuine antikamnia and the various substitutes that are being palmed off, until within the past few days; and the realization was all the more pronounced because I myself was the patient.

"For four weeks I had been suffering with neuralgia of a very severe type, and attended with considerable febrile movement. I tried the various compounds and other preparations, lauded as 'just as good,' but with no real advantage and with no little heart disturbance.

"On Saturday, I went to Arcola, and while there was taken very sick with one of my neuralgic attacks. I sent to the drug store for some genuine antikamnia, and to be certain about it, procured an unbroken original package. I took it in eight to ten grain doses at intervals of two hours. The effect was magical, the first dose relieved the severity of the pain, while the second quieted it entirely, and I went to bed, sleeping all night with one awakening of a few moments only, a thing I had not done in four weeks. This experience on my own person has thoroughly convinced me of the superiority of the genuine antikamnia."

SANMETTO IN GONORRHŒA.

Dr. A. G. McCormick, Richmond, P.Q., Canada, writing, says: "I prescribed Sanmetto in a recent severe case of gonorrhœa with the greatest satisfaction. I never prescribed any remedy in such cases that acted so well. The case was one of simple gonorrhœa, of a severe type—pain, burning and scalding, with a profuse discharge. By the use of Sanmetto my patient made a rapid and satisfactory recovery. Sanmetto is a sovereign remedy in such cases. I used it two years ago in a like case with a similar result. I am well satisfied that Sanmetto is by far the surest, speediest, and safest, as well as the most pleasant and most satisfactory remedy we have for gonorrhœa."

ADHESION OF PLACENTA, WITH HEMORRHAGE.

I had a bad case of adhesion of placenta, with dangerous hemorrhage. With ergot and Sanmetto the danger was at once removed, and by continued use of Sanmetto, patient, although very weak from loss of blood, improved rapidly, and is now up and about the house helping about her work. In sixty years practice, with an attendance upon more than three thousand child births, I have used no medicine that seemed to hit the case better than Sanmetto in this instance. I am now in my eighty-seventh year, and have practised since 1832.

VIOLA, IOWA. S. G. MATSON, M.D.

CANADA
MEDICAL RECORD

FEBRUARY, 1897.

Original Communications.

NURSING THE INSANE.

By J. V. ANGLIN, B.A., M.D.

Late Assistant Physician at the Protestant Hospital for Insane, Verdun, and Western Pennsylvania Hospital. Professor of Psychiatry, University of Bishop's College. Physician Montreal Dispensary, &c.

(*Concluded.*)

At this point we may fittingly introduce the subject of occupation, which has done so much to revolutionize the treatment of the insane, to banish objectionable restraint, and to mitigate almost every symptom the insane present. By occupation is meant anything that takes up your patient's time and diverts his mind in useful and pleasant ways. Idleness and loafing are a curse to the insane as to the sane. Almost every patient is better employed in some way, and, moreover, it lightens your tasks. The amount and value of the work done are but secondary. The first consideration is to find some suitable employment, no matter how simple, that will have its salutary effect by exercising his mental and bodily powers. If the work done is useful, all the better; but whatever he does should be for his own good alone. Unless better employment is found, patients are apt to occupy themselves thinking of their delusions, in noise or violent demonstrations, pacing the floor, indulging secret vices, in gossip or constant Bible reading, going from bad to worse. By employing you introduce new thoughts into the mind to crowd objectionable ones out. One's thoughts are not changed by an effort of the will, but by inviting others in. Occupation finds suitable outlets for morbid energy, and turns restless movements into healthy channels. It arrests the deterioration to which insane brains tend, and even in settled dementia prevents degraded habits. It re-educates the dement's brain.

Whatever work is provided it should be congenial. Find what best suits and interests each case, and let there be variety. It may be housework, or toil in the garden, farm or workshop, writing, drawing, or anything he can do, even to picking oakum. It is easier perhaps to find work for women. They can sew, knit, mend, make flowers or a fancy present for some one. Outdoor work is best for men. It is a harder task in private than in hospital to find work to do, but encourage all to do something. They may see to their own clothing and keep their apartments in order, and thus be made to feel they are adding to their own comforts. Men have not much taste for this, but they can do a little at it, perhaps add to the decoration of their rooms or take charge of some plants. Here let me say the old idea of robbing the invalid's quarters of all its furnishings is exploded. They should be made as cosy and attractive as taste can devise, with whatever is pleasing to the eye, and gives comfort to the body.

It will cost effort to induce some to work, but you will be rewarded. The best nurse is the one who has the most done by the patients, although it might often be easier to do it yourself. It is not the thing, however, for the nurse to sit idly by. She should at least appear to join in with them. Make them enjoy the working hour by chatting and joking over your task, so that they come not to regard it as irksome. On a few, you may have to hold a check. Some try to do too much, though the tendency is the other way with most. Maniacs go to excess in everything ; or some delusion may make patients work harder than is wise. Overwork may cause sleeplessness. Your duty is to coax the idle to industrious ways, and not overtask the willing. Some may be too feeble and old to work, and may need rest and nursing more. But even such may do a little something to their advantage, and can be read to or their minds diverted in some way.

But occupation means more than work. It includes also the spending of some time in amusement, for it is not beneficial to have your patient always drudging, his life unbroken by variety. The idea is to make his days as natural and pleasant as possible, having some work and some indulgence in innocent pastimes. But see that it is not all play. Games

indulged in exclusively will cause anyone to degenerate. For entertainment you can conjure up lots of desirable things,—games, music, pictures and scrap books, walks, drives, etc. Attending places of amusement when possible will help strengthen self-control, for a patient will often pull himself together when strangers are about.

The will is usually disordered in insanity more or less. Self-control may be altogether lost. Ladies who have done most improper things while insane have told me that they knew they were doing them, they knew they were wrong but they were utterly powerless to check themselves. So you see the lunatic often knows the difference between right and wrong, but is yet irresponsible for his acts.

We shall now refer to certain habits and morbid impulses of the mentally diseased, and what the nurse may do with them. When these are the offspring of the disordered mind they should be repressed as much as possible, and correct habits and self-restraint inculcated. Training to proper habits promotes comfort and mental improvement. It saves yourself trouble, and redounds to your credit.

You will meet with wet and dirty habits, either due to the mental state or to paralysis, and these are the cases hospital nurses dislike most; but in model institutions they rarely are let persist in such troublesome ways. The dirty habits often result from forgetfulness, and you must think for your patient. When it is the fault of the mind, more than you would think can be done by training to have nature's calls attended to at set times in the proper way. When the "guards" are powerless from paralysis, you can add to the comfort by changing the clothes and bathing when soiled. The danger of scalding must be kept in mind. Those who have involuntary evacuations may be prevented from filthiness by the use of warm water injections and the catheter at intervals. Dements will give the most trouble from these habits, but excited patients may not micturate properly from sheer inattention, and depressed patients from indifference, and hence get into bad habits.

Masturbation is another common result of insanity too often set down as a cause by the knowing public. Hard work by day and watchfulness by night will go far to counteract it.

Another habit that some, oftenest dements, have is that of picking up valueless articles and accumulating heaps of rubbish. It is not always wisdom to take from them harmless collections, as they may find pleasure therein, fancying perhaps rags are silks, and pebbles, diamonds. However, the bed, clothing and other possessions should be systematically searched, best without the patient's knowledge, for objectionable articles, or better still keep such out of their way.

Untidiness will confront you in almost every patient. The general tendency of the insane is to slovenliness in dress and neglect of personal appearance; and as mental enfeeblement increases, these will become more marked. For many of these patients you will have to do much of the thinking, and see to it that they are properly protected by seasonable clothing. Encourage the untidy to be neat and orderly about their own persons and their rooms, and to live like the outside world. Many of them can be trained to self help. A little extra pains at the beginning will repay you. Never abandon your efforts with any patient towards improving him in every way.

Some want to dress fantastically, in keeping with their delusions. Indeed, there are few who do not affect some peculiarity of style; a bit of ribbon, or a grotesque hat may betray their mind's condition. Years ago they had an ugly old Queen in a certain asylum, who, covered with buttons and tinsel, levied taxes on all the subjects who visited her, and the tidbits she got thereby well rewarded her pains. Under better management she was shorn of her toggery, and was the better for it, and the effect on her fellow-patients was for good.

Disorderliness in eating is another habit for correction. Some, and especially paralytic dements, are wont to eat ravenously, stealing from others, cramming huge pieces into their mouths and bolting them. Guard against this, as, good manners aside, they may choke, and will not be the first case in Canada either. It may be advisable to mince their food beforehand. Some are so careless you may have to protect their clothing like a child's. Others you may have to keep from making a meal of the dessert or prodigal use of the sugar, butter, etc. Other poor creatures will swallow leaves,

rags, ashes, etc. Like a baby, everything goes to their mouths. It may be in these cases the special sense of taste is abolished. As serious injury may accrue from the habit, prevent it.

There may be mischievous and destructive propensities to be checked. While some patients are destructive only when violent, others are maliciously so, and will do their best to escape your omnipresent eye, and glory in their deviltry. They will tear up clothing and bedding, hide it, or throw it out of windows or down the closet. They will destroy anything they find, and often spoil the walls. Watchfulness is all that should be used to mend such cases and keeping them at work, so that Satan cannot find them mischief.

There is an impulse in some to break glass, which they cannot resist, though they get badly cut. Therefore screen their windows and have pictures unglazed. In some hospitals they have the light coming only through the roof of rooms for such patients. They may not be violent or otherwise destructive.

The disposition to burn things or to steal is seen in others. These symptoms have wrongly been magnified so as to name the diseases from them as pyro and kleptomania. An attempt is occasionally made to thus cloak crime and shield rich sinners. But these evidences of insanity are rarely the only ones in a patient. Paretic dements are often thievish under the delusion that what they take is their own, for they are prone to fancy they own the earth. In these cases again occupation will come to the rescue.

There are patients who are given to mutilating their bodies, and these are often inspired. You can't be too careful in keeping all weapons away. A common form of self-injury is to stick needles or glass into the skin. If you find a patient with delusions of mutilation, guard against its occurrence; thus one may declare his eyes offend, and he tries to pluck them out.

We shall next turn to symptoms rather bodily than mental. It may not have occurred to you that in dealing with the mind physical symptoms would cut any figure. But on reflection you will see that the connection between mind and body is so close that it cannot be otherwise. While the brain is

safely lodged within its bony chamber, it is in intimate communication with the other organs, which convey to it impressions that either soothe or annoy, comfort or distress. Bodily disorders are often the starting point of mental. A fit of the blues may be due to a torpid liver, and many diseases can irritate the brain and derange its functions, of which one is mind. And the mind can react on the body with equal vigor. We know how worry may retard digestion, and fear affect the heart. Nearly every recent case of insanity manifests many symptoms of disordered bodily functions. In referring to the body in insanity my task is lightened by the fact that you are already familiar with general nursing. My remarks, therefore, need only be supplementary. So if you take up the care of the insane your present knowledge need not be shelved, for the insane are very liable to the ills of sane flesh as a complication, which with the physical symptoms of their peculiar malady may demand your skill. Your efforts, then, must be largely directed in measures that will improve the general health. It is not all moral treatment. All that tends to promote the bodily welfare directly benefits the mental. The brain indeed is so situated that we cannot treat it directly as we do many other diseased organs. The most stable recoveries are those in which the bodily and mental conditions make equal progress.

I can pass over things with the benefit of which you are acquainted, particularly hygienic measures, as the necessity of ventilation, cleanliness, etc., warning you that sanitary surroundings are apt to be neglected with the insane. The friends want to have the windows fastened down, the shutters shut and doors closed if the patient is any way troublesome.

Loss of weight is the rule with the insane, in whom wear and tear is excessive. Rarely will you meet an acute case in which the patient has not fallen away in flesh and color. So that everything possible must be done to restore the lost, for once your patient begins to gain in weight his mind will likely soon show signs of improvement. It is well to have him weighed weekly. The weight is an index to the bodily health and a clue to the patient's condition. If the weight be regained and the mind becomes no better, you may usually consider the case beyond cure. But until you have

built him up, hope and strive on. Patients can't fatten too soon or too fast, nor can you have too great faith in the "gospel of fatness."

This naturally leads us to consider some points regarding food and feeding. To see that plenty of proper food is taken will be a most important duty, perhaps half the battle. Except in cases already hinted at, there will be greater probability of too little being eaten than too much. Excited maniacs can assimilate from 6 to 10 times the quantity of food needed in health to make good the waste going on. Some who come near death's door from exhaustion are tided over the crisis by food with sleep. A foul tongue does not indicate less food. Most cases will get sufficient in three square meals of digestible, mixed food. But others may need something between. Then, and in most acute cases, milk is your sheet anchor. No culinary preparations are so useful as those into which milk and eggs largely enter. The more ways your skill can present these the better. All the tempting things you prepare for the invalid have a place as variety, but let no abominable nicknacks supplant milk. Need I tell you that, just as for the sane, the food should be well prepared and attractively served. Many are keenly sensitive about this, and if some lack refinement, their minds will be improved by displaying it to them.

Refusal of food, either absolute or partial, is common. It may not be taken because of inattention, as in mania, where the patient is too busy to eat. In such a case perhaps you can only give a little at a time, but repeat often during moments of least excitement, for few cases need nutrition more. As a rule, their refusal is not persistent. It is oftener declined because of the delusions of the melancholiac. But by studying your patient, some way may be found to meet his whims and fancies. One who suspects poisonous designs may take eggs in the shell or potatoes in their jackets. By cooking in his presence he may be convinced his meal is poison free. He may eat what has been got ready for some one else, or off your plate. He may take it if you will first sample it to show it has not been tampered with. It is well at times for the nurse to affect indifference about giving food, for then the patient thinks she has no ends to serve.

Thus may frankness and indifference disarm suspicion. One who thinks it wicked to eat will swallow if you put food in his mouth with a pretence at force. *His* conscience will be then clear. One who fancies himself unworthy or is unwilling to dine with others, may eat alone or take food after the rest leave. One will eat if he can steal food or pick it up unobserved. If so he should be given the opportunity, and you may leave food within his reach. One will eat if you put crackers in his pockets. Another, if let do it in his own way, *e.g.*, standing. Some from delusions eat certain kinds of food only so that they do not get variety enough. Some will take liquids readily, but refuse solids. In such cases let what they take be as rich as possible. Thus tact can do much to persuade patients to take nourishment, and you will see one nurse succeed in this where another fails. But if no way can be found to offset their delusions, then they must be fed mechanically as a last resort, and that too before they have gone too far towards starvation.

As forcible feeding is not without its risks, it should only be done under the immediate direction of the physician. It is found necessary to make use of it almost daily in large hospitals, some patients being fed thus for months. The plan adopted is by means of a soft rubber tube passed through the nose or mouth, and several nurses are usually needed to overcome resistance. Some have a trick of trying to regurgitate the food that is thus given, for whom you must be on the lookout. Rectal alimentation is not much employed, but it may have a good moral effect, the patient eating after one such operation to avoid the humiliation.

Sleep is quite constantly affected in insanity, insomnia being one of the first symptoms to appear, and what little sleep is got is disturbed by horrid dreams. It has been said if a man sleep well he will not go insane, no matter what causes exist to drive him out of his head. Like other bodily organs, the health of the brain is best maintained by exercise and rest in proper proportions. Sleep is the brain's rest, its closing for repairs. So we find a mental break down is preceded by interference with sleep, the mind working on without interruption, and this condition is apt to prevail during the acute stage. Sometimes insane patients seem to

pass weeks without apparent sleep, which I need not say makes us anxious; when sleep returns we look for the approach of recovery. It will be your duty to note carefully the duration and quality of the sleep your patient gets, and encourage sleeping habits by every means your art can suggest. The past few years have witnessed the birth of many useful hypnotics, but the ideal one has yet to come forth. They are abused by some in insane cases, when what may be called chemical restraint is used, as in the old asylum days, when the night watch went his rounds armed with a chloral bottle to silence the noisy ones.

Open air exercise is the best sleep inducer. Not only is it that, but so necessary for your patient's general welfare that I would call your special attention to it. If at all able, and most are, your patient should get out some portion of each day, even if only for a turn in the yard. One of the chief difficulties in home treatment is the objection of friends to exhibiting the invalid out of doors. But you must insist on it. In the summer time most of the day should be spent in the fields or lawns, while in winter shorter walks can be taken. You must exercise your judgment to avoid fatigue; too much fresh air they can't have, but they may over-exercise. Also avoid loitering where strangers may guy them. Not only is the blood thus better oxygenated, but the patient's mind is diverted by what he sees, and injurious thoughts banished. In every case fresh air will prove profitable, stimulating the downcast, calming the restless and aiding digestion.

Melancholic patients often object to going outdoors, but their well-being demands it. However, patients' protests are to be duly weighed. Their objections are not always imaginary. Every word and act of your patient is not an insane one. Don't fall into that error.

While exercise is so advantageous, prolonged rest in bed may be indicated. In acute mania, especially, physical exhaustion may be extreme, and is often improved by confining to bed and nursing as you would a delirious fever patient. It may require a couple of nurses to keep the patient there, but merely fastening the sheet to the mattress may suffice. Some when wildly excited are quieter when

left in bed. Seeing no variety, their thoughts become less confused. The objections to bed treatment are the danger of suicide or of falling into lazy and untidy habits.

The general sensibility is often remarkably altered in the insane. It may be so lost that wounds are not felt. Maniacs are often insensible to temperature, so you must be careful in applying heat or cold, else some would let hot applications stay on till serious blistering occurred; also to try the temperature of the bath. You will be surprised how much clothing they can dispense with on cold nights, and yet seem none the worse. In some cases you will find difficulty in keeping clothes on at all. On the other hand, many are cold-blooded, and require extra clothing.

Constipation with its train of evils is a common thing with the insane, and the condition of the bowels should be carefully looked after. Excitement or depression may subside after a free movement of the bowels.

There are some patients liable to accidents from the brittleness of the bones. This is the case with paretic dements. Unfortunately they are often pugnacious, and if handled roughly the consequences may be a fracture. Their bones may be broken when no rough measures have been used.

The temperature is not usually abnormal. When you wish to ascertain it, in many cases it may be foolish to try and insert the thermometer in the mouth, for it may be broken in a struggle, or bitten in two, and the pieces swallowed, or otherwise unsatisfactory. If you have any doubt as to his behavior, place it in the axilla and hold it there yourself.

While not within our province to-night to discuss medication, it may be said that while physic is often secondary to the means for cure already cited, tonics and sedatives are sometimes of great value, and it may be very important that they get the benefit of medicine ordered. You must therefore see that it is swallowed, for some will throw it away, if left to take it when they wish; others will hoard it. Some will try to keep it in the mouth, to spit it out when your back is turned. Some apathetic ones have been known to accumulate quite a few pills under the tongue. Patients may

refuse outright to take medicine, either because they think they are well and need none, or on account of some delusions, that it displeases God to take it, etc. Only the slightest amount of force is justifiable to get such patients to swallow. Holding the mouth and nose are reprehensible practices. If great force is used, it will do more harm than any good in the dose can counteract. Always, too, give medicine as such, and don't deceive.

If medicine will not be taken, it may be necessary to give it rectally. If an enema has to be given by force plenty of help will be needed to avoid injury. At least one fatality has occurred therefrom. With frenzied patients you should always use your eyes.

The bath will not only be indicated for hygienic reasons, but therapeutically. The warm bath with or without cold to the head often acts like a charm to calm the restless and induce sleep. Patience and tact will often overcome curious objections they may raise to ablutions. If the patient fears the tub and will use a sponge and water, it is better to humor him.

You will have observed from all that has been said that while they have things in common, some of the differences between nursing insane patients and those you have been accustomed to are as follows:—

Nursing the insane involves a double responsibility, for both mind and body demand attention. The day may come when it will be regarded the loftiest branch of nursing, as it entails the care of the mind, the dome of thought, the most vital part of a man. You must nurse the whole patient, rather than attend to some one part of the body. Moral treatment will be more requisite. He will depend on you for mental guidance. He is like a child in many ways, and may copy your example. In insanity you depend less on what the patient tells you of his bodily symptoms. He may not notice real troubles, and his mind may be filled with imaginary ones. Unexpected changes will occur more frequently than in bodily diseases, when you will have to act on your own responsibility. More will depend on you and less on the doctor than in ordinary cases. There will be less surgical work and less medicine to give, and fewer sick in

bed; more annoying behavior on the part of the patient and more physical labor. Your time will be occupied very differently. But with these and other differences there is no more difficulty about it than many cases you undertake now. And I know no greater pleasure that can come to you than to see a patient restored to himself and his friends, and that largely through your efforts.

You will be interested in some comparison between home and hospital care, for you will thus get some idea of what kind of cases may be left to you in private. For while many may be treated at home, more have to be sent to institutions, for a variety of reasons. While enumerating the advantages of a hospital, you will see there are many things done there that you can practice in the home to a greater or less extent. I will be glad if any false ideas you may have of an insane hospital are corrected. One of the proofs of the erroneous ideas abroad is this: Not seldom recovered patients are loath to leave the friends made there. Few but become content in the Hospital after a little time.

In former times, when insanity was regarded as a visitation of God or the devil, or the man moonstruck or lovecracked, or anything but ill, the poor victim wandered about, the sport or terror of children, no attempt being made to restore. If dangerous, he was treated to a cage and straw. But thanks to certain philanthropists, asylums have since sprung up to receive the deranged, and in our day we see these being converted into hospitals. The day of the corridors destitute of ornament, cheerless and uninviting has gone by.

In hospitals there is every advantage skill and experience can suggest, at little expense; the patient remains there without anxiety to friends, more than they need have about their money in the Bank of Montreal. To avoid the publicity asylum life is supposed to entail, relatives excuse themselves by saying the association with lunatics must be injurious. They never think their patient as bad as others. But superintendents do not huddle patients together promiscuously, and, besides, mingling with others is the best thing for some. From being all taken up with self, they grow less introspective when they find others afflicted like themselves, and may even take to criticizing their neighbors' errors. With

questionable humanity, they prefer to keep the insane at home in an attic perhaps, without doctor or nurse, cared for only by a servant. Lest the afflicted ones be seen, they are kept indoors, which tells on their health, and crystallizes their infirmity. When they get so troublesome that they can no longer be kept in the house, they are consigned to an asylum for the rest of their existence, cure being out of the question. An asylum often offers more privacy than can be secured at home, for servants will gossip over family failings. The discipline and regular routine of asylum life cultivates self-control. Instead of the patient acting in accord with his own sweet will, regular ways of living must be followed. The patient may be kept under observation better in a hospital. There are more to do it. Hospital life is good for some, because they will exercise greater self-restraint among strangers. Patients may be calm in a hospital, who run riot at home. The unruly one will resist interference with his liberty in his own house, where he has been master. When he finds servants disobey, and that he is a prisoner instead of lord of his castle, he will become so vexed that he will not likely accede to any proper treatment. Sick parents don't want their children to control them. It is well often for other reasons that a patient be removed from his relatives, for whether it is because insanity is an hereditary disease or not, they usually make the worst sort of attendants. Relatives can't be calm in the presence of suffering, and they are apt to threaten the excited and tell the depressed to brace up. A strange nurse going in will often do away with all this.

A hospital may be good because it withdraws the man from scenes associated with his delusions and takes him from the home circle. But of course that can be done without going to hospital. Again, removal from home may substitute real for fancied troubles. The morbid thoughts which at home crowded his brain may be replaced by home-sickness beneficially. Hospital care is needed often either to protect the patient from himself or others, and in many cases where it is not essential for safety, it may be for cure. Even when unnecessary, it may be expedient, on account of his influence at home on children or others of unstable mind. His example, the anxiety and worry are hurtful. It may be expedient to

withdraw from the marital relation, for sexual excitement is in some cases marked, and indulgence an obstacle to recovery; or it may be expedient for society's sake, he may grow dangerous or a source of scandal, demoralizing the community with his queer ways for boys to jeer at.

But while the hospital has so many advantages, there are many cases that can be treated as well, and some better, at home; or where home is objectionable, in some suitable house, preferably in the country. Most recent curable cases should when practicable be given at least a trial at home. The idea is altogether too prevalent that as soon as evidence of insanity is seen, its victim must be hurried to a hospital. True, if he cannot receive treatment at home because of poverty or anything else, he cannot be committed there too soon. For insanity is not a disease that cannot be arrested when once it has set in, and the earlier treatment is begun the brighter are prospects of recovery. Unfortunately, owing to prejudice, patients are kept at home till the curable stage has gone by.

Many poor sensitive families shrink from the formalities that must be gone through to pass the hospital door. The law prevents asylum treatment in many incipient cases until the disorder has gained such ground as to leave no doubt of their state. Precautions meant to protect often affect the patient most injuriously. The Government is penny wise and pound foolish in this matter, and is creating chronics to be supported for years.

If private attention can be afforded, then the advantages of both plans of treatment will have to be weighed. Though we see to-day patients of all classes rushing to general hospitals for every ache, the insane hospital has not got so popular. Indeed, it may pay you to specialize, for while bodily cases grow fewer, insane ones increase, and friends will be more and more inclined to keep at home if they find patients can do as well there.

A difficulty at times encountered in private is to get the patient to submit to any kind of treatment, for he will not admit anything is wrong. But this and other difficulties may be overcome often, and after recovery he will more readily forgive restraint imposed at home than in an asylum.

In the home the risks are greater, but many of them may be obviated. Windows may be checked, rooms should be prepared on the ground floor, likely weapons kept out of the way, etc.

In private you will have less assistance and more responsibility. The other members of the household may bother you more than the patient. There is no disease of which the laity know less, but of which they think they know more, than insanity. Relatives are often suspicious of your conduct, or frightened, or fussy, or obstructive. So you must needs be firm and carry out the orders of the physician only, and he will see to it that the patient is left solely to your management. Because of the proximity of meddlesome relations, and for other reasons, it is often desirable that the patient should be removed to other quarters, preferably some good farm house. After the acute stage has passed, such change of scene and removal from surroundings of which the patient is weary will complete his recovery.

In conclusion, little need be added regarding your personal qualifications. Doubtless you have had instructions ad nauseam as to what a model nurse should be, and by this time exemplify that character from day to day. But I will say that every good quality now possessed you will find use for in insane nursing. Especially will you find tact helpful in diverting the patient's mind and managing the case. You may find it of value on the very threshold, and your success may largely depend on the first impression made. When called in, you may find the patient will have nothing to say to you as a nurse, but may converse with you as a friend. He will likely be jealous of the intrusion of strangers, and not admit his need of advice or nursing. It is well to listen to all he has to say attentively, without at first making many inquiries, which he is apt to look on suspiciously. Don't treat his aberrations lightly, but rather sympathize with him. By and by he may be got to admit some disorder, such as sleeplessness, for which he will submit to treatment, and thus tact carries the day.

Sympathy you will find has a great influence on the insane mind. But coddling and a display of warmth of affection are often injurious. Sympathy should find expression in deeds rather than words, and you will gain his confidence

thereby. Hold not aloof, but join heartily in his work and play, and thus will a bond spring up between you that will do more for his cure than medicine. You will often find among the insane most enjoyable and talented companions, for genius is closely allied to insanity. Your patient may be extremely grateful to you for your kindness after recovery. Besides, it is well to bear in mind that your wildest patient may remember everything that happened while he was not himself, and after he gets well may remind you of some unkind word said when you forgot yourself for a moment.

Firmness in the nurse is specially helpful to the wavering mind. Some patients are more docile with one nurse than another, simply because they have found out her will is law. There is no need to be domineering, only decided. There is a temptation to abuse the authority one is given over such patients. But let it be cloaked with gentleness and good temper, as the hand of power is hid by the soft glove.

Deception is not allowable or necessary in managing these patients. It destroys our influence. If truth won't answer, then use force, which, rightly exercised, leaves no sting behind. This needs underlining, for the first thing that occurs to some is to resort to deception with the patients. They are often deceitful themselves, but quick to see it in others, therefore it is the more necessary they should have a good example set. Never promise what you can't fulfill.

You will need to keep in play all your habits of observation, and study your patient. In the absence of any information from pulse and temperature, the doctor will be guided largely by what you tell him, for the patient may act quite differently from usual in his presence, and may talk to you but not to him. Besides, your carefulness gives confidence to the relatives.

Fear is a feeling that must be a stranger to you. Be cautious, but not fearful. A lunatic will take advantage of a coward. You will also gather from the symptoms of insanity how much cheerfulness will do to help the sufferer.

Above all, ever remember insanity is a disease, and that the conduct is a symptom. If one is long associated with the victims of this terrible malady, he is apt to forget that they are suffering from ailment of any kind. This is perhaps because

one sees patients as they are, not as they were before disease made them irritable and troublesome. But you will think otherwise if you reflect that the unfortunate patient might be one of ourselves, for insanity is no respecter of persons, and is as apt to dwell in the palace of the prince as in the hut of the lowliest peasant. One would not think of taking to heart the absurd things said by a delirious fever patient, and really it is just as wrong to be nettled by the remarks of the insane. Think of the best friend you have, the most refined, gentle and winning of your acquaintances. As she was when you knew her you could not imagine her doing or saying or even thinking a mean thing. Picture her again transformed by disease of the brain into a wretched, annoying, unlovable creature, not as a result of any fault of her own;—think of her as being given to the care of utter strangers, cut off from all her old friends,—and would you not be anxious that they should understand that she must not be held responsible for her actions, that they should be kind to her—more than kind; and would you not resent any cruelty practised on your friend? This is the attitude taken by the relatives of patients. This is the attitude the conscientious nurse must take.

DIPLO-STREPTOCOCCIC PUERPERAL INFECTION TREATED WITH MARMOREK'S SERUM.

By A. J. RICHER, M.D.,
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On the 1st Dec., 1896 (2.45 a.m.), I delivered Mrs. L., aged 33, of her fourth child, transverse position, turning under anaesthesia; delivery by the feet was only accomplished after a great deal of effort, the death of the child being the result. Placenta was expelled in its entirety, no vaginal or cervical laceration; the mother being very much exhausted, no intra-uterine douche was given until seven hours following delivery.

Two months previous to the confinement, one of the children, a boy of 5 1|2 years of age, had developed scarlet fever, but was at once removed to the Civic Hospital, where he died nearly four weeks after his admission; the day following his removal to the hospital the house had been disinfected by the health authorities, and all felt more or less secure, es-

pecially as the other two children had not in the meantime developed the disease.

The first day following confinement patient felt rather "done up" as she put it, and in fact her pulse had not the volume I should have hoped for, so I ordered brandy and strychnine, which improved the condition somewhat. On the morning of the second day her temperature rose to 100° while the lochia seemed quite normal both in quantity and quality; they were not offensive, yet being somewhat suspicious on account of rising temperature, I ordered creolin douches every four hours, and same evening temperature had fallen to 99 1|5°, only to rise again on the morning of the third day to 100°, evening 101 2|5°, morning of the fourth day 103 1|5° and in the evening to 105 1|5°. On the morning of the fourth day lochia were more scanty and gave out a slight smell and were more viscid; examined microscopically they contained in great numbers large diplococci resisting the Gram stain as well as streptococci in much lesser numbers, and these two varieties existed to the exclusion of all other forms of micro-organisms. Early that morning patient had had a chill, not very severe, but every now and again throughout the day complained of occasional chilliness and rather severe headache. The vulva and cervix showed no false membrane, but were the seat of active hyperaemia.

She had had on the evening of the second day a full dose of castor oil, which produced three stools on the third day and two on the fourth day; the abdomen was not distended much, nor over-tender. Feeling satisfied that I had a case of puerperal septicaemia to deal with, and knowing I had streptococci to fight against, I thought it wise to assail these in particular; and should the diplococci show signs of resistance, I trusted in the use of internal sustaining treatment and stimulation of the phagocytes to dispose of them. My sole pre-occupation was the streptococcus.

On the evening of the fourth day I injected ten C.C. of Marmorek's serum in the loose abdominal tissue. Next morning temperature had fallen to 101 2|5°, but rose again in the evening to 103°, and the next morning fell to 102°, rising the same evening to 103° again, when I decided to give another injection of five C.C., the temperature falling in twelve hours to 98°, and oscillating for the next two days between 98° and

100°, when again on the morning of the 9th day the temperature shot up to 103°, and in the evening to 103 4|5°, when the diplococci, though now in the company of various bacilli- I decided to give another injection of four C.C. of serum; but this time at the request of the patient (who had complained of pain at the seat of inoculation under the binder), I made the injection in the left gluteal region deeply, and in spite of all antiseptic precautions, an abscess developed at the seat of inoculation, from the pus of which a diplococcus was found in every way identical with the one found associated with the streptococcus of the lochia, but this time in a state of purity. The lochia examined on the day following third injection of serum showed the absence of the streptococci but the persistence of the diplococci, though now in the company of various bacilli which appeared to be saprophytic. The abscess was freely incised, and filled up in the course of three weeks without giving rise to any unusual symptom. The temperature oscillations following the third injection, which continued for five days (when abscess was incised), may be attributed to the development of the abscess, the cause of which was probably autogenetic, especially as the injection had been intra-muscular and the anti-toxine being one directed against a different micro-organism,—the streptococcus. From the 21st day the temperature remained about normal, and the patient made a slow but good recovery. Beginning at 5th day, brandy, strychnine (1|30 gr. doses) and proto-nuclein tablets were administered, and creolin douches twice daily were given. Haematuria though slight followed the second serum injection, but gradually disappeared.

The appended chart shows that the falls in the temperature were in no way ascribable to the medical treatment, as any appreciable lowering of the temperature was only observed after each injection of Marmorek's serum. The respirations were noted from time to time, and always found to be in the same ratio with the pulse, following closely its characters, and for this reason were not recorded in appended chart.

I omitted to mention that on the 6th day following confinement, the patient's eldest child, a boy of nearly seven years of age, developed a typical erysipelas of left cheek, which subsided by painting the affected area with guaiacol and internal use of quinine and iron. How was this child infected? possibly through the caresses of the mother during the

first three days following confinement, as the nurse had the greatest trouble to keep the child away from the mother during that time.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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Associate Professor of Medicine and Neurology University of Bishop's College; Physician Western Hospital.

THE ACTIVE CONSTITUENT OF THE THYROID GLAND.

Dr. Robert Hutchison, in the *British Medical Journal*, Jan. 23rd, 1897, gives the clinical evidence in support of his views that the colloid substance is the only part of the gland medicinally active. The proteids of the glands he finds are two in number, a nucleo-albumin and colloid matters; the latter contains phosphorus and iodine. The extractives resemble those of other organs The specific action of the gland he claims is stimulation of general metabolism and increase in the oxidation processes in the body—clinically manifested by progressive loss of weight, slight rise of temperature and pulse, and increased excretion of urea and carbonic acid. In three cases of myxœdema, tests of these constituents were made. The extractives were found to be inert, as well as the nucleo-albumin. Pure colloid matter which exists in the proportion of 1 gm. (dry) in 10 gms. of fresh thyroid he finds is the active constituent. It is made up of two parts—a proteid and a non-proteid. The former had the action of the colloid in a lesser degree, while the latter is active in minute doses. Hence he concludes that the colloid matter is the active portion of the glands, and exists in all the preparations found to be effective, and that it should be prescribed in preference to the gland as a whole. The advantages are constancy in dose, purity of the remedy, the freedom from taste and odor, smallness of dose, rapidity of absorption, and is more economical.

THE MARAGLIANO SERUM.

Statistics have placed it beyond doubt that as many as one million cases of diphtheria have already been cured by the Behring serum, and there is ground for believing

that antitoxin would have scored a still greater success had it oftener been applied before the diphtheria poison had established a fatal foothold. The same results may yet be attained by the Maragliano serum in pulmonary phthisis; but the nature of this latter disease is such that the antitoxin can never assert its power so rapidly and so decisively as in diphtheria. It is in private practice that Dr. Maragliano and his followers have had most success, and for reasons that are obvious. In such cases the tuberculous patient generally sees the consultant in good time; he is surrounded, as a rule, with the comforts and the careful tendance of home; and he can often reinforce the cure by change of scene. In hospital practice, on the other hand, the patient, in ninety-nine cases out of a hundred, is far gone in the disease; his strength has been reduced by pyrexia or hæmoptysis; his nights have been impaired by harassing cough; and his resisting power is often low through mal-nutrition. And yet even in this latter less favorable type of case Dr. Maragliano has had most encouraging success. His followers have been not less fortunate.

Dr. De Renzi, the dean of Italian clinicians, who for twenty-nine years has held the chair of clinical medicine at Naples, announces that he has had forty-four cases of cure by the Maragliano serum in his wards, and equally gratifying results in his private practice. Like all others of his colleagues who have used the antitoxin, he found its efficacy most marked when the patient was seen early and when complications were at their minimum. One lesson he profited by in his clinic, and that was (as Maragliano himself had inculcated) not to despair when even 200 injections had failed to achieve the effect desired. He observed, indeed, that while improvement had declared itself even in the most intractable cases, he had only to suspend the treatment for a brief interval to witness the rapid exacerbation of all the symptoms and to resume the injections in all haste. Serotherapy, said Dr. De Renzi to a colleague the other day, has a great future. It is rational and physiologic; it corresponds to what we moderns understand by the surviving physiologic forces.

In his own clinic Dr. De Renzi had had convincing proof of the action of the Maragliano serum "*contro le proteine tubercolari.*" With the "tuberculin" of Koch inoculated in phthisical patients to the amount of five milligrams he had obtained a strong reaction; but applying the same "tuberculin" to patients already under the Maragliano treatment the reaction was much less strong, showing that, *pro tanto*, they had become immunized against the "*proteine tubercolari.*" In proportion as he increased the number of

injections of the Maragliano serum, he augmented the immunity against the action of the tuberculous poison, until after thirty or forty injections the reaction to the same dose of tuberculin was barely appreciable or entirely non-existent.

Dr. P. Schivardi, who reports these views of the Neapolitan consultant, adds that in Dr. De Renzi's opinion there is no remedy for phthisis superior to the Maragliano serum. It seldom fails to relieve, and if applied in time and persevered with under reasonably favorable conditions it almost invariably results in cure.—*The Medical and Surgical Reporter.*

INVESTIGATIONS ON THE APPLICATION OF THE PHONENDOSCOPE OF BIANCHI.

(*Münchener Medicinische Wochenschrift*, November 10, 1896. *International Medical Magazine.*) By B. F. Egger, M.D.

After first stating a personal objection that sounds caused by rubbing parts of the instrument are conveyed to the ear with painful intensity, Egger reports an elaborate series of experiments that were suggested by the absence of metallic sound in certain intrathoracic sounds as heard though the phonendoscope. By these he determined that the instrument was incapable of transmitting sounds of greater vibratory rapidity than six thousand per minute, or even less. Tones of lower intensity were magnified. As a result, certain high-pitched heart-murmurs are absolutely inaudible, and amphoric breathing is imperfectly heard or converted into ordinary bronchial breathing. In conclusion, he calls attention to the fact that the attempt to outline the organs by rubbing is inaccurate, inasmuch as the change of note occurs at a certain distance from the staff without particular relation to the border of the organ, as can be proven by experiments on the thigh.

THE SURGICAL TREATMENT OF FOCAL EPILEPSY.

(*American Journal of the Medical Sciences*, October, 1896. *International Medical Magazine.*) By B. Sachs, M.D., and A. G. Gerster, M.D.

The authors report the results of their observations of nineteen cases of partial epilepsy. They include not only the cases of traumatic origin, but also those in which localized convulsions were associated with other diseases, especially with early infantile cerebral palsies. In only a single case

could death be attributed directly to the operation. We are informed that the return of the attacks during the first few days following an operation by no means proves that the surgical procedure has been a failure. The paralysis produced by the excision of a diseased portion of the motor area was found to be merely transitory, probably because this area had ceded its functions to neighboring, healthy portions of the cortex.

They draw the following conclusions:

1. Surgical interference is advisable in those cases of partial epilepsy in which not more than one or, at the utmost, two years have elapsed since the traumatic injury or the beginning of the disease which has given rise to the convulsive seizures.

2. In cases of depression or other injury of the skull, surgical interference is warranted even though a number of years have elapsed; but the prospect of recovery is brighter the shorter the period of time since the injury.

3. Simple trephining may prove sufficient in a number of cases, and particularly in those in which there is an injury to the skull or in which a cystic condition is the main cause of the epilepsy.

4. Excision of cortical tissue is advisable if the epilepsy has lasted but a short time, and if the symptoms point to a strictly circumscribed focus of disease.

5. Since such cortical lesions are often of a microscopical character, excision should be practised even if the tissue appears to be perfectly normal at the time of operation; but the greatest caution should be exercised in order to make sure that the proper area is removed.

6. Surgical interference for the cure of epilepsy associated with infantile cerebral palsies may be attempted, particularly if too long an interval has not elapsed since the beginning of the palsy.

7. In cases of epilepsy of long standing, in which there is in all probability a widespread degeneration of the association-fibres, every surgical procedure is useless.—*Review of Medicine.*

ALCOHOL AND POPULAR MEDICINES.

In the report of the Massachusetts State Board of Health are found the following statements of the percentage of alcohol as an ingredient of nerve stimulants and blood purifiers: Ayer's Sarsaparilla 26.2 per cent., Hood's Sarsaparilla 18.8 per cent., Paine's Celery Compound 21 per cent., and Greene's Nervura 17.2. Malt liquors contain from 1.5 to 8 per cent. of alcohol, wines from 8 to 20 per cent., while

ardent spirits, of which whisky is a type, contains from 45 to 60 per cent. of acohol. Among the wines it is only old Port that contains more than 17 per cent. of alcohol. It is therefore apparent that these "nerve stimulants" and "blood purifiers" out-rank wines in the amount of alcohol, while Ayer's Sarsaparilla reaches almost the proportion that should classify it as "ardent." No wonder great benefit is claimed for these universally used "remedies." The man or woman who is benefited by a draught of "Schnapps" cannot fail of rejuvenation by a dose of these medical "Schnapps." Better take your whisky straight.—*Medical Arena.*

THE ABUSE OF DIGITALIS.

W. T. English says (*Med. and Surg. Rep.; Medicine*) that digitalis is one of the most abused drugs of the materia medica. It appears that in the minds of a large number of the medical profession the pathological range of its application has no limitations. There is a very general want of agreement as to the conditions in which it is applicable, as well as the amount that should be considered a proper dose. Notwithstanding accepted theories and well established facts which should control its exhibition, digitalis has been exhibited in every malady in the catalogue of diseases, and is consequently made the subject of unwarrantable criticism and ever-increasing abuse.

Because it is claimed that in digitalis we have a drug which increases the force of the heart and contracts the vessels of the periphery—except those of the kidneys—it is employed indiscriminately as an ideal diuretic in Bright's disease, notwithstanding the contra-indications observable in capillary tension and cordy pulse. Such irrational therapeutics can result in naught but harm. It seems almost foolhardy to use it in chronic nephritis accompanied with high peripheral blood-pressure, as it usually is, unless preceded by a short course of nitro-glycerin to relieve the peripheral tension.

A fact that is not only forgotten but frequently ignored is, that in normal conditions the heart muscle adjusts itself to the demands made upon it. In those whose vocations force them into the extremes of bodily exertion, the heart becomes muscular in proportion to the demands. In response to temporary or protracted influences that perturb the heart and induce over-exercise without diminution of tonicity of the myocardium, as in functional or reflex disorders, the same result follows. Digitalis is often administered under these circumstances to steady or quiet the cardiac tumult. In the author's opinion, this is a flagrant abuse of a good medicine and an

unpardonable sin against the heart. It is but an added goad to an already overworked organ. Moreover, if the stomach, whence the disturbing impulses often proceed, is already irritated, the presence of digitalis will augment the difficulties in geometric ratio by increasing nausea and heightening the cephalalgia and other symptoms of gastric distress. Cardiac arythmia of myopathic origin, or reflex, toxic, or nervous in its nature, cannot present a reasonable cause for employing digitalis. If it be exhibited in palpitation due to neurotic conditions, there will be a possibility of converting the curable disorder into an incurable malady.

One of the most universal abuses of digitalis is the habit of prescribing it for a patient without advising him to abstain from exercise while under its influence. There are very few physicians who have not been disappointed by its results from the counteracting influence of exercise. All patients taking digitalis should live in perfect physical and mental quietude, as otherwise there is danger of adding to the perils of the diseased conditions demanding its use.

In mitral regurgitation there is a time when the administration of digitalis achieves its greatest clinical good. The opportunities for its good action are often permitted to pass by on the one hand, and upon the other the drug is sometimes administered so prematurely that its most effective opportunities are lost. It must be remembered that in mitral regurgitation the two chambers of the heart are practically one, and increased vigor of the ventricle augments its suction power during diastole as well as its propulsive energy in systole. Through this dual service the engorged pulmonary circulation is unburdened and the anæmia in front is also relieved. This is the only condition in which it can secure such results.

In aortic regurgitation it is sometimes employed in a thoughtless and careless manner. It is a dangerous medicine, and often harmful in this valvular malady. If the diastole is increased and prolonged, the period of regurgitation and its force are augmented, and the difficulties multiply.

The only excuse for prescribing it in aortic stenosis is to give vigor to the myocardium when the tendency to dilatation is pronounced. If it slows the action of the heart notably, it may add to the valvular systole or occasion tetanic contraction.

It is deplorable to see a well-informed physician employing it in conditions of compensation. Many a case of benign hypertrophy has thus been goaded into myocardial weariness and weakness that disabled the heart from keeping up its work. In the absence of dropsy, in all cases where the urine is voided freely, there is little, if any, call for digitalis.

THE WEARING OF VEILS, AND ITS EFFECTS.

The *Boston Medical & Surgical Journal* for December 3rd publishes an article on this subject, by Dr. Casey A. Wood, in which the author remarks that, although we hear and occasionally read of the ill effects produced by veils upon the eyesight, very little has been done in the way of determining the exact degree of interference with vision which these ornamental and occasionally useful protectors bring about.

The fact that the wearing of veils is productive of weak eyesight, headaches, and sometimes vertigo and nausea is, he says, within the experience of every ophthalmologist. Not only are these effects produced by the eye strain consequent upon the added efforts made by one or both eyes to see through or around an obstruction, but the irregular figuring on the veil itself is, in some instances, a source of annoyance to the wearer. As in other cases of abuse, the author remarks, the burden rests heaviest upon the weakest eyes, and probably the reason why one encounters so comparatively few instances of asthenopia directly due to veil-wearing is that the embarrassed eyes are able to overcome the additional strain where the vision is normal, the oculo-muscular system in proper equilibrium, and the general health good.

Dr. Wood had a dozen typical specimens selected for him for the purpose of demonstrating the extent to which veils of various kinds influenced the eyesight, and made a number of experiments with them, the most important of which he gives an account of, with the following results :

1. Every description of veils affects more or less the ability to see distinctly, both at a distance and near at hand.

2. The most objectionable kind is the dotted veil, although the influence of this variety for evil is more marked in some samples than in others.

3. Other things being equal, in undotted and non-figured veils, vision is interfered with in direct proportion to the number of meshes to the square inch.

4. The texture of the veil plays an important part in the amount and kind of eye strain produced by the veil. When the sides of the mesh are single, compact threads, the eye is embarrassed very much less in its effort to distinguish objects than when double threads are employed.

5. The least objectionable veil is that without dots, sprays or other figures, but with large regular meshes made with single, compact threads.

It is not a necessary consequence of the wearing of veils that eye symptoms should result, continues Dr. Wood, for a healthy body resists the strain of an impediment to vision just as it does other deleterious agents ; and it is only when from

other causes the eyesight is weakened that the wearing of an objectionable veil proves immediately and obviously hurtful. Dr. Wood states that he has noted many cases of headache and painful vision, as well as other ocular symptoms, produced by veil-wearing in persons whose eyes are not overstrong; and he believes that this practice is one of the agents, not perhaps always recognized, that contribute to ocular discomfort, and it is not the part of wisdom to compel our visual organs to overcome unnecessary obstacles in the effort to see.

It has been urged in defence of veils, he says, that they are often required for the protection of the face, to keep the hair in order, or to retain the hat in place. If the happiness and comfort of members of the gentler sex are thus bound up in veil-wearing, he adds, they should at least give preference to those veils that do the least harm.

But what excuse can be urged, he asks, for that not uncommon offence, the attempt to read through this unnatural screen? And yet such exhibitions are of every-day and every-night occurrence in places of public resort—street cars, railway trains, churches, theatres, concert halls, club rooms, etc.—thus adding to the injury of defective distant vision the insult of eye strain for near work.—*The Woman's Medical Journal.*

OBSTETRICS.

IN CHARGE OF

H. L. REDDY, M.D., L. R. C. P., London,

Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

SULPHATE OF QUININE IN LABOUR.

Schwab (*Revue Obstet. et Gync.*) vaunts the efficiency of quinine as an oxytocic. Whenever he has given it in the course of a simple lingering labor it has awaked or accelerated uterine contractions. Quinine, he maintains, stimulates uterine fibres when once they have begun to contract of their own accord. Unlike ergot, it does not set contractions going; hence it is not an abortifacient. Quinine has one distinct advantage over ergot: the contractions which it sets going retain their normal intermittent character. It acts rapidly—within twenty-five minutes as a rule. Large doses are needed; Schwab gives a gramme, that is, 15 2|5 gr. in two "cachets," taken at an interval of ten minutes. He prescribes these two doses of sulphate of quinine particularly when the membranes are ruptured, and it is advisable that the labor should be ended as soon as possible. It is harmless to mother and child alike, since, should it fail, dilators or forceps may be used, and there is no difficulty from the tonic

contractions caused by ergot. Schwab warns obstetricians that, as the placenta comes away, when quinine has been used there is a slight tendency to internal haemorrhage. Coules, as long ago as 1888, advocated quinine in abortion with retention of foetal relics. Schwab has given the drug in three such cases with good results, the relics being quickly expelled, but he cannot feel sure how far the quinine contributed to the good result until further experience. Of its direct value in labor he has no doubt.

PLACENTA PRÆVIA.

Heil, *(L'Obstét.)* describes the practice now adopted at the Heidelberg Maternity in dealing with placenta praevia. The membranes are first ruptured so as to bring down the head. When dilatation is complete there is no doubt what ought to be done. But if the os remains narrow, and in cases where the haemorrhage begins before labor, antiseptic plugging of the vagina and cervix is indicated. Braxton Hicks' method is dangerous for the child, but quite allowable if it be dead or hardly viable, or if the mother be in immediate danger. Heil notes 28 placenta praevia labors, 29 children being born; 4 mothers died (14.28 per cent.) ; 14 had high temperatures ; in 10 of these the tampon had been employed ; out of the remaining 14 where there was no fever the tampon had been inserted in 6. Out of the 29 children, 19 (65.5 per cent.) were at full term, 9 delivered dead, 4 died within twenty-four hours of birth, and 16 (55.1 per cent.) survived. In 2 cases admitted with complete dilatation both mother and child were saved. Out of 19 children at term that were living when labor began, 11 were delivered alive by turning, whilst in 8 cases the tampon was applied till dilatation was complete, only 1 child being lost, and in that instance the pelvis was rachitic ; all 8 mothers were saved. These statistics are favorable to the tampon.

DELIVERY IN THE MORIBUND.

Decio *(Univ. Med. Mag.)* publishes a table of 18 labors, in which women apparently in a dying condition were delivered per vias naturales; of these, six children, including one of a pair of twins, seem to have lived. Five were born dead. The remainder expired soon after delivery. Turning after various methods was exclusively the means employed in all cases. In six the mothers were suffering from eclampsia ; of these, five recovered, including the twin labor case. Three had cerebral apoplexy ; of these, two recovered. Two with advanced phthisis survived for a few weeks. Four were flooding from placenta praevia ; of these, three were saved. One with pulmonary congestion recovered. One bleeding from an internal wound was saved, and one injured by a fall died.

DIAGNOSIS OF PREGNANCY BY THE SHAPE OF URINARY PHOSPHATES.

Parke in *Am. Gyn. & Obstet. Jour.* finds as a result of his researches, when conception occurs, the triple phosphates in the urine change their form. They lose their feathery appearance, the change beginning at the tip and progressing towards the base. One side only may be affected, or both, leaving only the shaft and perhaps a few fragments adhering to it. The shaft assumes a beaded or jointed appearance. These changes commence within 20 days after conception, and are most marked in the early months and almost absent in the later months. When the death of the foetus occurs, the phosphates resume their normal appearance. This change in form of the urinary phosphates being recognizable very early, it is of the greatest value when other signs are of the least reliability or wanting. A diagnosis may be made without examining patient or her suspecting it.

CONSTANT IRRIGATION IN SEPTIC PUERPERAL CASES.

Gliakoff in the *Jour. de Med. Mil.* describes a method for the treatment of puerperal cases, by constant irrigation of the uterus with solutions of carbolic acid and permanganate of potash. A one p. c. solution of carbolic acid was first employed, and followed by a weak solution of permanganate of potash having a rose color. The irrigating fluid was kept at 104° F., and allowed to flow for six hours. The results were excellent. Only one patient out of twenty-eight thus treated died, and she was not treated until three weeks after labor, and had pyaemia.

ALBUMINURIA IN PREGNANT AND PUERPERAL WOMEN.

Dr. Eklund *(Edin. Med. Jour.)* believes that midwives' handbooks should call attention to the necessity for examining the urine of every pregnant woman. If the urine be found to contain albumin, the midwife should be competent to order hot baths, flannel underwear, rest in the recumbent posture, mild diuretics and laxatives, beef tea with parsley, seltzer water with boiling milk, milk food, boiled fruit, weak coffee, tea and chocolate, compound liquorice powder, etc. If this hygienic treatment does not within a certain time, say a month, cause a disappearance of the albumin, a physician should be called. It is a matter of great importance that the pregnant woman should learn to procure for herself daily evacuations of the bowels, especially towards the end of pregnancy and in the beginning of labor. For this purpose dietetic means

should be employed chiefly; but in case of failure, mild aperients should be used, such as cascara, senna, frangula, compound liquorice powder and enemata of salt and water. Of the very greatest importance during pregnancy, and especially during the puerperal state, is the care of the kidneys, the avoidance of all that would tend to increase the functional activity of these organs, the maintenance of equilibrium and the proper division of labor between the skin, digestive apparatus and the kidneys. If any organ can bear a greater exercise of function it is the skin, and next in order of tolerance the intestinal tract, the lungs are far more sensitive, but the kidneys most of all. No puerperal woman should be permitted to leave her bed until her urine is free from albumin.

ECLAMPSIA AND THE MILK TREATMENT.

Ferre *(L'Obstet.)* regards the milk treatment to be most efficient from a prophylactic point of view in the treatment of puerperal convulsions, although it does not necessarily cause the other alarming symptoms besides the convulsions to disappear. He has never seen convulsions in a patient subjected for over a week to milk diet nor any other trouble of toxic origin. The alleged disappearance of albuminuria on the other hand does not necessarily occur.

Ferré speaks with equal decision on this point, declaring that he has never seen so much as an appreciable diminution of albumin even after prolonged milk diet. The same is the fact with the oedema. The above facts are emphasized because he is aware how some obstetricians have very naturally given up milk diet on account of persistence of the albuminura and oedema. Such a step is a mistake, for if the treatment be continued, labor will proceed without any convulsions coming on, though the legs remain swollen and the urine albuminous.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, November 9th, 1896.

GEORGE WILKINS, M.D., PRESIDENT, IN THE CHAIR.

HYPOPLASIA OF ONE KIDNEY.

Dr. J. G. ADAMI read a paper on this subject, illustrating his remarks by two specimens.

Dr. WYATT JOHNSTON referred to five cases in his experience where there was absence or hypoplasia of one kidney. In one of these the death was due to a rupture of the remaining kidney, and in another the removal of the functionally active kidney was followed by anuria and death.

SERUM DIAGNOSIS IN TYPHOID FEVER.

Drs. WYATT JOHNSTON and MACTAGGART communicated the result of three hundred and ninety observations on the serum reaction of typhoid. These were made, partly in hospital cases, and partly in cases when samples were received at the laboratory of the Board of Health of the Province of Quebec. The results obtained were shown in the following table:

Total cases of genuine or suspected typhoid	431
Positive Results.—Decision on first examination. (Of these, complete reaction in 112; partial reaction, 6. Three of these before the third day)	118
Doubtful on first examination; decisive on second examination. (Of these, 4 were first examined before sixth day)	5
Total positive results	123
Negative Results.—Decisive cases proved by subsequent history to be something other than typhoid, viz.: meningitis, malaria, pneumonia, constipation, etc.	14
Negative Results remaining in doubt.—Mild cases of typhoid first examined during convalescence	3
Primary examination negative, clinical history typhoid, no re-examination	2
Severe fever of typhoid type, negative results both by Widal and the dry method (examined three times)	1
Total negative results in cases of possible typhoid	6

They considered that about 90 per cent. of successful results could be obtained by the method in public health laboratory work, although typical hospital cases gave a much higher percentage. They had never met with a typical reaction apart from typhoid fever.

Dr. ADAMI congratulated Dr. Johnston on having worked out this simple method of diagnosis in typhoid fever. Although the author of the paper had endeavored to show that Dunham had been the originator of the serum reaction for typhoid, and that Widal had first popularized it, Dr. Adami thought that Dr. Johnston deserved still greater credit for having devised this simple test

which was so generally applicable. It was evident that Widal was wrong in contending that the dried blood was not so good for examination as fluid blood. Without doubt this method would come into general employment in the health offices of cities throughout America and eventually in Europe.

Dr. H. A. LAFLEUR drew the attention of the Society to the great value of the test in differentiating the various febrile conditions grouped under the name of febricula. This term was mainly a cloak for our ignorance, and included among other things a certain number of cases of mild or abortive typhoid. If in any given case of so-called febricula the typhoid reaction of Widal was present, one should be on the watch for a possible relapse and should exercise caution in feeding.

Dr. J. B. MCCONNELL thought this an important method of detecting typhoid fever, not only in the earliest stages but in masked forms. Typhoid fever had so many anomalous forms, epidemics varied so much in their character, and difficulties in diagnosis were so frequent, that it certainly was to be regarded as a very great advance. In a few cases which he had sent to Dr. Johnston the diagnosis had been made at once. He had had a case recently in which he found it especially useful, it was a case of supposed malarial fever, but the symptoms also resembled those of typhoid. The patient had been in one of the city hospitals, and had been discharged as being better, but he still felt ill, and went around, until at the end of three weeks he came to the Western Hospital. He had frequent chills and perfect intermissions of fever, some enlargement of the spleen with great depression, but no characteristic spots. An examination of the blood for plasmodia was negative except one slide which gave some evidence of the parasite, and this added to the difficulty of coming to a conclusion. The diazo reaction was present. A positive diagnosis was made by submitting a sample of the blood to Dr. Johnston The man died, as most cases of ambulatory typhoid do, and the post mortem examination fully confirmed the serum diagnosis of typhoid fever.

Dr. F. G. FINLEY, speaking of the value of this method in cases of so-called febricula, cited a case which was brought into the hospital a few days previously with all the symptoms of typhoid, although they were not pronounced enough to enable him to come to a decision. He submitted a sample of the blood to Dr. Johnston, who reported that it gave the reaction.

The PRESIDENT thought that probably the first case on which Dr. Johnston had tried this reaction had been a patient of his who came to the hospital some time in September, presenting symptoms of typhoid. He had shortly before read an account in the *Progrès Médical* of Dieulafoy's attempt to make a diagnosis by this method.

Dr. JOHNSTON, in reply, said that in his first case the examination had been made at the request of Dr. Wilkins. In mild cases, clinically doubtful and when the reaction was ill marked, the corroborative evidence obtained by bacteriological examination of the stools should be very valuable. The dry blood method had appeared to offer certain advantages for public health laboratory work, but was not necessary for hospital work. Dieulafoy had brought Widal's work before the Académie de Médecine, but had not himself modified the technique.

BACTERIOLOGICAL METHOD OF DIAGNOSIS IN LEPROSY.

Drs. WYATT JOHNSTON and W. H. JAMIESON read a communication on this subject, and exhibited slides illustrating this method.

Stated Meeting, November 20th, 1896.

J. G. ADAMI, M.D., FIRST VICE-PRESIDENT, IN THE CHAIR.

THE PRESENCE OF TUBERCLE BACILLI IN FÆCES FROM A NON-TUBERCULOUS INTESTINE.

Dr. C. F. MARTIN read for Dr. R. B. SHAW and himself a report of this case.

Dr. GORDON CAMPBELL thought this was an extremely interesting case. When one considered the difficulty often experienced in detecting tubercle bacilli in the stools in cases of tuberculous disease of the intestine, the fact that they had here passed through in sufficient numbers to lead to the diagnosis of that disease seemed remarkable. He asked for more particulars regarding the number found.

Dr. R. B. SHAW, in reply, stated that the bacilli were sufficiently numerous for three to be within the field of the microscope at one time.

Dr. J. G. ADAMI alluded to the fact that mucus was a very insoluble substance, and was acted on but slightly by the intestinal juices. This and the small quantity of fæces passed were two considerations which favored the finding of the bacilli in the present case.

CONGENITAL DILATATION OF THE COLON.

Dr. C. F. MARTIN exhibited specimens from this case and read the report.

Dr. WESLEY MILLS drew attention to the dilatation of the colon sometimes occurring in the insane, which he attributed to their inattention and want of regularity in their habits, together with the dullness of their senses. He referred to one case reported by him in a paper on hibernation, where the dilatation was evidently produced by accumulation of fæcal matter.

Stated Meeting, December 4th, 1896.

GEORGE WILKINS, M.D., PRESIDENT, IN THE CHAIR.

IMPETIGO CONTAGIOSA.

D. G. E. ARMSTRONG reported this case as follows :

This young man was admitted to the Montreal General Hospital on the 12th November, 1896. He was nineteen years of age, and single.

This rash is now, as the result of treatment, much less distinct than on admission. It appeared first about six weeks before he was admitted to the hospital. It was first noticed on the lower part of the abdomen, then on the buttocks, afterwards extending to the lower extremities. A little later it appeared on the arms and in the axillæ. The back, chest and face have almost entirely

escaped. In its geographical distribution then, it does not follow any special order, except that it is most abundant on those parts of the body most likely to be infected by the patient himself in scratching. It has from the first been intensely itchy. No parasites were found on his body or clothing. He has lived in a rather crowded boarding house, but no other inmates of the house have suffered from any skin disease so far as he knows.

He is a leather cutter by trade, and has generally been in fairly good health. Uses alcohol and tobacco. Has had three attacks of gonorrhœa within the last twelve months, the last attack appearing fifteen days ago. There is no rheumatic or tubercular history.

The rash appears at first as slightly elevated papules which are very itchy, and after the irritation of scratching develop into pustules, and these rupture and form these thick crusts which you see. Several of them may be seen running together. The flexor and extensor surfaces seem to be about equally affected. The glands in the groin and the epitrochlear glands are enlarged. When admitted to the hospital the lower abdomen, buttocks and thighs were one mass of scabs. There was also a scab about the middle of the dorsum of the penis. This case has had added interest in the hospital, from the fact that different views as to its nature have been held by different members of the Hospital staff.

On the one hand it is contended that the rash is a syphilide, and the sore on the penis, the primary lesion. Against this theory is the patient's positive and persistent statement that the sore on the penis only appeared two weeks after the rash on the abdomen. Also it may be urged that there is no sore throat or falling of hair.

I have regarded the case as an impetigo, but just what was the source of infection I have not been able to determine with any degree of certainty. It has, to me, the appearance of a case of neglected scabies, but no furrows or parasite have been discovered. He is rapidly improving, however, under the daily inunction of sulphur ointment and hot baths. The sites of the crust you notice are red, but hardly can be called copper colored. I think the case of considerable clinical interest, and shall be glad to hear an expression of opinion from the members as to its nature.

A Series of Cases of Pelvic Hæmatomata.

Drs. Wm. Gardner and C. F. Martin read a paper on this subject.

Some Points in the Treatment of Potts' Disease.

Dr. C. W. Wilson read a paper on this subject.

Dr. T. G. Roddick thought Dr. Wilson had covered the ground very thoroughly, and agreed with almost everything he had said in regard to treatment. Mr. Howard Marsh's plan of keeping these cases in a recumbent position, a treatment which has stood the test of seventeen years, Dr. Roddick thought was the most satisfactory of any. With regard to Sayre's jacket he had given it a thorough trial. Having been present in Manchester when Dr. Sayre first demonstrated its use, he became very enthusiastic about it, and provided himself with this means of treating cases. He now felt that the fixation secured by it was not sufficient to give

quite satisfactory results, and he had abandoned it for a modification of Taylor's spring jacket, the great difficulty of which was in getting it made properly.

For the abscesses he felt that aspiration should be practised once or twice before they were opened, and that injections of iodoform as mentioned by Dr. Wilson were beneficial. For the paralysis which so often occurred he first tried the recumbent treatment, and cited a case as evidence of its value.

Dr. G. E. ARMSTRONG, referring to the apparatus shown by Dr. Wilson, thought it a very satisfactory one. He had found it no easy matter to keep children quiet in bed. The length of time the apparatus should be worn was an important point. He felt that the children should be kept in bed until the disease had ceased to be progressive, and the process of repair had begun. He had yet to be convinced that the head and shoulders could be adequately supported by any apparatus up to the present devised. A jury mast controlled the movements of the head and neck, but did not support the former. No apparatus that would altogether lift the head and take its weight from diseased cervical vertebræ could be borne for any length of time. The same was pretty much the case with apparatus to support the shoulders in mid-dorsal disease. It controlled movement, but did not carry the shoulders and head.

BURSITIS OF THE KNEE.

Dr. R. C. KIRKPATRICK exhibited two enormously hypertrophied bursæ which he had removed from the knees of an elderly woman. They had been present for a number of years, but had grown more rapidly of late.

Stated Meeting, December 12th, 1896.

GEO. WILKINS, M.D., PRESIDENT, IN THE CHAIR.

SPINA BIFIDA, OPERATION WITH TRANSPLANTATION OF BONE TO CLOSE THE ORIFICE.

Dr. G. E. ARMSTRONG exhibited a child upon whom he had performed this operation.

Dr. WYATT JOHNSTON had seen the part removed, and thought it consisted of atrophic nerve elements, some showing multipolar cells.

Dr. J. B. MCCONNELL pointed out that the benefit which might accrue from an operation depended upon the nature of the tumor, and that it might be misleading to have a favorable result reported in regard to a case of spina bifida, unless the variety was indicated. For where it was a simple meningocele, there was no difficulty, but in a hydro-myelocele, in which the sac consisted of the flattened-out spinal cord, and in meningo-myelocele the condition was generally considered to be one in which operation was not to be recommended, as it was likely to endanger the patient.

VESICAL CALCULI.

Dr. WILLIAM GARDNER exhibited a collection of calculi and sand removed from the bladder of a woman of 70, a patient of Dr. J. T. Finnie, of this city. There were thirteen stones, all facetted, of

the size of chestnuts, besides numerous others smaller, of all sizes down to that of a grain of the finest sand. The patient had suffered for the last twenty years from procidentia uteri. The displacement had not prevented her being active, and had not apparently caused very much suffering until within the last few weeks. Four or five weeks previous to operation she contracted pneumonia, from which, notwithstanding her advanced age, she recovered. During convalescence she began to suffer intensely from pelvic tenesmus with violent pain. The urine was fetid and turbid. On handling the completely prolapsed pelvic organs the sensation conveyed was that of a bag of marbles. The stones were removed through an incision made in the base of the bladder by the knife of the thermo-cautery, care being taken to avoid the muscular fibres at the vesico-urethral orifice. None of the calculi were encysted; the bladder, however, was succulated in parts. It was thoroughly irrigated with warm boracic acid solution. The cut edges of the vesical and vaginal mucosa were then brought together by a continuous fine catgut suture. The narrator said that the case was unique in his experience. Calculus of the urinary bladder was extremely rare in women, but in this case the extraordinary accumulation, which must have been forming during a period of several years, was very remarkable. The operation of cystotomy was selected for the removal of the stones in this case, for the reason, that the alternative procedure of dilatation of the urethra would inevitably, especially in the tissues of an old woman, have resulted in permanent incurable incontinence of urine from destruction of the sphincter of the bladder. The incision was kept open to drain and rest the bladder, so facilitating the cure of the cystitis. When the cystitis had been cured and the parts otherwise became healthy, the closure of the artifical fistula would be a comparatively easy operation. The relief to the symptoms had been complete.

Appended was a report of the weight and chemical composition of the stones, by Dr. Ruttan, Professor of Practical Chemistry in the Medical Faculty of McGill University.

"The total weight of the calculi (almost dry) was 265 grammes (or 9 ounces, 150 grains). I find that each of the larger calculi has a nucleus of uric acid, stratified with a little phosphate; when examined under a lens, the nucleus is surrounded by a deep layer of mixed phosphates of lime, being chiefly neutral calcium phosphate, and quite free from uric acid, the next layer is chiefly uric acid, but also has fine lines of phosphate in it, and it tends to break into layers. Outside of this is the outer coating, white, composed of phosphates, chiefly triple phosphate carrying a little uric acid. The fine calculi, seed-like forms are uric acid, and facetted like biliary calculi. All show the marks of having grown in a confined space and of having been closely packed. All calculi from the size of a pea to the largest have the history of the larger ones above."

Dr. F. J. SHEPHERD asked if the inflammation was considered due to the presence of the calculi or to the prolapsus. If due to the former he did not understand the necessity of keeping up drainage, as in the male bladder removal of the cause is followed by the cure of the inflammation.

Dr. J. C. WEBSTER said that there was no analogy between the male bladder containing calculi and the female viscus in the condi-

tion of prolapsus described by Dr. Gardner. The anatomical conditions as shown by frozen sections were entirely different. In the female, the most dependent part of the bladder being below the urethral orifice acted as a *cul-de-sac* for the intention of stinking urine. He had seen one somewhat similar case, but there had been no large calculi present. The bladder was drained, and subsequently an operation performed for the prolapse.

Dr. GARDNER replied that immediate closing of the bladder was carried out in a healthy organ, but in such cases as these he preferred to follow the rule, as laid down by Emmet, and drain.

TYPHOID PERFORATION.

Dr. G. E. ARMSTRONG reported a case of operation for perforation of the bowel in typhoid fever, and Dr. Wyatt Johnston exhibited specimens from the case.

Dr. J. G. ADAMI stated that Dr. Armstrong's case was the sixth in which the operation might be said to have been followed by a certain amount of success, as the patient had lived for six weeks after its performance. Of the six cases, four had been reported from America.

He drew attention to several interesting points. First, with regard to the part played by the omentum. When, some time previously, he had read a paper on this subject, Dr. Lafleur had pointed out how rarely protective adhesions followed perforation in typhoid fever, as there was but little inflammatory lymph thrown out. Here, however, this part was played by a little tag of omentum which closed in the wound. It must be admitted that in typhoid generally, there was singularly little power of repair of wounds or perforations. This being so, it was inevitable that all operastion in typhoid must be attended with but doubtful success, and there must be a large number of failures. Hence other auxiliaries to repair must be sought after. He would suggest that the formation of an artificial anus above the usual region of ulcers, that is four to six inches above the valve, with rectal feeding, might insure physiological rest and prevent irritation of the lower part of the gut by fæces. He asked Dr. Armstrong whether such a course was feasible.

Dr. T. G. RODDICK said the same idea of putting that diseased part at rest, by forming an artificial anus, had occurred to him during the reading of the paper. This, with careful drainage, would make it almost impossible for ulceration to progress. It remained a question, whether the change of diet from milk to animal broths, etc., affected the ultimate result. He had pleasure in congratulating Dr. Armstrong on his success in closing the original perforation, and in thus prolonging to such a degree the life of his patient.

Dr. W. GARDNER asked if anything had been done in the way of securing the omentum to the opening, or where the latter was scanty of turning down a portion and suturing it over the opening. He had noticed in Dr. Johnston's account of autopsies on three cases, that the sutures had held firm, so probably the patient had died from the effects of the peritonitis.

Dr. F. J. SHEPHERD had hoped that this was going to be one of the successful cases, but the difficulties were very great. It was

a question, whether the original peritoneal inflammation had not continued in spite of the careful washing out. Patients suffering from typhoid had not much reparative power, and when there was no tendency to repair, operation was almost hopeless. In most operations of this character the patient was operated on too late, and died a few hours afterwards.

Dr. F. G. FINLEY thought the case presented a great number of features of interest. Such as, the early date at which perforation had occurred, the tenth day. This was the third case he had seen operated on, and the other two had died within a few hours from shock. This patient's condition had presented some difficulties, in that the temperature had kept up so long there seemed some doubt whether it was due to the fever or to sepsis, and, acting on the latter supposition, later on it was thought advisable to give him more food to keep up his strength. The autopsy showed, however, that the typhoid had persisted to the fiftieth day.

He considered that the chances of recovery were much greater in these early cases where the patient was not exhausted by three weeks or more of fever.

Dr. ARMSTRONG, in reply, said, in regard to the time at which the operation should be done, that he considered that the opening should be closed as soon as possible after the shock following the perforation had passed off. He also thought it would be good practice to give a hypodermic of morphia once a definite diagnosis of perforation had been made. This would arrest peristalsis, prevent diffusion of the septic matter from the bowel, and conserve the patient's strength.

With regard to an artificial anus, the difficulty would be to provide room for efficient drainage without making another opening.

Dr. Adami's idea of cutting off the typhoid area could not be carried out, as it was impossible to get away from the ulcer area. Perforations occurred over the whole length of the bowel from the beginning of the ileum to the sigmoid flexure.

Undoubtedly the chances of recovery were better after convalescence was established, and the patient was able to take food to keep up his strength, instead of having both the fever and the operation to contend with at one and the same time.

ON THE INFLUENCE OF THE AGE OF THE TEST CULTURE UPON TYPHOID SERUM REACTIONS.

Drs. WYATT JOHNSTON and D. D. MACTAGGART said that they had met with pseudo-reactions sufficiently decided to give rise to error in diagnosis in non-typhoid blood, when the cultures were too active. Pfeiffer states that typhoid serum can be diluted to a point where, though it would no longer give a reaction with virulent culture, it would still do so with an attenuated one. Drs. Johnston and MacTaggart find the reverse to be the case. In working with cultures highly virulent by transplanting them daily during a period of several weeks or months, they found that such cultures became peculiarly sensitive, so that even a few hours delay in transplanting produced, so to speak, a kind of premature decay. With such cultures a decided clumping was in three cases not typhoidal, obtainable when they were 24 to 30 hours old, while none occurred with the same culture from 12 to 20 hours old. The clumping in these cases

was not that of the typical, complete reaction, but was sufficiently close to simulate a partial reaction.

When the bouillon culture was made from a stock culture kept at room temperature for a week or more, a few hours or days difference in the age appeared to have comparatively little effect on the result as far as the occurrence of pseudo-reactions was concerned. *

In doubtful cases the best safeguard against being deceived by pseudo-reactions was that recommended by Widal, of very free dilution of the blood, to a point (1 to 30 or 1 to 50), where only genuine typhoid blood would react, as pseudo-reactions were most liable to occur with relatively concentrated solutions. Drs. Johnston and MacTaggart stated that in 400 blood examinations so far they had not yet met with the typical, complete serum reactions under conditions which excluded genuine typhoid fever, and had only met with one severe case apparently of genuine typhoid when they could not readily obtain it during the height of the attack.

Dr. C. F. MARTIN stated that, in conjunction with Dr. H. B. YATES, he had examined the dried blood from all the patients in one of the medical wards of the Royal Victoria Hospital, the specimens having been collected by Dr. Argue, who had sent them on numbered slips of paper and retained the key to the diagnosis. They were thus enabled to make a fair test of the value of the method, and as a preliminary investigation they employed a five days' old typhoid culture, and had allowed the dried blood to remain untouched for ten days prior to employing the test.

The cases were of the most varied nature, and among them were five of typhoid fever. When the complete examination of all the series had been made, the results were compared with the key of the house physician with the following result :—

In not one of the typhoid cases had there been a strong, positive reaction at the end of 4 hours. In two there had been a typical reaction within five minutes, which, in one instance, passed off after a few hours, and, in the other, had become so modified as to be named merely a partial reaction, *i.e.*, although agglutination was present, there was considerable motion in many isolated bacilli. In the other three specimens from typhoid patients, there was no change in the hanging drop after five minutes, while in half an hour a partial reaction was manifest, either by agglutination, or by general cessation, which in 24 hours had not become sufficiently typical to yield a positive diagnosis. When they obtained, within 24 hours, some definite agglutination with isolated motile bacilli elsewhere, they called this a weak reaction, and obtained it to a more or less marked degree in one case each of aortic disease, rheumatism, pernicious anæmia, and gastric neurosis, in two cases of venereal disease, and in a case of tuberculosis.

In the other cases the results were quite negative. In endeavoring to establish the relation between these remarkable results and their technique, Drs. Martin and Yates concluded that the fault lay either in the age of the culture used, the long exposure of the blood, or, as Dr. Johnston had already suggested, the insufficient dilution of the serum employed. Their investigations being merely com-

* With attenuated cultures grown at room temperatures and transplanted at intervals of about one month, these pseudo-reactions do not occur.

menced they were not as yet prepared to definitely state the causes.

With reference to diabetes, they had examined two cases, and found in both instances a positive reaction within ten minutes, which, however, soon again disappeared, leaving after 24 hours absolutely no agglutination or cessation of motion.

Dr. JOHNSTON said, in reply, that a partial reaction did not, in his opinion, justify a positive diagnosis. Also, unless the blood was freely diluted, pseudo-reactions were liable to occur with virulent cultures. Sometimes in very early stages of genuine typhoid only a partial reaction might be obtainable.

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Editorial.

BRITISH MEDICAL ASSOCIATION.

Owing to the fact that the meeting of the General Council of the Association was delayed, we are still ignorant of the names of those selected to give the general addresses and to be office holders in the various sections in the forthcoming meeting. We can only here repeat that the local executive in Montreal has throughout felt that it will be highly conducive to the success of the meeting if leaders of the profession in the Old Country, rather than Canadians, be chosen to occupy the leading positions in connection with the forthcoming meeting. This, not from any disbelief in the abilities of Montrealers and other Canadians being able to prove themselves worthy occupants of the positions, but from a belief that the known presence of well-known men will attract to Montreal a greater number both of Canadians and of practitioners from Great Britain and the Colonies in general. Judging from information recently received from Dr. Roddick, the President-elect, he has found the authorities in England most anxious to aid in making the meeting successful along the lines suggested by the Local Executive. Dr. Roddick left Montreal on the 1st January, and devoted some weeks in England to the business of the Association ; he was received with open arms, and a dinner was given in his honor.

The dinner was given to Dr. Roddick by members of the Council at the Grand Hotel. Dr. Robert Saundby, President of the Council, was in the chair, and proposed the toast of their guest, Dr. Roddick, who was given a hearty British welcome. He spoke of the sacrifice he had made in undertaking this long journey, made in order to have a personal conference to complete the arrangements for the coming meeting in Montreal. Dr. Roddick replied at length, thanking them for the honor conferred upon him, and spoke of the efforts that had been made by a number of Canadian physicians to induce the Association to meet in Canada, and suggested that the coming to Canada next summer of the two great scientific associations of Britain was getting in the thin edge of the wedge of genuine imperialism. He then spoke of the attractions which would be offered to the members here, and pleaded for a large representation of the Association from across the water.

Not only was Dr. Roddick able to post the officials of the Association with all necessary information concerning what has been done in Canada, but he was able by personal interviews to secure the attendance and active co-operation of many who are first and foremost in the profession.

Since our last issue we have received from England the exact wording of the resolution of the Council of the Association, stating who are and who are not eligible to be members and to attend the meetings of the Association. This resolution was passed two years ago, and inasmuch as we hear on all sides that very large numbers of members of our profession in the United States are proposing to attend the Montreal meeting, it may be well again to point out that however much the Local Executive desires to welcome American practitioners, its hands are tied. Those visiting Montreal must either be members or invited guests if they are to enjoy the privileges of the meeting, and only British subjects can be members. The resolution runs as follows:—

Resolved:—That while recognizing it as both a duty and a pleasure to accord a hearty welcome to Foreign Medical Practitioners attending the Annual General Meeting of the Association, the Council is of opinion and is advised that it cannot extend to such practitioners the privilege of

actual membership, having agreed to the origin and constitution of the Association, and to the fact that, in the opinion of the Council, the word "qualified" in By-Law No. 1 means British subjects who are registered or entitled to be registered in the Medical Register of Great Britain or Ireland, or British subjects residing in any part of the British Dominions who are legally entitled to practice in such dominions, and that such definitions cannot be further extended.

Since our last issue also, the Excursions Sub-Committee has obtained most favorable terms from the G. T. R. and the C. P. R. companies. They offer to the Association and its guests to convey them at half fare as far as Sarnia on the one system and Port Arthur on the other. In addition, the C. P. R. will give the same rates to those wishing to cross the Continent. Return tickets will be given from Montreal to Vancouver for one single fare, and the privilege of stopping over at the leading places of interest along the route. The Committee has not as yet received absolute information from the Railway Companies as to whether these terms apply to Canadian members of the Association as well as to members from other parts, but the inference is that this is the case.

The Local Entertainment Sub-Committee has also been busy, and proposes to give members fond of exercise opportunities of showing their powers in golf, tennis, etc., against the visiting members from Great Britain. It is quite prepared also to have a Lacrosse match, provided a sufficient number of members from the other side are acquainted with the game. Lacrosse, we may add, has of late years made considerable strides in the north of England and of Ireland and again around London.

Arrangements have already been made for a Ladies' Committee to entertain the wives and daughters of visiting members.

We learn from Toronto that a most attractive excursion through the Niagara peninsula, Kingston and the Thousand Isles has been arranged for those attending the Meeting of the British Association for the Advancement of Science, and intending to be present also at the Montreal Meeting. Reduced rates have been given by all companies to those coming to Montreal by New York.

The Canadian Pacific Railway offers a return ticket from Hong Kong, Shanghai, Yokohama for £63, with a time limit of six months.

A tastefully arranged plan of the Victoria Rink with circulars has been sent to possible exhibitors by the Museum Committee.

THE AMERICAN MEDICO-SURGICAL BULLETIN.

This Journal has been changed from a weekly to a semi-monthly, and the subscription price has been reduced to one dollar a year. Robert G. Eccles, M.D., is the Editor, and is supported by a large staff of collaborators.

This is one of the best conducted journals of the United States, and at the low subscription price at which it is now placed becomes the best investment for the money now available. We wish it every success, and feel assured that it only has to be known in its present style to secure a wide circulation.

FORMALDEHYD AS A DISINFECTANT.

The Medical Review of January 30th, 1897, refers to the testing of this method by the St. Louis Board of Health. Evidence, it states, is accumulating pointing to the conclusion that formaldehyd gas is undoubtedly the simplest, most practicable and powerful germicide for the disinfection of houses and all kinds of articles. The usual method of producing this gas is by passing methyl alcohol over red hot platinum; the product is said to be irritating if breathed, and carbon dioxide is also formed. An improved process is mentioned by which this objectionable feature is avoided. It has been suggested by Drs. Rosenberg and Offerman, and consists in the vaporization of a sixty per cent. solution of formaldehyd in methylic alcohol. The *Review* states that Dr. C. F. Robinson, of Brunswick, Maine, has a simplified method of producing it by means of a lamp he has invented. It has proved so successful that the Legislature of Maine has enacted a law requiring formaldehyd to be used in all cases where fumigation is necessary.

A very great stride will be made in the prevention of disease if a really effective germicide exists in formaldehyd gas. The inutility of sulphur fumigation as ordinarily carried

out is now generally concurred in. We hope our "at ease in Zion" health authorities in Montreal will sense the possibilities here referred to, and not be slow in informing themselves of and adopting a measure which promises such advantages, with apparent simplicity of application.

Formaline is a 40 per cent. solution of paraformaldehyde in water. Its antiseptic powers are said to be equal to that of corrosive sublimate. Formic aldehyde is a gas, and is a powerful penetrating germicide, one part in a thousand of air will in 24 hours destroy all micro-organisms, and in strengths of 2 to 3 per cent. will do so in about a quarter of an hour. It is also a deodorant, and is non-destructive to clothing or instruments. Formaline in strengths of ½ to 4 per cent. is now one of the most popular medical antiseptic applications in surgical practice.

PUERPERAL ECLAMPSIA; ITS ETIOLOGY AND TREATMENT.

Dr. William Warren Potter, of Buffalo, read a paper on this subject at the 91st Annual Meeting of the Medical Society of the State of New York, Albany, Jan. 26, 1897.

He said, *inter alia*, that we seem to have arrived at the renaissance of eclamptic literature, that while the subject is being discussed in magazine articles and societies, it would not answer for this Society to keep silent.

Though the pathogenesis of eclampsia is still unsettled, we are certain that it is a condition *sui generis*, pertaining only to the puerperal state, and that to describe, as formerly, three varieties—hysterical, epileptic and apoplectic—is erroneous as to pathology and causation as well as misleading in treatment.

The kidney plays an important office in the economy of the eclamptic. If it fails to eliminate toxins, symptoms are promptly presented in the pregnant woman. Renal insufficiency is a usual accompaniment of the eclamptic state. Over-production of toxins and under-elimination by the kidney is a short route to an eclamptic seizure. However, many women with albuminuria escape eclampsia and many eclamptics fail to exhibit albuminous urine.

The microbic theory of eclampsia has not yet been demonstrated. The toxæmic theory in the present state of

our knowledge furnishes the best working hypothesis for prevention or cure.

Treatment should be classified into (*a*) preventive, and (*b*) curative. The preventive treatment should be subdivided into medicinal and hygienic; and the curative into medicinal and obstetric. A qualitative and quantitative analysis of the urine must be made at the onset. If there is defective elimination something must be done speedily to correct a faulty relationship between nutrition and excretion. One of the surest ways to control progressive toxæmia is to place the woman upon an exclusive milk diet. This will also serve to flush the kidneys and thus favor elimination. Distilled water is one of the best diuretics; it increases activity and supplies material—two important elements. In the pre-eclamptic state, when there is a full pulse with tendency to cyanosis, one good full bleeding may be permissible, but its repetition should be regarded with suspicion. If there is high arterial tension—vasomotor spasm—glonoin in full doses is valuable.

When eclampsia is fully established the first indication is to control the convulsions. Full chloroform anæsthesia may serve a good purpose. If the convulsions are not promptly controlled the uterus must be speedily emptied. This constitutes the most important method of dealing with eclampsia. Two lives are at stake, and by addressing ourselves assiduously to speedy delivery of the fœtus we contribute in the largest manner to the conservation of both.

Rapid dilatation first with steel dilators, if need be, then with manual stretching of the os and cervix, followed by the forceps, is the nearest approach to idealism. Only rarely can the deep incision of Duhrssen be required. Cæsarean section should be reserved for extreme complications, as deformed pelvis, or to preserve the fœtus when the mother's condition is hopeless. Veratrum viride is dangerous, uncertain and deceptive in action.

In eclampsia of pregnancy, *i.e.*, prior to term, the aseptic bougie, introduced to the fundus and coiled within the vagina, may be employed to induce labor. Finally, to promote the elimination of toxic material diuresis, catharsis, and diaphoresis should not be forgotten; neither should the hot air bath, nor the hot pack be overlooked.

LABORATORY OF THE BOARD OF HEALTH OF THE PROVINCE OF QUEBEC.

Circular on attenuated test cultures as a safeguard against pseudo-reactions in serum diagnosis of typhoid by the dried blood method.

MONTREAL, 7th January, 1897.

To the President of the Board of Health of the Province of Quebec.

Sir,

In my work in serum diagnosis done jointly with Dr. D. D. MacTaggart, we recently met with a series of peculiar partial reactions, in which the dried blood solution from many perfectly healthy persons gave a very decided agglutination. The blood serum from the same persons was found much less liable to give these pseudo-reactions. This made it less easy to exclude other febrile diseases, and as with this test accuracy in the negative diagnosis is of great practical importance, others who may meet with similar pseudo-reactions will be interested in learning how they may be avoided.

These pseudo-reactions were not encountered in our earlier cases when attenuated cultures were used. They began to appear when we employed a short time virulent cultures, and disappeared again on resuming the use of attenuated ones. Active, virulent cultures intensified by daily transplantation and growth at the body temperature were therefore not suitable for the dried blood test. Where only active cultures are employed, we do not think that the dried blood method can be considered to have had a fair trial.

The explanation of this difference appears to be that the serum contains relatively less of the substances causing agglutination than solution of the entire blood. Hence solutions of the entire blood react more intensely to test than solutions of the blood serum alone. This was the reverse of what we had anticipated.

It is found that old laboratory stock cultures kept at room temperature, and transplanted at intervals of about one month, give us the best result. Bouillon test cultures grown from this stock for 12 to 24 hours at body temperature are found to react decisively with solutions of typhoid blood or

typhoid serum, the reaction being as a rule well marked within 15 minutes. With non-typhoid blooding serum solutions, the same test cultures give no reaction even after 24 or 48 hours contact. Intra-peritoneal injection of 1 c. c. of such living bouillon culture produces in guinea pigs a marked blood reaction and immunity without much disturbance of health. We find that the best results in cases of dried blood are obtained with cultures where the motion as seen under the microscope is of a rapid gliding character, but free from darting movements. If the movement is sluggish owing to too great attenuation of the culture, a few daily transplantations at body temperature will make it more active. Exact estimation of the degree of dilution has not been found necessary for ordinary diagnostic work when attenuated cultures are used. A very faint tint in the drop examined usually indicates sufficient strength. The solution should not be thick and viscid.

All the results which I have reported (*N. Y. Medical Journal*, Oct. 31, 1896, and *British Medical Journal*, Dec. 5, 1896) were obtained with attenuated cultures. A report giving some additional technical details has been prepared, and can be sent to any who desire further information.

I remain, yours respectfully,

WYATT JOHNSTON,

Bacteriologist to the Board of Health Province Quebec.

ASSOCIATED PHYSICIANS AND SURGEONS OF SANTA CLARA VALLEY.

San Jose, Cal., Dec. 18th, 1896.

Dear Sir,

We ask you to give publicity to this letter and accompanying resolutions, to the end that in all communities afflicted with the pestiferous practice of lodge doctoring, physicians may be encouraged to assert their independence through organization.

Here, in Santa Clara County, Cal., containing 70,000 population, all the physicians of the County, numbering 124, have entered the compact that has ridden us of a slavish evil, and wrought independence and freedom for the practitioners of medicine. Investigation shows that medical compensation for lodge work averages about 15 cents on the dollar.

Even respectable lodge physicians feel a sense of degradation in giving their services for 15 cents on the dollar, and the ever-increasing spread of these alleged charitable institutions is absolutely destructive to the business of other physicians.

The main incentive of the persons who band themselves together in lodges is to get cheap doctoring; they are willing to take but not to give. They belong to protective unions, and the same right should not be denied physicians. Ninety-nine per cent. of these people are able to pay reasonable fees to physicians, but will not do so as long as a few doctors in every community for the sake of immediate gain can be induced to stand as driven guys to the lodge politicians. No preacher or lawyer would give his services to these people for 15 cents on the dollar. No grocery store or merchandise firm would contract to supply these lodges with goods at 15 cents on the dollar of actual worth.

The remedy indicated in the subjoined resolutions is simple and manifestly efficacious, depending upon the personal honor and free will of those concerned. Where one doctor temporarily profits by contract work, the business and ethical rights of fifty others are violated; hence an overwhelming *esprit de corps* is created among physicians which will sustain a strict observance of the pledge.

LINCOLN COTHRAN, M.D.,
Secretary.

RESOLUTIONS.

Adopted by the Physicians of Santa Clara County.

WHEREAS, Rendering professional services at a stipulated fee per capita per annum is derogatory to the dignity of the medical profession, we, the undersigned physicians and surgeons of Santa Clara County, California, enter into the following agreement:

FIRST.—We mutually, jointly, and individually, pledge our word of honor not to enter into any contract or agreement, or renew any existing contract or agreement, either written, verbal or implied, to render medical or surgical services to any lodge, society, association or organization.

SECOND.—We will not render medical or surgical services to the members of the above mentioned bodies for less compensation than we charge the general public for similar services.

THIRD.—This agreement shall not be construed to affect existing contracts between physicians and surgeons and the above mentioned bodies.

FOURTH.—These pledges shall take effect and be in force for a term of three (3) years from and after May 22, 1896.

This agreement shall not apply to hospitals and purely public charitable institutions.

Book Reviews.

Le Langage Ecrit.—Par le Docteur P. Keraval. (Written Language, by Dr. P. Keraval.) 1 vol. in 16, 200 pages; Soc. d'Editions Scientifiques, 4, rue Antoine Dubois, Paris. Price 7 fcs 50.

This is a work of psycho-physiology, and will prove especially useful to the neurologist. The first chapter is devoted to the characters, words and phrases of the following languages: Hebrew, Arabic, Russian, Sanscrit, Chinese, Japanese, Egyptian, and Sino-Japanese. The second chapter embraces the mental images corresponding to these languages. The third chapter is devoted to explaining the development of these images in the evolution of humanity and the development of writing. The fourth chapter treats of the laws governing written language, in reality a sort of psycho-physiological grammar, the ground-work of the language. The fifth and six chapters treat of the mechanism of reading, the different centres in the brain as well as the different pathological conditions connected with written and spoken language.

Hygiene et Traitement du Diabete.—Par le Dr. E. Monin. Soc. d'Editions Scientifiques, 4, rue Antoine Dubois, Paris. (Hygiene and Treatment of Diabetes, by Dr. E. Monin, Paris.) Price, 3 fcs.

This monograph treats in a most practical manner the subject of Diabetes, giving in a very condensed form the old as well as the new theories upon the causation of the disease, going into the subject of hygiene and treatment in a most practical and concise way. A most useful formulary is appended, which will be found very beneficial to the practitioner, who is often at a loss to find in his pharmacopœia a combination which may prove beneficial.

Elements d'Analyse Chimique Medicale Appliquee aux Recherches Cliniques. Par le Docteur Sonnié-Moret. 1 vol. in 16, 230 pages. Prix 6 fcs. Soc. d'Editions Scientifiques, 4, rue Antoine Dubois, Paris. (Elements of Clinical Analysis, by Dr. Sonnié-Moret, Paris.)

This volume of 236 pages contains what the most exacting clinician would require in the way of practical methods of chemically analyzing the urine, the blood, serous exudations, gastric juice, bile, saliva calculi, milk and butter. Dr. Sonnié-Moret has treated the subject from the standpoint of the clinician, and brings his methods and manipulations to the level of a clinical laboratory, which need only be a modest one, this fact alone making the book valuable, as most of the authors preceding him seem to have forgotten that practicing medical men do not always have an elaborately furnished laboratory and a great deal of time in which to make the most minute chemical tests which are not always the most useful for the practitioner.

De la Nature de L'Epilepsie.—Par le Dr. Fr. Hallager. (On the Nature of Epilepsy, by Dr. Fr. Hallager, Viborg, Danemark.) 1 vol., 180 pages. Price 5 fcs. Société d'Editions Scientifiques, 4, rue Antoine Dubois, Paris.

In his treatise upon the subject, Dr. Hallager classifies the different forms in two classes, *i.e.*, epilepsy due to lesions of the cortex and reflex epilepsy; he also devotes a goodly portion of his work to experimental epilepsy, and quite a few pages to the symptoms of epilepsy and post-epileptic phenomena. The bibliographical references show that he has treated the subject in a most thorough manner, and his tabulation of reported cases is most comprehensible; in reality, it is a most valuable volume.

PUBLISHERS DEPARTMENT.

ARTIFICIAL SOMNAMBULISM.

Two fundamental elements constitute personality—memory and character. In the latter respect, as to character, induced somnambulism is not perhaps always clearly distinguishable from the waking state. It frequently happens that the somnambulist does not relinquish the character that he had before he was put to sleep. The reasons are manifold. This does not, however, hold for the second element of personality—memory. It has long been said that memory supplies the chief sign by which the new state may be distinguished from the normal state. The somnambulist shows, in fact, a curious modification in the range of his memory; the same regular phenomena of amnesia may be produced in him as occur in the spontaneous variations of personality.

Two propositions sum up the principal modifications of memory which accompany induced hypnotic somnambulism: first, the subject recalls during his waking state none of the events which happened during somnambulism; and second, on the other hand, when put in the somnambulistic state, he may remember not only the previous somnambulistic states, but also events belonging to his waking state. It follows that memory attains its maximum extent in somnambulism, since it then embraces two psychological existences at once, as the normal memory never does. It may even be remarked that the somnambulist, when he endeavors to recollect certain particulars, has better memory than the same person awake. Gurney has shown, moreover, from studies of hysterical patients, that somnambulistic states may persist in the waking life; that the somnambulistic ego, the second condition, is not always completely effaced when the waking state returns, but survives, co-exists with normal thought, and gives rise to complex phenomena of division of consciousness.—*From Plural States of Being, by* ALFRED BINET, *in Appletons' Popular Science Monthly for February.*

The weekly issue of *The Living Age*, bearing date Feb. 13, is the Monthly Supplement number, and, including the supplement, contains 96 pages. Among its most striking features are "All Souls' Eve in Lower Brittany," a delightful sketch of the customs and folk-lore of the Breton peasants, translated for *The Living Age* from the French of Anatole le Braz; the first part of "The Land of Suspense," Mrs. Oliphant's latest story of the seen and unseen; a passage from Mrs. Steel's stirring story of the great mutiny, "On the Face of the Waters"; Herbert Spencer on "The Fallacies of Socialism"; a discussion of "Political Ideals and Realties in Spain," by Emilio Castelar, translated for *The Living Age*; and a paper by W. Holman Hunt on "Religion and Art."

The "Monthly Supplement," giving Readings from American Magazines, Readings from New Books, and a List of the Books of the Month, adds a valuable feature to *The Living Age*, which its readers will be quick to appreciate, and with the translations from eminent continental authors, on prominent questions of the day, fairly doubles the value of the Magazine which, before these additions were made, was well worth the subscription price of $6.00 a year.

The Living Age Co., Boston, are the publishers.

THE PRESIDENT'S DAILY ROUTINE.

Ex-President Harrison has written of "A Day with the President at his Desk" for the March *Ladies' Home Journal*. The article is said to be singularly interesting in the detail with which it describes the wearisome routine of the President. It is said that General Harrison, in this article, has delivered himself with great directness and vigor, relative to the annoyances that are visited upon a Chief Executive by persistent office-seekers, and he suggests a unique plan, by which the President's burdens in that direction could be greatly lightened, and he be enabled to devote more attention to more important matters. A feature of the article that will have a timely interest to those ambitious to serve the country under the incoming administration describes very fully how the President makes appointments to office. "A Day with the President at his Desk" is unique in being the first time that the daily life of the President has been described by one who has filled the exalted office. Articles upon the social and domestic life of the President by General Harrison will follow in successive issues of the *Journal*.

The January (1897) number of the *Alienist and Neurologist* contains "Insane Heredity; Insane and Consanguine Marriages, etc.," by Dr. H. P. Stearns; "Analgesia of the Ulnar Nerve in the Insane," by Dr. Arrigo Giannone; "Report of a Case of Brain Syphilis Heroically Treated with Mercury, Followed by a Mercurial Neuritis and Recovery," by William C. Krauss, M.D.; "Interaction of Somatic and Psychic Disorder," by Jas. G. Kiernan, M.D., Chicago; "Imperative Conceptions," a note by C. H. Hughes, M.D.; "Defence of Modern Psychiatry," by Dr. Wm. Hirsch, New York; "Cyclone Neuroses," by C. H. Hughes, M.D., St. Louis; "On the Effects of Extirpation of the Parathyroid Glands," note by Prof. G. Vassale and Dr. F. Generali; "The Stigmata of Degeneration—A Cursory Editorial Critique," and the usual Editorials, Selections, Reviews, Book Notices, Etc. C. H. Hughes, M.D., Editor, 3857 Olive Street, St. Louis, Mo. Subscription $5.00 per annum; single copies, $1.50.

From U. S. Commissioner of Education, the Hon. Wm. T. Harris's very suggestive "The New Education" to Miss Genevieve Thorndike Clark's "On the Threshold: a Psychic Experience" is a far cry, but the February *Arena* spans the gap, providing much and most diversified entertainment on the way.

CANADA
MEDICAL RECORD

MARCH, 1897.

Original Communications.

NEPHROLITHIASIS.*

Report of a case by J. Bradford McConnell, M.D.
Associate Professor of Medicine and Neurology, University of Bishops College.

Rev. A. M. P., aged 49 years. He is engaged in active ministerial work as pastor of one of the city churches. He first consulted me on May 6th, 1895, when the following notes were taken: Complained of passing unusually large quantities of urine, which at intervals contained blood. He is tall, has black hair, and a dark complexion, skin of a pale yellow hue, and his appearance that of one insufficiently nourished. He worked on a farm until 17 years of age. He had some intestinal inflammation in 1879 and again in 1880, and pneumonia in 1882. He once had blood poisoning following the plugging of a nostril for epistaxis, and had La Grippe a year ago.

He first became aware of the presence of some kidney affection in 1881. He was taken suddenly with excruciating pain in the right side shooting towards the bladder. Pain was felt in the penis and in the testicle which was drawn up, and also on the inner side of thigh. The pain continued for an hour, when he was relieved by a physician. No calculus was found, but a quantity of brick dust deposit appeared at the bottom of the chamber for several days after. There was no hæmorrhage. He was free from any urinary trouble until some fifteen months after, in 1883, when, while out driving, he was seized in a similar manner, the pain being again in the right side; it continued for three hours, when it was relieved by a hypodermic injection. No calculus, sediment or blood was observed at this time.

* Read before the Medico-Chirurgical Society, January 15th, 1897.

About a year after his second marriage in 1886 he had another attack; it came on during the night, about 3 a.m. No changes were observed in the urine and no calculus found. Six months after this was again relieved by a hypodermic injection of morphia. A year after this, 1888, had another attack, it occurred while engaged at a meeting; he went out to a physician's office, and was again relieved by a hypodermic. Considerable brick dust deposit was found in the urine after this attack, which like the others was in the right side. He then drank mineral water for some time, and had no further attacks of renal colic, and remained well until the autumn of 1894, when he suffered from an attack of La Grippe; about this time noticed a whitish deposit in the urine, which has continued to the present. Since that time he has complained of feeling tired and weak, and his health was not up to normal.

During the past winter he has attended gymnastic classes which met on Monday afternoon, and he noticed that the urine contained blood each evening after taking the exercise, but did not observe it any other time during the week. Present condition: has a somewhat anæmic appearance, is depressed and melancholic, appetite fair, bowels regular; nothing abnormal to be observed in the nervous, vascular, respiratory, or digestive systems. States that he sometimes feels a peculiar sensation in the region of the right kidney, but no pain. No tenderness can be elicited on palpation or percussion, nor could either kidney be felt. At this time he passes two quarts of urine daily, sp. gr. 1010, neutral to alkaline, containing pus cells and some earthy phosphates. Examined after exercise, sp. gr. 1013, brownish red in color, neutral to slightly alkaline, traces of albumen. Sediment contained pus cells and red blood corpuscles. Urea 4 grains to the oz.

The urine was examined from time to time with somewhat similar results, and the condition remained much the same up to the present year. During the past summer (1896), he travelled through England, mostly by bicycle, which he has ridden for a couple of years. While away he had occasional hæmorrhages, and returned feeling in somewhat better condition. He suffered no pains in the region of the kidney at any time after the last attack of renal colic in 1888, and during the

past year he was using mostly distilled water as a drink, which he sometimes drank copiously. He took Turkish baths from time to time. Oct. 8th, 1896, 2 quarts of urine was passed in 24 hours;—yellow, hazy, slightly acid, 1013 (sp. gr.), urea 5 grs. to the oz.; traces albumen in the filtered urine. No red corpuscles, abundant pus. After exercise there was in addition red blood corpuscles and fibrinous clots. At this time his health was not so good, and he consented to an operation. He had not taken his regular gymnastic exercises, but nevertheless he observed blood in the urine from time to time; but there was no pain, only a feeling of uneasiness in the right side, and at no time was his attention drawn to the left kidney. There were no vesical symptoms. He would not require to rise in the night more than once to evacuate the bladder.

The operation was performed at the Montreal General Hospital on Dec. 10th, 1896, by Dr. Geo. Armstrong. Ether was administered, but it was over half an hour before he could be anæsthetized, and altogether he was some two hours under its influence. Great difficulty was experienced in removing the calculus; it came away in segments. The patient seemed to be doing fairly well for two days, but then gradually merged into a semi-unconscious, restless, delirious condition, and succumbed six days after the operation. The wound was kept perfectly aseptic ; urine flowed from it freely. The amount of urine passed daily from the bladder varied from fifty to sixty ounces, urea six to seven hundred grains. The cause of death was thought to be due to a condition of post-operative mania, rather than to any insufficient elimination of urea. The kidneys were examined post mortem by Dr. Wyatt Johnston, the chief change found being more or less fatty degeneration and some sclerotic changes. There were three large cauliflower-shaped calculi in the right kidney, and thirteen small ones, weighing altogether six hundred and sixteen grains. In the left kidney were found also two similar large calculi and a large quantity of gravel. A chemical examination of the calculi by Professor Ruttan showed them to consist entirely of phosphate of lime, with no evidence of nuclei of uric acid or oxalate.

These cases of nephrolithiasis are always interesting, and often tax the keenest diagnostic powers of the observer

in order to arrive at correct conclusions in regard to the particular condition one is dealing with. In this case, although in the beginning a diagnosis of calculus was made, it was supposed to be one of the mulberry-shaped oxalate of lime varieties, while others suspected papillomatous disease of the kidney.

The purely phosphatic calculi are not common, and are said to be the cause of more pain than other forms, and to occur where the urine is alkaline. In this case the urine was more frequently neutral than alkaline, and on some occasions was acid. The freedom from pain is remarkable when one considers the amount of material which existed in the kidney, and which formed a complete cast of the interior, the dendritic mass fitting into the infundibula of the pelvis.

It is remarkable that so much foreign material could exist in the left kidney, and neither patient nor medical attendants suspect its presence at all. The fairly comfortable condition of health which the patient enjoyed previously would raise the question as to the advisability of surgical interference, and whether it would not be better practice to await urgent symptoms; and it is a matter for consideration as to what effect the ether anæsthetic may have had on the result in this case, and whether chloroform would be a safer anæsthetic in these cases. With either, the prognosis of the case would probably be improved in the reverse ratio of the length of the time occupied by the operation. The slight changes in the parenchyma of the kidneys enabled them to perform their functions soon after the necessary mutilation required to extract the stone, and hence if the shock of operation and anæsthesia could be minimized, the outlook would, I think, improve accordingly.

CLINICAL LECTURE ON A CASE OF THREATENED PUERPERAL ECLAMPSIA.

Delivered at the Women's Hospital by Dr. H. L. REDDY,
Professor of Obstetrics, University of Bishops College.

GENTLEMEN,

The case we are now about to consider brings prominently before us the question of the prophylaxis of eclampsia.

Most if not all of you have had an opportunity of witnessing in this case the prophylactic treatment adopted, its failure to benefit and the operation following, with most happy results to mother and child.

This patient, Mary—, aged 18, II para, general servant, was admitted into the hospital January 11th. Her history is as follows:—Last menstrual flow was about the middle of April, 1896, so that if her statement had been correct we might have looked for her confinement about the middle of January. As we have seen, her account is probaby inaccurate, for we find on the 28th January there was not the slightest appearance of labor, the cervix not being shortened and the os undilated, although she was probably within a fortnight of it. Previous history: She was delivered when 16 years old by an easy and normal labor of a healthy child, there being left as a result of this labor, a bilateral laceration of the cervix. From that time until the middle of last December she enjoyed good health, when after a fall she complained of pains in her back and chest, shortness of breath and general weakness, which continuing, she entered the hospital. History otherwise negative. Condition on entrance: Severe frontal and parietal headache. Severe pain in the lumbar region, nausea and dyspnœa, flashes of light and diplopia, twitching and jerking of the limbs,—in fact, all the symptoms we might expect in a case of approaching puerperal convulsions. Urine examined shows no albumen, no sugar, specific gr. 1020. Urea 220 grains excreted in 24 hours. As the case was urgent she was at once freely purged, placed on a strict skimmed milk diet and a mixture containing 5 drops of tincture of digitalis and 10 drops of tincture of ferri mur. t.i.d. For about the first fortnight the treatment seemed to be giving good results and all the urgent symptoms diminished. The quantity of urea excreted daily was increased by about 100 grains, and we hoped that the case might terminate normally, but all the former symptoms began to return in increasing severity, and on the afternoon of the 28th of January, as she seemed to be verging on a convulsive seizure we proceeded to deliver her. After emptying the bowels by an enema and having the urine drawn off, an anæsthetic (the A .C. E. mixture) was administered. All aseptic pre-

cautions having been taken we dilated the os with a Goodell dilator (as the os was only large enough to admit the dilator) until we were able to dilate bi-manually, we then dilated until we were able to apply the Axis Traction Forceps. On applying traction they slipped, when we e sily turned and delivered the child (and I wish here to call to your remembrance an interesting though not very important fact, that on introducing the hand into the uterus to deliver the child it was distinctly heard to cry by those standing around). The child was born alive, and has lived. The patient recovered slowly but well from the narcosis, but had rather a severe post-partum hemorrhage. During the first 12 hours after delivery she suffered with severe dyspnœa which was at once relieved by inhalations of pyridine. After-pains were present for the first 24 hours after delivery. The patient made an uninterrupted recovery. The quantity of urea increased from 416 grs. the day after delivery to over 600 on the third day.

We naturally ask to what pathological condition or conditions do we owe the serious state in which we found the patient on admission to the hospital?

We find in some cases post-mortem that nephritis has existed, but in many cases no lesion has existed ante-partum to which death may properly be credited. Experience has demonstrated that when the urea excreted falls below a certain quantity per day (in round numbers say 500 grs. per day), that certain symptoms appear and rapidly become grave. Therefore it becomes of prime necessity to examine the urine of every pregnant woman for urea in the last two or three months of pregnancy. Formerly only albumen was sought for, and if not found, all was considered to be well with the patient, and that there was no danger of a convulsion. I have often pointed out to you the fact that there may be albumen found in even large quantities (the quantity of urea being normal), and no convulsions take place, and again as in the present case no albumen was present, and undoubtedly had we not operated on the woman she would have had convulsions. Such is the experience of those of our profession who have had the largest experience in obstetrical work. Now if a favorable prognosis depends on the quantity of urea

excreted daily you might very well ask : does not the urea *per se* cause the poisoning? By no means, for to quote from Prof. Bouchard, we find that there are 7 toxic principles in the urine. Firstly, a diuretic known as urea. Now, urea, although it is a product of disassimilation, plays a useful role in the economy; it possesses the property of forcing the renal barrier, of removing whilst it makes its own escape from the organism both the water in which it is dissolved, and the other toxic matters which are united with it. In fact, although poisonous, it takes an enormous dose of it to act as such, and it has been calculated that to be poisoned by urea alone it would take 19 days of complete retention of urea in a patient weighing about the same weight as the case we are considering Secondly, a narcotic ; it is fixed, of organic nature and has not been given a name. Thirdly, a sialogenous substance ; it produces salivation. No name given for it. Fourthly, we find two substances endowed with the property of causing convulsions, one is fixed, stable, organic, it might belong to the group of coloring substances from the manner in which it behaves. It is really an alkaloid. It is found in less quantities in the urine of the day. But it is of less physiological activity, the narcotic substance in the urine when injected causing death before the convulsive substance can produce convulsions. We do not know the names of these substances. Fifthly, there is a substance which causes contraction of the pupil; fixed, organic, probably belonging to the coloring matter series ; name unknown. Sixthly, there is a substance which reduces heat, by dimnishing heat production. It is fixed, organic, and may be a color substance. Seventhly, another convulsive substance, fixed, inorganic. It is, briefly, potassium, whose convulsive and toxic properties we have known for a long time. Nevertheless we cannot attribute to it alone the convulsions. In every case there is good cause for taking into account potassium in the toxic phenomena, consequent upon the retention of substances which ought to be eliminated by the urine ; for the accumulation of potassium may go on more rapidly than that of other substances coming from the organism. If in consequence of failure in the elimination of the substance in the urine which reduces calorification, disassimilation of the tissues diminishes, the potassium which

continues to be introduced into the organism by the food and drink may soon be found to be in a predominating proportion, and may induce convulsions, which is one of its properties.

It has been shown that urea is a powerful diuretic (which, however, fails to act on a diseased kidney); and when we find that the quantity of urea is diminished, we know that the excretion of the other toxic principles is also diminished, and herein lies the danger.

In conclusion, we have found by experience that the treatment adopted in this case on her entering the hospital is generally sufficient to cause the case to terminate naturally. Indeed probably no other form of treatment is so generally recommended by authorities on the subject. The indications are to produce free diuresis as well as to support the heart's action by digitalis. To improve the quality of the blood which in these cases is always abnormal by iron, of which the best preparation is the muriated tincture of iron. To freely purge with some of the salines, which not only act directly on the bowels, carrying off a large quantity of the toxic matters as well as watery constituents of the blood (water itself, when in excess, acting as a poison), but which also act to a large extent as diuretics. A strict skimmed milk diet is found by experience the best, and it also tends to act as a diuretic. Amongst many of the other remedies recommended is bleeding; but I would advise you against it, as its action is only temporary, and you can see in this case it might have been serious, as she had a post partum hemorrhage. Veratrum viride is uncertain. Nitroglycerine is of temporary value. It might possibly have been of service in this case to relieve the dyspnœa, but the pyridine acts much more promptly.

Should you meet a similar case, I would advise you to proceed at once to the forced delivery of the woman, rather than wait until convulsions break out, providing always that you have first attempted to relieve the serious symptoms by treatment.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

Associate Professor of Medicine and Neurology University of Bishop's College; Physician Western Hospital.

THE CLINICAL SIGNIFICANCE OF RENAL CASTS.

Dr. Geo. Barrie, Washington, discusses this subject in the *Medical Record*, January 23rd, 1897. He refers to the modification of our views as to the seriousness of this condition, owing to the frequency with which they are met with when looked for with the centrifuge in those apparently heathy. He examined the urine in fifty cases of apparently healthy persons confined in prison. Traces of albumin were found in 40 per cent., and casts mostly hyaline and granular were found in 26 per cent. In another group, when the persons were ailing and consulted him for some abnormal condition, but where no kidney affection had been suspected and no evidence of such existed other than the albumin and casts, he found the former in 20 per cent. of the cases, and the latter in 8 per cent., and by the centrifuge he has been able to discover casts in 15 per cent. of these cases. Prof. Shattuck, in 297 patients who sought his advice, not including fevers or cases where bile or sugar was present, found that at different ages the percentage in which albumin and casts were found ranged between 23 and 100, all the result of a single examination.

Dr. Landon Carter Gray has also reported cases of persistent albuminuria and glycosuria, with frequent hyaline casts in functional nervous diseases, but there was no nephritis, nor did the cases result in nephritis. Casts were found in half the cases (31) of neurasthenia, albumin in thirteen, and faint in fourteen; in five cases of melancholia, albumin was present in all, and casts in four; in three cases of insomnia, albumin in all, casts in two. In cases of neuralgia, neuritis, nymphomania, torticolis, tic douloureux, syphilis, alcoholic meningitis, general paresis and subacute mania, albumin and casts were found in the majority of cases. Dr. Barrie does not agree with Brewer, that the presence of casts always means a damaged constitution, as in these cases all the functions of the kidneys are performed normally,

the epithelial casts are usually absent, and are present only in genuine parenchymatous nephritis. While traces of albumin and casts do not point to a serious condition in the neuroses, they should be a note of warning that the kidneys require watching and rest.

He then refers to cases having all the symptoms of Bright's disease where recovery has occurred, especially in the cirrhotic form where casts and albumin are sometimes absent or sparingly present, with renal insufficiency.

He concludes that in the two groups of people referred to, the discovery does not usually indicate anything serious, and agrees with Flint Senator, and Johnson, that cases of chronic nephritis are not necessarily hopeless, and that by a more general routine examination of the urine, incipient cases may be discovered and aborted in the early stages.

ON THE TREATMENT OF GRAVE'S DISEASE BY MEANS OF THE THYMUS GLAND.

Dr. Mackenzie, M.A., M.D., Cantab., F.R.C.P.L., of London, England, gives a paper on this subject in the *American Journal of the Medical Sciences* for Feb., 1897. Fifteen cases are reported from the experience of other observers, the results of which are thus summarized:—

It will be seen from the preceding that the treatment was followed by considerable improvement in the patient in every case but one. In this case the calf's thymus was used in large doses, averaging about three-quarters of an ounce a day. In seven of the cases a very striking fall in the pulse-rate is explicitly recorded.

In three cases the exophthalmos disappeared, in one case it nearly disappeared, and in four cases it was lessened. In the remaining eight cases the result, as regards the eyes, is not specially mentioned.

As regards the goitre, in four cases in which it was large there was no change; in four cases no effect is noted; in three cases a slight enlargement disappeared; in two cases there was diminution in size; in one case the swelling was noted as never much, and in another as only occasional. Improvement in the general condition of the patient was noted in fourteen.

As regards the dose given, it varied between ¼ lb. and 4½ grains in the day. Lamb's or sheep's thymus was given in six cases, in four slightly cooked and in two raw. In six cases thymus was given in the form of tabloids, and in two cases in the form of fluid extract. In the remaining case calf's thymus was given raw.

Large doses in two of the cases were successful where small doses failed. Two of the English firms who make thymus-tabloids inform me they use the calf's thymus, so that it is probable where tabloids were given that it was calf's thymus which was made use of. I have ascertained that the preparations used in 5 cases were derived from the calf. It must be borne in mind, in judging of the remedy, that it is probable it has been used without benefit in a considerable number of cases which have never been published. On this account it would be hardly fair to compare these cases, as I shall presently compare my own, with cases treated by other methods.

Dreschfeld, in a recent article on Grave's disease, remarks that he has tried thymus gland in three cases without any marked benefit. Möbius, in his recent work on Basedow's disease, mentions that he has treated several patients with slightly cooked calf's thymus for a shorter or longer time. They improved, but not more or sooner than under other modes of treatment.

In regard to the cases treated by himself, his conclusions are:

Of the twenty cases I have now recorded under my care, treated by the thymus gland, one died, and in six no improvement was observed. In thirteen cases there was some improvement. In none of these, however, have I observed any such decided effect produced on the most important symptoms, and on the progress of the disease, as could lead me justifiably to conclude that the thymus had any great therapeutic activity. For the sake of comparison, I propose to contrast the progress of these twenty cases with a similar number treated by other methods.

In the beginning of this paper I stated that the symptom which, up to the present time, I have found most intractable is the rapidity of the pulse-rate. One must, of course, avoid the error of taking the diminished frequency resulting from rest as a result of a remedy. In my cases I have endeavored to avoid this fallacy. In twelve of the cases no alteration in the pulse-rate was observed, and in two it increased slightly. In six it diminished; in all but one of these the diminution was only slight. In the one case in which there was very considerable slowing this improvement was only observed after the remedy had been taken for some months, and it seems doubtful whether the thymus had anything to do with the change, as the pulse-rate subsequently increased again while the remedy was still continued in large doses. Of the twenty comparison-cases no alteration in the pulse-rate was observed in eleven, and in two it increased slightly. In four cases there was marked but gradual diminution, and in three

there was slight lessening of the frequency. It would therefore appear that, as regards the effect on the heart, there is nothing in favor of the thymus treatment.

As regards the thyroid gland, in only three cases was there a material diminution in size. In two cases the goitre actually increased in size while fairly large doses of thymus were being given, and in another it increased after first diminishing.

Of the contrast-cases, the goitre more or less diminished in four, and in a fifth the enlargement entirely disappeared. An increase in size was noted in only one case. In thirteen no change was observed.

It therefore appears that the progress of the enlargement of the thyroid has been much the same whether thymus was given or not.

The exophthalmos decidedly diminished in only one case, and in that it had commenced to lessen before the thymus treatment was started. In the contrast-series three lost their exophthalmos.

As regards the general bodily condition, in eight of the cases the weight was not recorded. In three there was no change. In four there was loss of weight. In three of these this amounted to only a few pounds; but in one of the three, the fatal case, there was considerable further loss of weight after the remedy was discontinued. In the fourth case the patient lost fourteen pounds in weight, but the loss was quickly made up for when the medicine was stopped. In a fifth case the patient lost weight to the amount of eleven pounds during the first two months of the treatment, but gained twenty pounds during the next two mouths. In four cases there was a marked gain in weight of from four to fifteen pounds. Of the comparison-series, I find loss of weight noted in only one, and a marked gain noted in three cases, amounting to sixteen pounds in one case and thirty-five pounds in another. This, again, is somewhat in favor of the series treated without thymus, but I do not look upon the difference as at all significant.

The dose of thymus given varied from several ounces to ten or fifteen grains a day. The cases which had large doses did not appear to do any better than those treated with small doses.

At the same time it is quite evident, from the record of several of the cases, that the patients themselves were satisfied that the remedy benefited them. When it was discontinued they asked to be put back on it. In no case did it produce any unfavorable symptoms.

The combination of thymus and thyroid was employed in four cases, and in two of these it did not appear to be very well borne.

The last case, which was the fatal one, had no treatment for some weeks preceding her last illness.

The size of the thyroid enlargement appeared to make no difference on the progress of the case. About the same proportion of the cases, with little or no enlargement, did well as of those where there was a large goitre.

It will be observed that I prescribed other remedies along with the thymus in several of the cases, such as belladonna, bromide of potassium, sodium phosphate, etc. This would diminish the value of my observations, if I were endeavoring to maintain that the thymus gland had any specific value; but, as my thesis is that it has no specific influence, the administration of other remedies is not of material importance.

An important point which should be borne in mind is that the most remarkable of the cases of recorded benefit have been those in which the lamb's thymus has been employed. Möbius and Taty and Guérin, who failed to observe benefit, expressly mention that they employed the calf's thymus. I am not able to give exact particulars as to which form has been employed in all of my cases. The tabloids used were supplied by Messrs. Burroughs, Wellcome & Co., who informed me they were made from the thymus of very young calves. The extract of thymus was prepared for me by Mr. White, the pharmacist to St. Thomas's Hospital. It was prepared from lamb's thymus whenever it was procurable, and at other times from calf's. The calf's thymus was used in 2 cases, in which large doses were used.

It seems unlikely that any important therapeutic effect should exist in the lamb's thymus and not in the calf's; the reported success of cases treated with tabloids of calf's thymus may be set against the failures.

The conclusion at which I have arrived is that the thymus gland possesses no specific action in Graves's disease. I have found it in most cases to have no effect either on the heart, on the goitre, or on the exophthalmos. At the same time it appears to be a remedy of some value, improving the general condition, and, in this way, may assist toward the recovery of the patient. I should, at present, place it in the same class of remedies as cod-liver oil.

I am of opinion that the dose, to be of any use, should be at least one or two drachms a day, of the fresh gland or its equivalent, in the form of extract or powder.

AMŒBOID CELLS IN ASCITIC FLUID.

VON LEYDEN and SCHAUDINN (*Sitzungsbericht der Kgl. Preuss. Akad. der Wissensch. zu Berlin*, 30 Juli, 1896) report the discovery of an amœboid protozoon in ascitic fluid. This

was first found by Prof. Leyden in the fluid from a woman of twenty-two years, with heart-disease and ascites. In the course of numerous tappings made for the relief of the latter, colorless gelatinous cells were found, often aggregated in nests. They changed their shape, threw out pseudopodial processes and withdrew them again, showing active motion at ordinary temperature (23 o to 24 o C.). They could also be observed to unite in peculiar meshes with nodes on the processes thrown out. These nodes were at time loosened, and in turn developed into cells. About the same time similar bodies were found in the ascitic fluid of a man of sixty-three years, who had carcinoma of the stomach. In the first patient nodular masses could be felt in the abdomen after tapping, so it was assumed that she, too, had cancer. The examination of the bodies was made by Dr. Schaudinn, assistant in the zoölogical laboratory of the University of Berlin. Dr. Schaudinn finds the cells are parasitic protozoa, the exact classification of which he does not wish to make in the present unsettled state of the subject. They are undoubtedly amœbæ, and perhaps nearly related to the free-living placopus.

The objection has often been made that the extensive work on parasitic protozoa, as those of malaria, dysentery, etc., has all been done by pathologists. not by specialists, and for that reason is often belittled by the said specialists. It is therefore a matter of congratulation that Prof. von Leyden availed himself of an expert "who for years has been working on protozoa." Whether he is able to distinguish these from body-cells any better than a Pfeiffer, an Adamkiewicz, or a Sudakewitsch, remains to be seen.—*American Journal of the Medical Sciences.*

THE DIAGNOSIS OF MALIGNANT TUMORS OF THE LUNG BY THE SPUTUM.

BETSCHART adds another to the small number of cases in which malignant disease of the lung has been diagnosticated by the sputum-examination. The sputum in this case was of variable color, often brownish-red, as in infarct, but never resembling raspberry-jelly, as was at one time thought to be the case in such conditions. Miscroscopically there were free fat-globules, leucocytes, and large numbers of epithelioid cells more or less aggregated. The sputum also contained particles visible to the naked eye—in fact, up to three mm. in length, yellowish or brownish, and gelatinous-looking, which proved to be carcinomatous. The diagnosis thus made was confirmed by post-mortem examination.—*Virchow's Archiv*, Bd. 143, H. 1.—*American Journal of the Medical Sciences.*

THE INCREASE OF THE NATURAL CAPACITY FOR RESISTANCE BY THE PRODUCTION OF HYPERLEUCOCYTOSIS.

Dr. Martin Hahn, privatdocent of the Hygienic Institute of the University of Munich, has published (*Berliner Klin. Woch.*, November 28, 1896) the results of some highly interesting investigations, which we summarize in the following abstract:

Buchner demonstrated that immunity cannot be explained by simple phagocytosis, as exudates lose none of their bactericidal power when the leucocytes are killed by freezing. In these cases we do not deal with a phagocytic function of an organized cell, but with the decomposition or secretion products of the leucocytes, which impart a greater bactericidal energy to exudates than is present in blood-serum.

These observations are significant in their bearing on the theory and practical treatment of infectious diseases. The fact that leucocytes, where they occur in great number, impart to the respective medium, presumably through the products of their secretions, a bactericidal energy, suggests that we may increase by artificial means the natural resistance of the human organism, which is identical with the bactericidal energy of the blood. Not every increase in the number of leucocytes possesses the same value in increasing the bactericidal action; the kind, origin, biological condition, etc., of the leucocytes are important factors.

Assuming that resistance is augmented by certain alexins, it would seem that the injection of these substances would be efficient, but it has been shown by Buchner that human resistance cannot be increased in this way owing to the neutralizing antagonisms of the alexins produced by different animals. Accordingly the writer has attempted the production of a hyperleucocytosis.

Unambiguous results were obtained only by experiments on dogs. The number of leucocytes in the arterial blood was determined, and the animals were then given subcutaneous injections of remedies stimulating leucocytosis. For this purpose albuminoids, such as albumose or nuclein, were employed, the latter in the form of a yeast nuclein solution, placed at the writer's disposal by the firm of Parke, Davis & Company. Good results were obtained from a nucleinic acid donated by the same firm. As large quantities of such preparations can be administered to the dog, it is easy to double the original number of the leucocytes in a short time. This is usually accompanied by a rise in temperature, varying according to the remedy used. In the dog it rarely exceeds

1 to 1½ degrees. When the number of leucocytes has risen to double the normal, blood is withdrawn a second time. At first five to six hours elapsed before the second blood-letting; later an interval of twelve to fifteen hours was allowed to pass between the injection and the second bleeding.

The defibrinated blood, obtained in the stage of hyperleucocytosis, exerted a decidedly more energetic bactericidal effect than normal blood of the same animal; which would indicate that in dogs the course of infection may be very favorably influenced by artificial hyperleucocytosis.

A favorable action is to be expected from hyperleucocytosis only in those cases where the bacteria do not remain localized and cause mischief by their toxins, but where they really pass into the circulation. In the human subject, in harmony with the animal test, a decided increase is to be registered in the energy of the blood rich in leucocytes. The investigations are naturally not to be regarded as completed so far as the human subject is concerned. But in view of the results thus far obtained, it is highly probable that the bactericidal potency of human blood depends substantially on the number of leucocytes, and that it will be possible to augment the natural resisting power of the human subject through an induced hyperleucocytosis.

Of course, artificial hyperleucocytosis will not favorably influence all bacterial affections. With respect to diphtheria, it seems almost established that a persistent increase in the number of leucocytes is to be regarded as unfavorable—a fact which certainly calls for further explanation. In other infections, where the bacteria remain localized, and exert their harmful action, not by their direct presence in the blood, but rather by their locally produced toxins, as in cholera and tetanus, but little is to be hoped for from hyperleucocytosis. Here we have less to do with the destruction of living bacteria than with the problem of immunizing te body against the toxins. In these conditions antitoxic serum-therapy must continue to occupy the foreground of clinical interest. The situation is different in the septicæmic infectious processes. The results thus far obtained in the treatment of anthrax, by immunization with serum, are by no means brilliant, despite varied and extended experiments. At all events, they are far inferior to those obtained from immunization through attenuated cultures. A similar state of things seems to prevail with respect to the streptococcic serum. Accordingly, in those infectious processes which are due to the presence of bacteria in the blood, we have still left to us a field for immunization through attenuated cultures, and for cure through elevation of the natural powers of resistance. This cure is, prospectively, to be achieved through the artificial production of hyperleucocytosis.

The subjoined tables give the rate at which certain bacteria were destroyed by normal and leucocytic blood. The figures given express the percentage ofgerms remaining alive at the end of the respective periods ;

1. *Dog's Blood.* Staphylococus *pyogenes aureus ;*

	After two hours.	After five hours.
Normal blood	19.5	4
Leucocytic blood	2.9	1.7

2. *Human Blood.* Bacterium *coli :*

Normal blood	41.1	7.5
Leucocytic blood	16.1	0.6

—*Medicine.*

THE FUNCTION OF THE SUPRARENALS.

L. Szymonowicz (*Arch. f. Phys.*, lxiv., Nos. 3, 4) reports three facts which throw much light upon the heretofore obscure function of the suprarenal capsules. They are as follows :—

1. The extirpation of both suprarenals causes a decided diminution of the blood pressure ; the pulse becomes smaller.

2. Introduction of suprarenal extracts into the veins produces, chief of all, a decided increase of blood pressure, and increase of the heart's action.

3. The blood flowing from the suprarenal veins, when introduced into the circulation of another animal, causes the same phenomena as do the suprarenal extracts when introduced into the blood, but in a lesser degree.

The author concludes from these researches and those of Cybulski that: (1) the suprarenals are organs of undoubted necessity to life, being glands with an internal secretion ; (2) it is their duty (especially of the medullary substance) to produce and transmit to the blood a substance which continually upholds the activity of the vasomotor nerve-centers, the vagus and the accelerator nerves, as well as the respiratory centers, and, in all probability, the centers controlling muscular tonicity.—*Modern Medicine.*

SERUM TREATMENT OF LEPROSY.

This method, which originated with Dr. Carrasquilla, he has successfully employed in fifteen cases, and it promises to prove a panacea in this disease. The conclusions from the cases treated are thus summarized in the *Indian Medical Record :*

"1. The serum treatment overcomes the anæsthesia more or less rapidly, in proportion to the extent and gravity of the lesions of the peripheral nerves.

"2. It decolorizes the macules without obliterating them entirely; they become the seat of abundant desquamation.

"3. It causes œdema to disappear rapidly in some cases, slowly in others; the skin retracts, becomes wrinkled, and finally returns to its normal state when the œdema has subsided.

"4. The tubercles become flattened and softened, and disappear, either by absorption, by desquamation, or by suppuration, leaving marks to show their situation.

"5. After suppurating abundantly, the ulcers heal with marvelous rapidity, leaving the skin sound.

"6. The scars of old suppurative lepromata become pale, and tend to assume a level with the surrounding skin.

"7. The ulcerated mucous membranes hasten to cicatrize, become decolorized like the cutaneous macules, and regain their sensibility, while the tubercles disappear.

"8. With the disappearance of the œdema and the tubercles, and with the fading of the stains, the countenance grows thin, and loses its leonine aspect entirely.

"9. The appetite is recovered, together with the capability of sleeping; there is cheerfulness and content replacing the previous profound depression, and lost hope is regained.

"10. From the first serum injection administered to the patient, the mortific action of the bacillus lepræ leaves, and no new manifestation of the disease shows itself.—*Modern Medicine.*

RECENT PROGRESS IN NEUROLOGY.

Neurological literature for the past few years has reflected very little which possessed either novelty or special interest in the domain of gross anatomy or histology, but in the more delicate and still somewhat obscure field of minute histology and anatomico-physiological research much work has been done, with a resultant degree of enlightenment which is prophetic of a rich harvest in the near future. The factor chiefly responsible for our advancement in this direction has been the various improvements devised in methods of research, the most notable of which are associated with the names of Golgi, Luciani, Marchi, and Ramon y Cajal. Other workers in this field, whose contributions have added notably to the value and scope of our knowledge of the subject are Andriezen, Risien Russell, Mellus, Van Gehucten, Turner, Schaeffer, Bevan Lewis, Biedl, and Chaslin.

The line of investigation which has been most positively fruitful in results has been that of experimentally induced pathology. Beginning with the functionally highest structures, the cells of the cortex, Andriezen has shown that the

apical processes of the great pyramidal cells of this region receive the terminal processes of the fillet radiations, a fact which leads to the conclusion that these are the sensory cells of the cortex. If accepted, this conclusion points to the correlated acceptance of a practically identical cortical localization of motor and sensory function or representation. Further support of this teaching is to be found in the results obtained through experimental studies by Flood and Schaeffer. (*British Med. Journal*, July 28, 1894.) With very few exceptions this view is generally accepted among neurologists to-day. In connection with this subject of cerebral representation of common sensation, Spitzka (*Lancet*, January 19, 1895) publishes advance notes of a case of direct interest and importance, involving a focal lesion of the right stratum intermedium, the patient presenting during life more or less complete right hemianesthesia, with loss of mechanical co-ordination, but preservation of equilibrium. Further study, not yet complete in this case, is expected to demonstrate facts of importance in connection with the pathway of sensory fibers in the cerebrum. Turner's (*Brain*, 70, 71, 1895) experiments, several in number, also bear upon this subject of the pathway of fibers conducting sensory impressions. He destroyed the tubercle of Rolando in the medulla of the monkey, and noted as a result, (1) defect or abolition of all forms of sensation in the skin, mucous membrane, and cornea supplied by the fifth nerve with contraction of the pupil of the same side, but without trophic change in the eye. The loss of sensibility was in relation to destruction of the ascending trigeminal root forming the superficial white stratum of the tubercle. The effect on sensation in the body was (2) loss or defect of the sense of touch and of localization on the side of the lesion, but retained pain-sense, while on the side opposite the impairment was of pain-sense only.

Mellus (communication to Royal Society, England), working in the laboratory of Horsley, reports the results of a series of experiments made with the object of determining the pathway of certain motor fibers from the cortex downward. The bonnet-monkey was the subject of experiment, the centers for the hallux, thumb, and face in the left hemisphere being the areas of the cortex subjected to minute experimental lesions. He found that the coarser degenerate associate fibers from the thumb lesion were distributed to the upper part of the motor area, and the finer fibers to the lower —an observation corroborative of the measurements of Bevan Lewis. In the internal capsule these degenerate fibers were divisible into two systems one of the fine fibers passing into the outer surface of the optic thalamus from the poste-

rior limb of the capsule; the other, coarse fibers, passing through the internal capsule into the crus and ending apparently in the *substantia nigra*. The fibers representing degeneration secondary to the lesions of the facial center are situated in themiddle third of the crus, mingled with the fibers of the pyramid, and not occupying a separate space mesial to the pyramid. These experimental findings are especially noteworthy, since they in some degree are opposed to the teachings of Meynert and others.

The pituitary body, long an enigma as regards its function, has been the subject of especial study by Andriezen (*British Med. Journal*, January 13, 1894), and Sacchi and Vassali (*Centralbl. f. Allgem. Path. Anat.*, May, 1894). They find that the function of this body is essentially trophic, enabling the nerve tissues to take up and assimilate oxygen from the blood stream. It also exerts an influence upon metabolism, destroying or rendering innocuous certain waste products. The pathological findings in acromegaly involving disease, usually of hypertrophic type, of this gland are strongly confirmatory of the experimental findings of Andriezen.

The cerebellum has perhaps been the subject of more extended and enthusiastic study than any other special portion of the cerebro-spinal system during the past half decade. Marchi, Luciani, Risien Russell (*British Med. Journal*, July 28, 1894), Turner (*British Med. Journal*, August 21, 1894), Biedl, and Ferrier are among the large number who have made notable contributions to our present knowledge of the subject. Ferrier (*Annual of Univ. Med. Sciences*, 1895, Vol. 2 section, Brain), in his presidental address before the London Neurological Society, reviews critically the published researches in this field of Luciani and Marchi. He accepts as proven by them the facts; (1) That the cerebellum has no share in psychical manifestations; (2) its removal causes no evident impairment of any of the special senses, nor cutaneous nor muscular sensibility; (3) it has nothing to do with sexual impulse or desire; (4) the influence of the cerebellum is direct and not crossed; (5) the middle lobe is not, as taught by Nothnagel, the essential lobe. Some of these statements, as will be noted, are radical innovations in teaching and belief.—*William Broaddus Pritchard, M.D., in Medical News.—The American Practitioner and News, January*, 1896.

URIC ACID AS A FACTOR IN DISEASE.

The part that uric acid plays in the production of morbid conditions is now fully recognized. It is of no mean import then when we find it accountable for a long train of

symptoms—many of which are obscure, and many not easy to formulate. And by reason of obscurity it can cause no surprise that errors in diagnosis are made. That many failures of relief are recorded, because the tendency has been to recognize and treat symptoms only instead of the true pathologic entity underlying the whole.

There is reason to believe that nearly all cases of periodic or paroxysmal headache, melancholia, not accounted for by other factors, and much of that undefined class of diseases denominated neurasthenia, are attributed to this cause. Then we have rheumatic affections, tonsillitis, cutaneous irritation, as in the various forms of eczema, anæmia and menstrual disorders.

A careful scrutiny is necessary in these cases in order to distinguish the actual condition present, as there is no one symptom which will interpret or cover the whole field of inquiry.

Help may, however, be obtained if we remember that it is almost always associated with gastric disorders, malnutrition, the result of disturbed assimilation, with more or less high arterial tension, super-acidity of the urine, of abnormal color, and probably scanty in amount.

These symptoms are not due to increased production of uric acid in the blood and secretions, but to its retention and storage in the various tissues of the body. A normal daily amount may be produced, and yet if the blood is not in a condition to carry it on as effete matter, or the kidneys to eliminate it, deposits take place with the resultant cumulative interference with the normal functions of the economy.

The indications for the relief of this morbid condition due to excess of uric acid in the system is to render the blood in a proper condition to dissolve out the deposit in the tissues and make the uric acid a soluble urate.

We have for this purpose a ready remedy in the so-called salines. The salicylates, and piperazine, and lysidine have met with decided favor, have rendered good service, and are well worthy of trial. Haig states that iron cures anæmia by clearing the blood of uric acid ; that the administration of uric acid will quickly undo its work, and that if in any case it fails to clear the blood of uric acid it also fails to cure anæmia. That when iron fails to cure, other drugs that have more power over uric acid, or act in a slightly different way, may succeed ; but that no drug of any kind will succeed if it fails to clear the blood of uric acid.

This is the principle of treatment in all cases—clear the blood and tissues of uric acid and the rest will follow. The symptoms will vanish.—*The Charlotte Medical Journal.*

THE ICE-BAG IN PNEUMONIA.

Dr. Lees gives the following directions for the use of the ice-bag in pneumonia:

1. Apply the ice-bag over the dull area, and especially over the advancing edge of the consolidation.

2. If the area is large, use two bags at least, or three. Even young children may require two.

3. Expect to find a distant local effect (improvement of percussion-note, less bronchial breathing, looser râles) on careful physical examination, after the ice has been applied for twenty-four hours.

4. If fresh areas of consolidation develop use additional bags. Four or even more may be needed in a bad case. The amount of the dose is as important as it is with drugs.

5. Take the temperature every half-hour for the first three hours, afterward every two hours.

6. Apply hot water bottles to the feet and legs. For children supply these before the ice is applied.

7. Examine the physical signs carefully twice daily, and shift the bags accordingly.

8. If pericarditis is present, place one ice-bag over the heart.

9. If temperature below 99° F. (37.2° C.), or hands cold, or lips bluish, remove the bags for an hour; then replace them, and use them for two or three hour periods, with one or two hour intervals.

10. If in a severe case there is distinct cyanosis and a rapid feeble pulse, consider whether leeches (in urgent cases venesection) would not relieve the right heart.

11. In all cases see that sleep is secured during the first three or four nights. If the relief afforded by the ice-bag does not suffice for this, give chloralamid or morphine.

Pneumonia treated vigorously with ice within twenty-four hours after the rigor may sometimes be aborted.—*The Charlotte Medical Journal.*

THE PROTECTIVE INOCULATION OF MAN AGAINST ENTERIC FEVER.

Pfeiffer and Kolle have recorded in the *Edinburgh Medical Journal* the results of researches into this subject, They first refer to Haffkine's investigations into the protective inoculation against cholera. Pfeiffer and Kolle have already proved that the blood of typhoid convalescents, as well as that of animals possessing an active or passive immunity against this infection, present analogous relations to those found in Asiatic cholera. The blood contains

specific bactericidal products. There is wanting also in the blood serum of typhoid convalescents the specific typhoid poison present in the bacterial cells. Considering the good results obtained in cholera, it became desirable to investigate the effects of the introduction of a small quantity of killed typhoid bacilli in man. The authors used a typhoid culture which had been made from a spleen two months previously, and the genuine character of which was proved by the specific reaction with the blood serum of typhoid convalescents. The virulence of the culture was very marked. Individuals were selected who were either in good health or at least free from febrile symptoms, and who were known not to have enteric fever. One c.cm. of a bouillon preparation, so completely sterilized at 56° C. that it contained no living micro-organisms, was injected. A few hours after the inoculation the first symptoms appeared of shivering, vertigo, etc. The evening temperature rose to 38.5°, but it fell to normal during the following day. From their experiments with it on animals it became obvious that a single injection of a minimum dose of killed typhoid cultures induced in man a specific change in the blood, which was apparent six days after the injection, and which attained at least the same degree as is visible in typhoid convalescents. It is more than probable that the appearance of specific bactericidal substances in the blood of individuals who have had typhoid fever represents the chief cause of the immunity possessed by them. If this is correct, then it is to be expected that these prophylactic inoculations with killed typhoid cultures can produce an immunity of equal intensity and duration as that found after an attack of typhoid fever, Haffkine's analogous, very numerous, successful, and practical investigations lend support to the same view. The authors hope that these protective inoculations against typhoid fever will be of practical service under certain circumstances, such as the prevalence of a severe epidemic, etc. The material for inoculation can be provided with comparative ease. They refer especially to its possible value in cases of sieges when enteric fever often decimates an army. Baieger, Wassermann, E. Fraenkel have used killed typhoid cultures in the treatment of enteric fever, but not for its prevention. Individuals with typhoid fever react quite differently from healthy persons, but even in the developed disease such injections have been known to produce a beneficial even though temporary effect.—*The Charlotte Medical Journal, January*, 1897.

THE SIGNIFICATION OF MORTALITY FROM CONSUMPTION WITH REGARD TO THE BICYCLE.

At a recent meeting of the American Statistical Association, Dr. S. W. Abbott, Secretary of the State Board of Health of Massachusetts, presented some figures regarding the proportion of pulmonary tuberculosis in females to that in males in Massachusetts. The rate in 1851 was 1,451 females to 1,000 males; in 1890, 1,055 females to 1,000 males; and in 1895, only 974 females to 1,000 males. 1895 was the first year in the history of the State in which the number of deaths from phthisis in females was smaller than that in males. The fact that a uniform reduction in the rate of female deaths began some five years ago, about the same time women were beginning to ride the bicycle extensively, Dr. Abbott considers significant, and he is inclined to attribute the decrease in the death-rate to the great increase in open air exercise among women by the use of the bicycle.—*The Sanitarian January*, 1897.

SURGERY.

IN CHARGE OF

FRANK R. ENGLAND, M.D.,

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Resection of the cervical sympathetic nerve for exophthalmic goitre and epilepsy, Jonnesco (*Centralbl. f. Chir.*, No. 2, 1897; *Br. Med. Journal*, March 13th, 1897) has been led by results of clinical and pathological observations to perform complete and bilateral resection of the cervical sympathetic nerve in cases of Basedow's disease and epilepsy. In 1896 he removed from a patient affected with the first mentioned disease the superior and middle ganglia, together with the intervening portion of nerve fiber on both sides. The result of this operation was so good that the author thought a more extended procedure—extirpation of the three ganglia—might prove beneficial in nine other cases, of which two were cases of Basedow's disease and 3 genuine cases of epilepsy, the remaining four being instances of chorea and hysterical convulsions. In both cases of Basedow's disease the operation was followed, the author states, by disappearance of the exophthalmus and diminution in size of the goitre. The increased frequency of the cardiac action was much relieved in one case, but persisted in the other. There was decided improvement in the 3 cases of genuine epilepsy. Each patient, it is asserted, has remained quite free from any

recurrence of the conclusions; one only having suffered since the operation from slight, rare and transient attacks of vertigo. In the remaining cases no good result was obtained by operative treatment. Resection of the cervical ganglia, according to the author's experience, is not likely to be attended by any serious consequences, as the only abnormal signs observed in his cases were temporary blushing, lacrymation, and increased nasal secretion and contraction of the pupil.

THE USE OF FORMALIN IN INFECTED WOUNDS.

By A. L. CORY, M.D., Chicago, Ill.

My attention was called some time since to the use of a mixture of formalin and gelatin in infected wounds. A German firm placed the mixture on the market under the name of "glutol." Formalin is mixed with gelatin, which forms a solid mass; this is grated, forming a fine gray powder, in which state it is sold, to be dusted on the wound as we have been doing heretofore with iodoform or boric acid. An American firm have recently put the same thing on the market under its proper name, "formal-gelatin." It was claimed for it that when pus was present the gelatin would gradually dissolve in the secretions, and liberate the formalin, which is a strong disinfectant, and thus keep up a continual action while any of the powder remained. On trial I failed to realize the good results except in superficial injuries, for instance in two cases of scalp wounds. At the second dressing, 48 hours after the injury, the skin around several of the stitches looked quite inflamed and seemed about to suppurate, but on the application of the powder and fresh gauze at the next dressing, four days after, the wounds were found entirely healed. In cases where the infection was deep and pus already formed I could see no benefit from the powder. At this time I had under my care one of the nurses of Englewood Hospital who had been operated upon for appendicitis. The external wound had by some means become infected, and I had opened it widely down to the peritoneum. In spite of all the measures I could apply, including the glutol, the wound surface continued to suppurate, and a pocket formed under the skin, beyond the wound, but communicating with it, from which pocket I could press out at each daily dressing about two drams of pus. It then occurred to me to try the formalin in solution. Knowing it to be very strong, I without any special reason chose to make it of the strength of 1 to 200, formalin ʒi, water ʒxxv. After the wound had been washed with sterile water until clean, I packed both it and the pus pocket with plain sterile gauze dipped in the above solution, and

what was my surprise on the next morning to find no pus whatever. I again dressed it with the formalin, and at the end of another twenty-four hours removed it and dressed with iodoform, and the wound healed promptly without further formation of pus. At the same time I had under care a woman who had an Alexander operation for shortening the round ligaments, and in whom one of the wounds had become infected so that I had opened it widely for drainage. Two dressings of the formalin, 1 to 200, stopped pus formation, and the wound healed under iodoform without further suppuration. Since that time I have dressed all infected wounds, and we get many of them in railway surgery because of dirt ground into the wound at the time of the injury, with plain gauze thoroughly wet with a solution of formalin 1 to 200, and have not had pus occur where the formalin could get to all parts of the wound.

I have had some wounds irrigated with the same solution, but do not get as good effects as where applied on gauze packed into the wound. In an amputation of the arm for railway injury suppuration occurred in the track of the drainage tube; here it was not possible to pack the entire tract with gauze, and irrigation seemed to reduce but not entirely stop pus formation. It would seem from my experience that the formalin must be held in place so that it may act on every part of the wound for several hours. In an acute case of gonorrhœa in a woman, as proven by finding the gonococcus in great abundance, I had the vagina thoroughly douched, then packed it through a speculum with gauze wet with formalin 1 to 400. This was renewed for four days in succession, and the gonorrhœa was cured.

My experience with the formalin has been so satisfactory that I desire others to try it and see if they can get the same good results.

I believe that with gauze dipped in the solution and the powder applied we have an ideal non-toxic dressing. With gauze wet with solution packed in "pus pockets," and in gonorrhœa in the female applied on gauze, we can get better results than with any other dressing used at present by the profession. I would not expect as good results in gonorrhœa in the male, for there the formalin could not be retained long enough in contact with the diseased surfaces. In making my solutions I have used the formalin, 1, as it is really a 40 per cent. solution of the gas called formaldehyde. I have continued the formalin as a packing material in my pus cases only long enough to stop the pus secretion. I do not know that it would be injurious, but knowing that it is being used as a fixative of fresh specimens for microscopic specimens, I have feared that its continued use would harden the granulations

and delay the cure, so as soon as the suppuration has stopped I have used iodoform in powder and plain gauze as a packing to stimulate the growth of granulations.—*The Journal of the American Medical Association*, Jan. 9th, 1897.

TREATMENT OF PROSTATIC HYPERTROPHY AND RETENTION BY CAUTERIZATION THROUGH THE RECTUM.

NEGRETTO (*Gazz. degli. Osped*, December 27th, 1896, extract from *British Medical Journal*, January 16th, 1897) records 4 cases of prostatic retention with much success by the above method. After thoroughly emptying the rectum, the patient anæsthetized, and a rectal speculum passed, the upper part of the bowel is plugged with gauze, and then, under the guidance of the finger, a specially devised hook with graduated stems is passed into the prostate to steady it. The prostate is then cauterized with a Paquelin or galvano-cautery over the extent required. The operation only lasted two minutes. The bowels are kept confined for a few days, and a catheter kept permanently in the bladder for some time. On the sixth or seventh day a purge is given, and at the end of ten or twelve days the catheter is removed, and the patient urinates by himself. The patients were 56, 62, 74 and 78, respectively, and had suffered from prostatic disease from three to five years on an average. In each case cauterization per rectum not only speedily relieved the congestion, but caused a notable diminution in the size of the prostate. The author believes this method to be superior both in its immediate and remote effects to castration or excision vas deferens.

TREATMENT OF APPENDICITIS.

MCBURNEY (*Medical News*, Vol. LXIX, No. 24, extract *British Medical Journal*, January 16th, 1897) points out that there is no medical cure for appendicitis, even though some cases recover without operation ; and whilst he considers appendicitis a surgical disease, yet operation may not be necessary in every case. The true cause of this affection is probably a stoppage of the drainage from the appendix to the colon, and the preliminary treatment is often worse than useless. The opium treatment relieves pain and discomfort, but entirely masks the symptoms at a most important time, for it is in the first 24 hours from the beginning of the attack that we can decide not only as to the diagnosis, but as to the probable course and the result of the case. If in 5 or 6 hours there is no increase in urgency, the patient is not in immediate danger if kept at perfect rest in bed ; if in twelve hours there is still no increase in the severity of symptoms, the patient should soon begin to improve. On the other hand,

if the urgency of the case has steadily increased in 12 hours from the time when the diagnosis was made, an operation will probably be called for. After two attacks the patient is sure to have a third, and each attack renders operation more difficult and dangerous. All the advantages lie with operation between the attacks. In an operation during an acute attack the prognosis is worse. In operating between the attacks it is rarely safe to do so in less than two weeks after an acute attack. McBurney was formerly more willing to operate during the attack than he is now. The chief cause of death is delay of one sort or another. In abscess cases the sooner we operate the better.

GYNÆCOLOGY.

IN CHARGE OF

A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. England.

Fellow of the American Gynæcological Society, and of the London Obstetrical Society; Gynæcologist to the Montreal Dispensary, and to the Western Hospital; Surgeon in Chief of the Samaritan Hospital for Women; Professor of Clinical Gynæcology in Bishop's University, Montreal.

THE EARLY DIAGNOSIS OF PREGNANCY.

Dr. Gardner of Baltimore has an interesting paper on this important subject in the Jan. *American Journal of Obstetrics*. He points out that pregnancy can usually be diagnosed at the end of eight weeks, the cessation of menstruation, by the breast signs, morning sickness, the softening of the cervix, the enlargement of the abdomen, the cystic condition of the uterus, and the color of the vagina. The bronzing of the nipple he found infallible in those who had never borne children, but unreliable in multiparæ. The papillæ fairly reliable; the presence of milk only reliable in those who had not borne children. Morning sickness may be due to displacement of the uterus or to salpingitis. When due to pregnancy the characteristic time for its appearance is the day upon which the first missed period would have fallen. But he only found it present 13 times in 75 early pregnancies. Cessation of the menses although not always present was the most reliable symptom, occurring fifty out of seventy-five times. But about one-third of all pregnant women continued to menstruate for one or more months after becoming pregnant, while on the other hand a good many women ceased to menstruate without being pregnant. The discoloration of the vagina due to distended veins was found in fifteen out of seventy-five cases. Gardner says that he had never seen it in any other condition except pregnancy. This is important. In a case which was sent to me a distance of a thousand miles with a fibroid tumor to be treated by electricity, I was struck by the marked purple color of the

cervix and vagina ; but the family physician referred me to the text-books, which state distinctly that this discoloration is frequent in fibroids of the uterus. Subsequent events proved that she not only had a large fibroid tumor, but that she was also pregnant several months.

He lays great stress on the cystic feeling of the uterus, going so far as to say that "practically a cystic uterus is a pregnant uterus." I have been carefully examining several hundred women at the Montreal Dispensary during the last few years, and I am now almost invariably able to detect it at from six to eight weeks by the bulging of the anterior wall of the fundus and the corresponding narrowing of the neck or isthmus. This sign Gardner does not mention. A very honest physician recently told me that he used the sound a good deal to diagnose pregnancy ; he showed very little judgment. The sound should never be used in any case where any or all of the other signs point to the slightest suspicion of pregnancy. Indeed the more experienced we become the less need do we have for the sound at all.

Fish, of Milwaukee, in the same number has an article on the question whether to leave the uterus or not whenever we remove the adnexa ; and he strongly maintains the affirmative, pointing out that the uterus is composed of erectile tissue and takes part in copulation.

Prevost, of Ottawa, has a paper in the *American Gynæcological Journal* for March, taking exactly the opposite position, maintaining with Segund that the uterus is always diseased when the appendages are affected. I do not agree with him, for out of several hundred cases in which I have left the uterus while taking out both ovaries and tubes, in only four or five have I regretted having followed this course ; and even in two of these cases the diseased uterus is gradually yielding to appropriate treatment. In the opinion of many, myself among the number, hysterectomy is performed unnecessarily, and far too frequently.

Ross, of Toronto (*American Journal of Obstetrics*, February, 1897), has a valuable paper on the best course to follow in fibroid tumor complicating labor. He advocates bringing on early emptying of the uterus. When the mother will not consent to this course he thinks she should be sent to hospital and prepared for Cæsarean section, but to wait a reasonable time to allow nature to have a chance. If no progress is made by vagina, we should not wait until the patient is exhausted, but at once proceed to open the abdomen, incise the uterus and extract the child. Ross cites a case of his own in which this plan was followed with marked success ; but he removed the ovaries, both in order to cure the fibroid, and also to prevent her from becoming pregnant again.

A few months ago I was consulted by my colleague, Dr. Fairweather Wilson, in a precisely similar case, but we decided to wait under observation until a few days before the expected time for her confinement, when we will have her removed to the Samaritan Hospital and perform Cæsarean section.

CHRONIC INFLAMMATION OF THE URETHRA, URETERS AND BLADDER IN WOMEN.

In the March number of the *American Journal of Obstetrics*, Dr. A. J. C. Skene, of Brooklyn, has an excellent and most practical article on the diagnosis and treatment. Regarding treatment he advocates quinine in cases due to herpes of the urethra. For urethritis and ureteritis he advises Santal-Midy. Also he lays great stress on the constitutional treatment of the urinary organs, proper diet, and more water. He deprecates dilatation of the urethra for exploratory purposes. Also he finds that the medical treatment generally gives better results than the treatment by surgical measures.

PATHOLOGY.

IN CHARGE OF

ANDREW MACPHAIL, B.A., M.D., M.R.C.S. Eng., L.R.C.P. London.

Professor of Pathology, University of Bishop's College.

Within the past two years medicine has been making heavy demands upon pathology, and has not often come away with empty hands. The clinical value of the work upon tuberculosis, diphtheria, typhoid and cholera has been detailed from time to time. The present seems a suitable time for dealing with the Bubonic plague, on account of the malignancy of the disorder, its recrudescence, and above all, in view of the good promise which anti-toxic experiments are giving.

Before the French Academy of Medicine, January 26th, Dr. Roux read a communication from Yersin under whose direction *twenty-six cases of plague at Canton and Amoy were treated with serum* obtained from a horse after numerous injections of plague bacilli into its veins. Three weeks after immunity was established in the animal the serum was tried on mice, and found to exert a preventive action. It was then tried upon human patients. The whole number of persons suffering from the plague who were treated by this method was twenty-six. Only two of these died, both of whom received the inoculation on the fifth day. A full account of the process is contained in the Annales de l'Institut Pasteur. His observation is, that this malignant polyadenitis, as Dr. Cantlie terms the disease, is amenable to

treatment along the lines already laid down in the case of diphtheria, that is creating an artificial immunity by the injection of anti-toxic serum.

Up to the 18th of the present month there have been reported in Bombay 6,853 cases with 5,447 deaths. In the whole Presidency the deaths number considerably over eight thousand, and the operations of the disease are not yet well under way. M. Yersin is on his way thither, and he will have no occasion to lament for the narrowness of his field. Indeed there has rarely been so good an opportunity for making a large experiment in the healing of disease.

The present outbreak of the disease dates from 1894, when it became epidemic in Hong-Kong. Its specific origin could not long be concealed, seeing that Kitsato was at that time in Tokio, not more than three days' sail from Hong-Kong. Accordingly on 14th June, 1894, Kitsato demonstrated the presence of a bacillus in the blood, glands, and other organs of patients suffering from this infection. M. Yersin, who at this time was working at Saigou, arrived at similar results by an independent enquiry. Clinically, several types are recognized. There is a benign polyadenitis with a low death rate, and a bacillus identical with that found in typical plague, though its toxicity must be of a much lower degree. Outbreaks of this nature are common enough in the East, and they are often quite widespread. Cases occurred in Hong-Kong in 1891, Astrakan in 1877, in Calcutta in 1890, in Singapore in 1892. Dr. Cantlie, who at this time was resident in the East, concludes that this benign polyadenitis is an established disease, that it may be independent of plague, that the two may co-exist, and that the one may exist independently of the other.

The epidemic is of slow growth. It may take twelve months to spread as many miles, but the method of propagation is unknown. The virus is carried by human beings or animals, but it probably requires the soil as a medium of growth. It seems to require dryness, but not heat, since it thrives in the severe cold of a Siberian winter. It goes hand in hand with famine. When a Hebrew prophet required a curse, these two were always found ready in his mouth. Dr. Adami, with his habitual liking for the origin of things, has made an exploit in Exegesis and Epidemiology at the same time. He supplies an original reading of the riddle in the fifth and sixth of First Samuel, which must be very refreshing to those who are fond of dark sayings and the interpretation of the same. The incident related therein does seem to point to a characteristic manifestation of the plague, with its relation of "mice" and "tumors in the secret parts." Even at that early period the part played by "mice" seems

to have been recognized. In every modern epidemic the onset of the plague is heralded by the death of rats. How the virus passes from animal to animal is as yet unknown.

The germicidal properties of nucleins Dr. Victor Vaughan has made his own for the past four years. His various contributions upon the subject have appeared in the *Medical News*, May 30th, 1893. Transactions of the Pan American Congress I, p. 238. Transactions of the Michigan State Medical Society, 1894. *Medical News*, 27th February, 1897. Dr. Vaughan first deals with the nucleins, and concludes that differences in reaction with staining agents so plainly seen under the microscope are only outward manifestations of less apparent and more important differences in chemical composition, and that the number of kinds of nuclein is limited only by the variety of cells. Indeed, there is such difference, for nucleins can be split up by the action of dilute mineral acids into albuminous bases and nucleinic acids, and the nature of the base and the acid obtained in this way will vary with the nuclein in which they originate. Yeast nuclein, for example, differs in both its basic and its acid constituents from leuco-nuclein as obtained from the thymus gland. The nucleinic acids on being further broken up by the action of dilute mineral acids yield the so-called xanthin bodies, and here again it is true that the products obtained will depend upon the kind of nucleinic acid acted upon. One nucleinic acid may yield only adenin, while another may furnish xanthin. Kossel has demonstrated some of the chemical differences between nucleinic acids from diverse sources. He finds that yeast nucleinic acid yields, on being broken up by the action of dilute mineral acids and heat, guanin and adenin; while testicular nucleinic acid furnishes adenin, hypoxanthin, and xanthin; and thymus nucleinic acid gives adenin only. These are what might be called gross differences, and it is probable that finer distinctions exist between members of the same group.

Dr. Vaughan in the outset adopted the view that an increase in the polynuclear corpuscles, upon which the natural resistance to bacterial disease depends, may be induced by introducing into the animal the most distinctive constituent of these cells, which is nuclein. To prove this position he had resort to actual count, and was satisfied that the subcutaneous injection of nuclein increases the number of white blood corpuscles, in both healthy and tuberculous persons, either slightly or three-fold; that this increase occurs principally in the polynuclear cells, and it is evident, as a rule, as soon as the third hour after treatment, but generally disappears by the forty-eighth hour. This treatment, it will be seen, depends upon increasing the normal resistance of the

body instead of depending upon antitoxins, and Dr. Vaughan mentions the diseases which in his opinion are to be treated by each method.

The work upon which this investigation is now engaged is the effect of nucleins upon such diseases as the "uric-acid" group. Inflammations of the upper air passages, typhoid fever, cancer, septicæmia and tuberculosis. The results are promised for early publication, and are certainly worth putting to a further test.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, December 18th, 1896.

GEORGE WILKINS, M.D., PRESIDENT IN THE CHAIR.

DYSMENORRHŒA IN YOUNG WOMEN.

Etiology and Symptomatology; this subject was introduced by Dr. WM. GARDNER.

Treatment, by Dr. F. A. L. LOCKHART.

Discussion.

Dr. A. LAPTHORN SMITH said that all must recognize the fact that dysmenorrhœa was not a disease, but rather a symptom of many and varied pathological conditions, and the treatment, therefore, would depend entirely upon the diagnosis. He found, on looking up his records, that it was an extremely common symptom, almost one-fourth of his patients having complained of it. The order of frequency had been as follows : greatest, in unmarried girls ; next, in childless married women ; then, in women with scanty flow at the periods, who had borne one child ; and lastly, in married women who had borne several children, and had prolonged and excessive menstruation. The reason of this was, partly because one met with more cases of stenosis of the os uteri in unmarried women, and partly because of a little of the general pelvic congestion occurring at one period often remained over to the next, and this was added to at each successive period, hence, little by little, the external layers of the ovary became thickened, and the mucous lining of the uterus swollen and blocking up the canal. He thought pregnancy might be called nature's remedy for dysmenorrhœa, because it both dilated the uterine canal and gave the ovaries a more or less complete rest, but that married life without pregnancy often made it worse.

Of the class who have borne one child but still suffer, the cause will be found, on examination, to have been an acquired, acute septic, or gonorrhœal endometritis, which had subsequently become chronic, leaving the mucous membrane of the cervical canal swollen with distended glands.

Of the fourth and smallest class, the cause would generally be found to be some form of displacement of the uterus, usually a backward one, which seriously interfered with the circulation of the

organ. Besides these four large classes, many scattered cases were found in which the pain was due, either to fibroid tumors blocking up the internal os, or to closure of either one or both ends of the Fallopian tubes.

Speaking of the treatment of that form due to stenosis, Dr. Smith recommended: (1) Improvement of the uterine circulation by curing constipation, the use of iron, strychnine, and phosphoric acid, and general hygienic measures; and by these measures he claimed to have cured one-half of his cases. (2) Relief of the spasmodic contraction of the sphincter of the internal os; here, acetanilide in doses of ten grains three times a day administered in strong coffee or weak whiskey, or combined with citrate of caffeine, had given him the best results. Another drug that might be used was viburnum. He unqualifiedly condemned the use of opium and alcohol. A hot sitz bath was also of use. Where these measures had failed, the introduction of the negative pole of the galvanic current within the uterus was most effective. It was indeed marvellous to see how readily a sound would glide into the uterus, as the negative wire touched it, when that same sound could not be made to enter previously, even by force. In the majority the second or third period after the treatment was painless, unless disease of the appendages was present. And where electrical treatment was not obtainable, rapid dilatation under anæsthesia with aseptic precautions came next in value. At the same time the mucous membrane of the uterus should be curetted, and equal parts of Churchhill's iodine and carbolic acid applied to its surface. Where no improvement followed, there should be at least one repetition, and the cervix, if elongated, amputated. He condemned the use of dilators in office practice.

In the event of all these measures failing, abdominal section would probably reveal the tubes bound down with adhesions and the extremities closed, and a small percentage of cases would thus require extirpation of the appendages for relief.

Dr. F. W. CAMPBELL alluded to the fact that the term "dysmenorrhœa" is being replaced by the modern synonym "painful menstruation," although in but few the function was entirely painless. In his experience the seat of the pain was in the pelvic region, back, loins, and inside of the thighs; and during the flow the expulsive efforts were often as marked as during labor.

He had met with, not only all the varieties described by Dr. Gardner, but also another which was only described by a few authors, as ovarian dysmenorrhœa. It was not possible to draw the line between these absolutely, as some cases seemed to possess characteristics of two or more.

While he believed that many cases, perhaps the majority, would reach the office of the gynæcologist, yet he could see no reason why the general practitioner should not treat such cases with marked benefit to themselves and to his own satisfaction. He felt that he had been able to relieve the great bulk of his patients by medicinal treatment, and that failure had been mostly in the mechanical variety, where subsequently the knife of the surgeon had been required to produce relief.

In discussing the drugs used, he unqualifiedly condemned both opium and its derivatives, as tending to produce the opium habit,

and the administration of gin or any kind of liquor. Many a bright life had been blasted by the liquor taken in the first place for the relief of menstrual pain. In the congestive form, he recommended the administration of some of the coal tar derivatives and viburnum. For the neuralgic variety, he thought general treatment most important with potassium bromide in half drachm doses three times a day at the period. Membranous cases he invariably handed over to the gynæcologist, and in the ovarian variety, tincture of conium twenty minims three times a day, with the application over the ovarian region of equal parts of extract of opium, extract of belladonna, and iodide of lead.

Dr. D. J. Evans did not agree with Dr. Smith in considering pregnancy nature's cure for dysmenorrhœa, and cited several cases in support of his opinion.

Dr. J. C. Webster stated that he would limit his remarks to some statements regarding the treatment of dysmenorrhœa in general, which would supplement Dr. Lockhart's paper, and be a sequel to Dr. Gardner's.

The latter speaker had pointed out that dysmenorrhœa often occurred in cases of slight or non-recognizable pelvic lesion. These were instances of disturbed innervation in one or other of its various manifestations. Notwithstanding the great increase in neuroses among women during the present generation, it must be confessed, that in the gynæcological world, scant attention had been paid to them. When we remember the great disturbances which mark the advent and departure of the reproductive era of a woman's life; the profound changes taking place during ovulation, menstruation, pregnancy, labor, and lactation; the subtle and complex activities of her psychical life in her various diastaltic functions; it is not remarkable that neuroses should manifest themselves, particularly in relation to her reproductive mechanism. That they are increasing, *pari passu* with the advance in our higher civilization, cannot be denied. Among the poor, the inducing factors were overwork, overworry, ill-regulated and poor nutrition; among the well-to-do, educational strain, over-indulgence, the stress of life, and emotional excitement.

Another important factor in explaining the prominent part which the pelvic organs play in the neuroses is the widespread habit among women of centralizing their attention upon these organs, because they are led to regard them as the primary cause of most of their ills. There is a fascination in the mystery of the sexual mechanism, and a morbid introspectiveness is easily engendered by an undue attention to it, too often passing into a condition of hypochondria. This mischievous habit is due, also, partly to the influence of the narrow mechanical school of gynæcologists; partly to the work of quack pamphleteers and vendors of patent medicines—would-be saviours of suffering womankind.

Owing to the marked surgical trend in gynæcological practice during the last twenty years, a narrow and debased specialism has been evolved which has resulted in the establishment of a school whose motto is "*Le bassin c'est la femme*," and whose remedial measures are limited to various procedures—from the passing of a sound to the extirpation of the appendages. Too strong a protest cannot be urged against the centralization of attention on the local

condition without regard to wider physical and psychical relationships.

The accusation of the broad-minded general physician, that the gynæcologist works in ignorance of the neuropathies and organic diathesses in that region of the body where they are of chief importance, is a well-merited one, and the majority of gynæcologists will, if they be honest, acknowledge its force.

In considering a case of pelvic pain we must bear in mind the following points:—

1. The pain may be directly due to pelvic lesions sufficient in themselves to produce this symptom.

2. Pain may exist with minor degrees of pelvic trouble, insufficient in themselves to cause more than a small amount of suffering.

3. Pain may be a pelvic symptom in association with some condition which in itself cannot directly produce this symptom.

4. It may be a prominent symptom in cases in which no local changes of any kind can be made out.

It is, therefore, very evident that other than local factors must be taken into count as explanatory of the symptom which we are considering. Among these, attention should be directed most markedly to the neuropathic condition—neurosis, in the widest meaning of the word.

This condition is related to the pelvis in various ways. In one set of cases, a local lesion, capable or not in itself of causing pain, may be the primary cause of development of a neurotic state manifested by diverse phenomena. The more marked these become the more is the pelvic pain intensified—a reactionary exhibition of the neurosis, as it were, on the seat of the primary affection.

In another class of cases there may be a slight pelvic lesion, causing very little discomfort. A neurotic condition may be developed from causes foreign to the pelvis, and this may manifest itself in intense pain, related by the patient to the pelvic lesion.

In another set the symptom of pelvic pain is developed as one of the phenomena of a widespread neuropathic state, there being no local lesion of any kind.

There is another interesting class in which the local symptom is practically the only neurotic feature in the patient. In some of these cases the condition is somewhat like that in which the possession of a "fixed idea" is characteristic.

In others it is of the nature of a "secondary reflex action" induced by a former continuity of habit when there was an actual painful local lesion which has since been cured. The patient's nervous system has so registered the former habit that it is reproduced apart from all control of the higher centres.

In the treatment of dysmenorrhœa, the failure to consider the existence of relationships between local and general conditions, between pelvic suffering due to and commensurate with pelvic lesion, and that which is due to neuroses, and the fixation of attention upon the local state, have resulted in a form of practice very often fraught with disappointment both to physician and patient.

The mechanically-minded specialist on coming into contact with his dysmenorrhœa case at once proceeds to establish *a locus standi* in the pelvis. He argues thus: The patient complains of pain in the pelvis. It must be there. Its cause is there; its treat-

ment must be by measures directed to the pelvis. He then has a choice of procedures. Probably he thinks first of a uterine flexion, and a pessary may be brought into requisition ; or he may diagnose a stenosis of the cervical canal, and proceed to a dilatation or to a cutting operation ; or he may deem the ovaries at fault, and decide heroically on their removal.

It may be that he will carry out these different operations *seriatim* in the chance that he will at last hit upon one which will be successful. Sometimes he cures his patient; sometimes he does not. When he is successful, he attributes the good result directly to his operation, forgetting that very often the benefit is obtained either through its indirect effect on her nervous system or by the influence of the rest, change of scene, diet, etc., with which her operative treatment is accompanied.

The history of gynæcology is one of a succession of periods of concentrated attention on one after another of the pelvic contents. Before the days of the bimanual examination, when every gynæcologist wielded the tabular speculum, the supposed great source of pelvic trouble was the so-called " ulceration of the cervix," and there are well-founded traditions of fabulous fortunes made by those who devoted their lives to the touching of these diseased spots with various applications. Then, with the discovery of the uterus, came the period of displacements and contractures, when nature's mistakes were remedied by pessaries, dilators and scissors. Then the era of the ovaries, and finally that of the tubes.

Now, at the end of the chapter, what can the *fin de siècle* gynæcologist do but practise upon the whole gamut of his predecessors, giving special attention to one organ or another, according to his particular bent or predilection, and so we find the country getting filled with women nursing a grievance against their wombs, their ovaries or their tubes; in many instances possessing diagrams of their pelvic topography furnished by their zealous gynæcological physician, in order, it may be supposed, that they may, in their leisure hours, exercise their already over-stimulated introspective faculty with more scientific accuracy.

Who that has read Clifford Albutt's lectures on visceral neuroses has not smiled at his account of the woman " entangled in the net of the gynæcologist, who finds her uterus, like her nose, perhaps, a little on one side, or again, like that organ, running a little, or as flabby as her biceps, so that the unhappy viscus is impaled upon a stem, or perched upon a prop, or is painted with carbolic acid every week in the year except during the long vacation when the gynæcologist is grouse shooting, or salmon fishing, or leading the fashion on the Upper Engadine ? "

Should the gynæcologist's moral sense become blunted, it is not difficult to understand why he may fall into the reprehensible habit of trading on the fears which naturally fill the minds of women when their reproductive apparatus is out of order, and of elevating into an unnecessary importance, conditions which are but trifling.

He trusted his words would not be misunderstood. He did not denounce local and operative measures. In their place they were essential. He only denounced their irrational and injudicious employment. All are subject to this temptation. All desire short cuts to success. All are prone to try like Clifford Albutt's *bête noir*, " to

stem the tides of general and diathetic maladies with little Parlington-mops of cotton-wool on the ends of little sticks." It is much less troublesome to make a few cuts than patiently to analyze a subtle and puzzling case, and to exert our whole energy in overcoming an obstreperous or aberrant nervous system. Yet it is this latter practice that must be our constant study in many cases where pelvic pain and discomfort are prominent symptoms.

Throughout the orthodox medical fraternities of the most advanced modern civilized countries, there has been a widespread distrust of all remedial measures of a distinctly tangible kind. This attitude has, no doubt, justly been developed in antithesis to the ridiculous pretensions of the mystics of dark ages in Europe.

We are taught to denounce with academic scorn, and rightly, too, in most cases, faith-healers, Christian scientists, hypnotists, religious miracle-workers, *et hoc genus omne.*

Yet it must be confessed that if a careful study of this interesting congerie of empirics be made, it will be found that amid their extravagant claims and sententious philosophies they have all been nursed upon one common germ-idea, viz., that the transcendent power in the human organism is mind, and that the effects of diseased conditions may be enormously modified by influences brought to bear upon the cortical centres, especially if the disturbances are due to neuropathic states.

It should, therefore, always be the aim of the physician, in addition to the means which he employs in toning up the general health by drugs, food, etc., and the local measures which he adopts, to endeavor to impress upon the mind of the patient the necessity of taking her thoughts from the pelvic condition, teaching her self-control, encouraging her, removing from her anxiety and fear as to the gravity of her state, and impressing upon her the importance of counter-acting every development of neuroses that may become manifest in her.

Dr. J. C. CAMERON thought that our duties in the way of the medicinal treatment of dysmnorrhœa were not likely to be neglected, but that we were more liable to forget our duty in the line of prevention. Preventive medicine was the medicine of the future; the prevention of malnutrition and nerve strain in youth was the true one for dysmenorrhœa. We do not realize this when we allow the strength of growing girls to be over-taxed and their nervous system to be over-stimulated by study and excitement. The public would never learn these things except from the profession, and yet we did not seem to realize our responsibilities in this respect. We should raise our voices persistently against those modern methods of education and training which undermine the strength and impair the usefulness of modern men and women.

Dr. WESLEY MILLS was pleased to hear from Dr. Gardner that the clinician could not agree with the view that there was no connection between ovulation and menstruation. This view could not be held by any person who was an observer of nature. It illustrated a very grave danger to the profession, that of proceeding to general principles from very special cases. Because, in certain diseased human females, one could not always trace the connection between them, it was rash to conclude that the process of menstruation was not dependent upon the function of the other reproductive organs.

He expected as a result of a recent advance in the knowledge of the innervation of the regenerative organs, as worked out by the Cambridge school, that a sounder basis of treatment would follow. As all parts of the body were related we did not know what the general effect might be of the removal of any one organ. He suggested that the gynæcologists might make valuable observations in this line.

Dr. LOCKHART, in reply, said he could not claim to have cured 50 per cent. of his cases by the use of drugs. With regard to the use of the stem pessary, it was always his practice where it was required, to insert it at the time of the operation, and to remove it before the patient left her bed.

Those who object to the bicycle for women should remember that it might be a question of use or abuse. He considered it essential that the wheel should be carefully selected and proper directions given as to the amount of exercise to be taken. He objected strongly to the routine use of potassium bromide and conium, believing that the exhibition of sedatives would not effect a cure.

Dr. GARDNER felt that he had not made himself clear with regard to the varieties of dysmenorrhœa; the classes mentioned he intended to represent types, as a large proportion of the cases was complex.

He considered the neglect of mothers and guardians to inform their charges of the onset of menstruation was very common indeed, and was scarcely short of criminal. In his experience the English were much more guilty than the Americans in this respect.

As a method of treatment in the neurotic form he had had pronounced success from the prolonged administration of the hypophosphites of lime and soda given in doses of from one to two grains freely diluted after each meal. Phosphide of zinc had proved satisfactory in a few cases in some instances after mechanical treatment had failed. Nutritives were of the greatest value, but he was a little more conservative with regard to the use of iron. In neurotic cases if suspended at the approach of and during menstruation, it was of value. Often, in the congestive form, it was injurious, the patient might gain in color, but she would suffer more severely at the periods.

The treatment by electricity was sometimes followed by brilliant results, using the negative pole of the galvanic current for a few minutes with a weak current.

He thought there was something we did not understand about the influence of the introduction of sounds into the uterus on painful menstruation. Often, after having passed the sound for diagnostic purposes, perhaps three or four periods following would be free from pain. He cited the case of a patient who came once every four or five months for five years, simply to have the sound passed.

Hot baths he had used for a long time, and bromides he thought of some value. For a few days before the advent of the period, in some cases, he used the bromides and conium, while in the intervals he employed curative measures.

THE

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Editorial.

CATCHING COLD; ITS CAUSE AND PREVENTION.

This common theme is discussed by Fayette C. Ewing, M.D., in the *Journal of the American Medical Association* of January 16th, 1897, and contains some useful suggestions and observations.

He speaks of the various theories propounded in regard to the manner of its acquirement. Rosenthal's theory, that the contraction of the peripheral vessels causes congestion and inflammation of the internal organs, he does not consider above reproach. Seitz's theory is more plausible, that the removal of heat from some part of the body results in a functional derangement of the heat centres, with attendant pathological changes sometimes in parts away from the exposed point.

Woake's theory is mentioned, a vaso motor disturbance. Bosworth endorses Seitz's theory, attributing the results to interference with functions which are carried on properly only when the temperature is at 98.6°F, and interference with nutritious changes at one point leads to increased activity at another.

In regard to prevention, a gradual hardening of the system is recommended, and the power of our natural forces to conform to the requirements of the system under the

most varied circumstances referred to, and the fact that anyone may become strong or delicate through habit. He inveighs against unnecessary wrappings around the throat, the superfluous coverings placed on the heads of infants as well as adults. Nature's heat-producing powers are dormant in parts over-protected, so that under unusual exposure there is no power to equalize the disturbed temperature, and the rule holds that the more the body is pampered and protected the less its resisting powers to cold become. We strongly endorse his opposition to the so-called chest-protectors, which increase the susceptibility to cold, and the wearing of fur coats, especially by women who seldom remove them on entering warm apartments, such as stores, churches and while visiting. We believe fur coats and caps are not a necessity even in our cold Canadian climate, unless a long drive is to be taken on some of our very cold days, and all forms of over-dressing have an injurious effect, and lower the vitality and natural powers of resistance to cold and its effects, and that a moderate amount of covering with flannel next the skin, and changes made according to the weather, always wearing the minimum amount possible, will result in more vigorous constitution, and in consequence the system will be better fortified against the effects of cold and morbid conditions generally. The writer condemns the American habit of wearing thin-soled shoes and rubbers, and favors warm woollen stockings and thick-soled boots. We have observed other forms of "catching cold," in which insufficient covering following the removal of warm garments is the cause, such as putting on light slippers in the evening after wearing heavy boots and overshoes during the day. The wearing of a cotton night-dress in bed—where a recent writer has stated the great majority of colds are contracted—after warm clothing during the day is another means; the wearing of light flannel pjamas is a decided hygienic advance. We have observed the ill effects of insufficient covering among hospital patients, who are often put between sheets with a routine cotton night-dress. Most of these patients would be safer from the effects of cold, and avoid some of the complications and relapses we meet with, if flannel night-dresses were worn.

The writer speaks of the exhaustion of the muciparous

glands, due to breathing dry furnace air, and the advantage of out-of-door exercise in all weather for children and all.

The cold bath daily is recommended as one of the best preventatives of catching cold ; it may be sponge, shower or plunge, but should not exceed one minute. We think one accustomed to the cold bath would not be satisfied with this length of time. If some warming up exercise, such as the use of dumb bells, clubs or the punching bag, is indulged in just before the bath until the blood circulates freely and the body is in a glow,—this being more necessary when the bath is taken on rising—after a judicious use of soap, from 2 to 5 minutes of the cold sponge or shower will prove enjoyable and refreshing. Half a minute will usually be long enough for the plunge, unless one can avail themselves of the swimming bath. A rapid drying of the body and a brisk rubbing with a crash towel until the surface is in a glow completes the tonic measure. We find that some are more benefited by taking the bath every second day.

The final suggestion in the article is that in regard to food, which should be adapted to season and climate, the fatty, fleshy and nitrogenous foods being that indicated in cold weather, vegetables, fruits a nd the cereals in spring and summer. Spring fever is the result of overloading the system with surplus matter over and above what is required to keep the body at the normal temprature.

BRITISH MEDICAL ASSOCIATION, MONTREAL MEETING.

Since our last issue there has been much accomplished in connection with the forth-coming meeting, but most of the work has been of a nature that, while useful, does not lend itself to being chronicled.

Most of all has been Dr. Roddick's journey to England and its result. We have already called attention to the warm welcome received by the President-elect and to the dinner which was given to his honor in London, a dinner presided over by the President of the Council of the Association, Dr. Saundby, and at which were present many of the old Presidents of the Association, together with Dr. Barnes of Carlisle, the present President of the Association as a

whole; Dr. Wilks, President of the Royal College of Physicians; Mr. Macnamara, Senior Vice-President of the College of Surgeons; Mr. E. Tegart, Master of the Apothecaries' Society; Mr. Butlin, President of the Pathological Society. Dr. Roddick made an excellent campaigning speech, which was published in full in the *British Medical Journal* of Jan. 23rd.

Evidently the fact that the President-elect ventured to cross the Atlantic in the middle of winter simply to attend a Council Meeting of the Association made a great impression.

Until the list of officers is officially declared we cannot unfortunately make public the names of those appointed as readers of Addresses and as Presidents of the various sections. This much, however, we can say, that the Council at home is determined that there shall be 11 Sections,—Medicine, Surgery, Gynæcology and Obstetrics, Anatomy and Physiology, Pathology and Bacteriology, Pharmacology and Therapeutics, Public or State Medicine, Psychology, Laryngology and Otology, and Dermatology, and that the list of Presidents of these various sections will comprise the names of a greater number of distinguished men than has been the case at any previous meetings of the Association, the meetings in London itself perhaps excepted. If we accomplish nothing more, Dr. Roddick, by his efforts in obtaining these Presidents, made it certain that the '97 Meeting of the Association must in this respect be most memorable.

We are glad to note that the other Colonies of the Empire, even as far away as Australia, are showing great interest in the forth-coming Meeting, and that letters received from Australia and the Cape, not to mention British possessions nearer home, such as Bermuda and Barbadoes, show that we are assured that the Profession there will help to increase the success of the meeting.

It is a matter of genuine satisfaction in Montreal that the efforts made by the Local Executive, to render the Meeting national rather than local, and to associate the leaders of the Profession throughout the Dominion in the work of the Association, is being so highly appreciated.

No steps have as yet been taken to ask for subscriptions

outside Montreal, and unless the Meeting attains enormous dimensions it is probable that nothing more will be attempted. All the same it was with genuine pleasure that the announcement was received at the last meeting of the Local Executive, that a leading member of the Profession in Manitoba had offered no less than $100.00 in aid of the expenses of the Meeting.

We are asked by the Secretary of the Museum Sub-Committee to state that, although many applications for space in the Museum Building have been received, spaces for which tenders are asked will not be allotted until March 27th, in consequence of the necessary length of time required for correspondence with British Exhibitors.

With most hearty appreciation of the good will shown by the great Canadian railways towards the Meeting, we announce that the Canadian Pacific and Grand Trunk Railways have agreed to extend to Canadian members of the Association the privileges granted to foreign members and to guests—namely, half rates. So considerable a concession has never been previously granted, and is a sign of the great national importance attached by the Companies to the Meeting in August. In other words, to quote the words of a joint letter received from Dr. W. E. Davies of the Grand Trunk, and Mr. D. McNicoll of the Canadian Pacific, "it has been decided to extend to Canadian members of your Association the same basis of rates to and from the Convention, and excursion fares as we have already advised you we are willing to extend to visiting members from over the sea." Practically every Canadian member can thus attend the Meeting, and return at the rate of a single fare for the journey, and can join the excursions at the same rate.

TO MEMBERS OF THE MEDICAL PROFESSION INDIVIDUALLY, IN THE INTERESTS OF MEDICAL SCIENCE.

As there is evidence tending to prove the theory that all persons predisposed by heredity to consumption have a respiratory capacity or action insufficient for good vigorous health, probably a proportionately small chest with insufficiency of lung membrane, that the predisposition is mainly or primarily due to this cause; in other words, that the

insufficient respiratory function is the special primary feature of the predisposition (a condition which may be, practically, acquired by habit, occupation, etc.), I desire the co-operation of the profession in an endeavor to help to establish, by means of collective investigations, the correctness or otherwise of this theory.

In this behalf I hereby ask all physicians who have patients predisposed to, or in the early stage of, consumption, to send to me (on a post card will suffice) the information below indicated. As soon as I can study and collate the replies I shall make the results known to the profession.

Give: (1) name (or initials); (2) sex; (3) age; (4) occupation; (5) height; (6) weight (average, when in usual state of health); (7) circumference of the chest on a level with sixth costo-sternal articulation when momentarily at rest after an ordinary expiration, and also (8) after habitual natural expansion or inspiration (which last (8) usually exceeds the first measurement, expiration (7), by an increase of only about one-fourth of an inch); finally (9), the circumference after a *forced* expiration, and also (10) after a forced inspiration (these two measurements, 9 and 10, varying or showing a range of from 1½ to 4 inches). The patient should of course be as calm as possible, and had better, usually, practise the *forced* breathing for a few acts before these two last measurements, 9 and 10, are taken.

To be of value, all four measurements should be taken as carefully, accurately and free from haste as possible.

Any further information, in brief, as to degree of heredity (family history) in cases, *prominent* symptoms, loss in weight, cough, dullness on percussion, etc., etc., or any remarks, will be a decided advantage.

Measurements of two cases, or several, or the average could be given on one card.

With the hope that many will comply with the above request, and with much respect for and interest in the profession,

I am,

Yours truly,

(Address) EDWARD PLAYTER, M.D.,
Ottawa, Ontario.

Book Reviews.

Anomalies and Curiosities of Medicine.—Being an encyclopædic collection of rare and extraordinary cases, and of the most striking instances of abnormality in all branches of Medicine and Surgery, derived from an exhaustive research of medical literature from it origin to the present day; abstracted, classified, annotated, and indexed. By GEORGE M. GOULD, A.M., M.D., and WALTER L. PYLE, A.M., M.D. Imperial octavo, 968 pages, with 295 illustrations in the Text, and 12 half-tone and colored plates. Philadelphia: W. B. Saunders, 925 Walnut Street; 1897. Prices: Cloth, $6.00 net; half Morocco, $7.00 net. *Sold only by subscription.*

A review of the pages of this novel book at once leads to the conclusion that our expectations in regard to its interest and value are more than realized. It represents an immense amount of labor on the part of the authors, and places on permanent record in a manner convenient for reference in one large, handsomely printed and illustrated volume an account of all that is exceptional, abnormal, anomalous and curious recorded in medical literature. It is a fascinating work for a physician, although the wonderful records may be read by all who are interested in biological or scientific work with entertainment and profit. Every page relates something that will be new to the ordinary medical reader, and while the instinctive desire for that which is striking, wonderful and out of the ordinary run of things is fully gratified, a vast amount of useful, practical knowledge is gained at the same time.

We have not only descriptions of the anomalous conditions, but plentiful illustrations in the way of photogravures, wood cuts and colored plates which are distributed through the work, showing some of the most striking abnormal anatomical conditions, many of which are more than equal to the task of satisfying the liveliest curiosity, or even constituting a relish to those who may be affected with a morbid desire to see that which is hideous or distorted.

There are eighteen chapters, the titles of which will convey an idea as to the scope of the book: genetic anomalies; prenatal anomalies; obstetric anomalies; prolificity major and minor terata; anomalies of stature, size and development; longevity; physiologic and functional anomalies; surgical anomalies of the head and neck, extremities, thorax, abdomen, genito-urinary system, and miscellaneous surgical anomalies; anomalous types and instances of disease; anomalous skin diseases; nervous and mental diseases; historic epidemics. Over nine hundred pages are taken up with this consideration of these subjects, and thousands of instances of anomalous conditions are related, constituting a book of surpassing interest and one which the possessor of will never cease to value.

The herculean task of collating from every available source in medical literature the data of these pages should be rewarded by a very general practical endorsation of the successful manner of its accomplishment. We bespeak for it a wide distribution, and heartily recommend our readers to secure a copy of this useful, interesting and unique work.

The American Year-Book of Medicine and Surgery.—Being a yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs and text-books of the leading American and foreign authors and investigators. Collected and arranged with critical editorial comments. By J. M. Baldy, M.D., Howard F. Hansell, M.D., Charles H. Burnett, M.D., Barton Cook Hirst, M.D., Archibald Church, M.D., E. Fletcher Ingals, M.D., Arthur H. Cleveland, M.D., W. W. Keen, M.D., Colman W. Cutler, M.D., Henry Leffmann, M.D., J. Chalmers Dacosta, M.D., Henry G. Ohls, M.D., W. A. Newman Dorland, M.D., Louis A. Duhring, M.D., Hugh T. Patrick, M.D., Virgil P. Gibney, M.D., William Pepper, M.D., Homer W. Gibney, M.D., Wendell Reber, M.D., Henry A. Griffin, M.D., David Riesman, M.D., John Guitéras, M.D., Louis Starr, M.D., C. A. Hamann, M.D., Alfred Stengel, M.D., G. N. Stewart, M.D., Thomas S. Westcott, M.D. Under the general editorial charge of George M. Gould, M.D. One volume of over 1,200 pages, profusely illustrated. Prices: cloth, $6.50 net; half Morocco, $7.50 net. Philadelphia: W. B. Saunders, 925 Walnut street; 1897.

The American Year Book of Medicine and Surgery first appeared in 1896, and was warmly received by the Profession generally. The second edition of 1897, now before us, while resembling it in its general arrangement, has many improvements in typography and details of the plan adopted, is even more profusely illustrated, and contains some seventy-five more pages. The large staff of eminent collaborators whose assistance Dr. Gould has been favored with in carrying out this elaborate work, all of whom are recognized authorities in their special departments, is a sufficient guarantee that the resume of the year's work given represents all of the actual progress that has been made.

The book contains some twelve hundred pages, and the printing and binding is similar to Saunders' now well known series of American text-books. The whole field of medicine is reviewed in some sixteen departments including medicine and surgery, obstetrics, pathology, anatomy, physiology, pharmacology and therapeutics, and the various specialties.

In each department is detailed in a succinct, clear style the various new points learned during the year in regard to the pathological conditions, varieties of diseases, improved methods of treatment or technique in operation, new remedies, and new applications of old ones, etc.

The book is not a compilation from the various periodicals and new books of the year, a feature which obtained to some exient in the first issue, and on account of which difficulties have arisen with the publishers of one of the leading medical journals; but each article is a carefully condensed epitome of the subject noticed, and the journal or book from which the item is taken is noted at the bottom of each page.

At the commencement of each department a résumé is given by the author of the more important features of the progress made and the results of the year's work; then under the heading of each separate diseased condition is noted the details of the work done

during the year. An important feature is the comments, placed in brackets, of the Editors; they criticize freely or add to the article some useful suggestion, and one has here besides the note of the new record, the opinion upon it of an expert who is in a position to give a reliable criticism; these are very frequent and more extensive than in the first volume, and constitute a most useful feature of this book.

At the present time the progress in medicine is recorded in hundreds of periodicals and books, and it is therefore impossible for the busy practitioner to keep abreast of the times by subscribing for a large number of journals. It is difficult to read thoroughly more than three or four, hence the value of such a book as the present one, which gives in a condensed form all that is worth knowing in the various departments. It is an absolute necessity to possess a work of this kind if one makes any pretension to keep up with the progress of the times, and as the epitomes represent the cream of subjects discussed, the reading is exceedingly entertaining, and one can in leisure moments, and in a brief space of time, acquaint himself with the advances made during the year. We cannot begin to give any idea of the subjects noted, but from the conclusion that one can come to who has taken more or less cognizance of what has been recorded in the numerous exchanges which come to the Editorial department of a medical journal, this year's book would seem to be a complete reference of the progress made throughout the year in every department of medicine and represents not only the records of English medical journals, but those of German, French and Italian and of other foreign countries. Numerous well executed illustrations embellish the work, and enhance its value, some of them colored in accordance with the best modern representations of this art.

The Editors and Publishers have in this book ably filled a vacant niche in the physician's library, the benefit of which can hardly be appreciated when one considers that the comparatively small price of the volume will enable every physician to possess it, and thus be able to keep himself posted with all the advances that will be of use to him in the various contingencies that arise in practice.

Autoscopy of the Larynx and the Trachea. (Direct Examination without Mirror.) By ALFRED KIRSTEIN, M.D., Berlin. Authorized Translation (altered, enlarged and revised by the Author) by MAX THORNER, A.M., M.D., Cincinnati, O., Professor of Clinical Laryngology and Otology, Cincinnati College of Medicine and Surgery; Laryngologist and Aurist, Cincinnati Hospital, etc. With twelve illustrations. One crown octavo, volume, pages xi—68. Extra cloth, 75 cents, net. The F. A. DAVIS Co., Publishers, 1914 and 1916 Cherry street, Philadelphia; 117 W. Forty-Second street, New York; 9 Lakeside building, Chicago.

The small volume describes a new method of inspecting the larynx, trachea and bronchi by direct vision without any reflector. The Author first describes the theory and method of making examinations in this manner.

A description is given of the forehead lamp required and the

electroscope. The autoscope, which consists of a spatula, hood and handle, is then described, and the method of using it, all illustrated by diagrams. The manipulation requires considerable practice; but the expert, it is said, can use it without exciting reflex movements or causing pain, by accurate and rapid work. The field for its application is more limited than laryngoscopy, and the latter method cannot be dispensed with, but when autoscopy is possible the Author claims great superiority over laryngoscopy.

The method of performing autoscopic operations is then explained. Autoscopy is said to be indispensable for some cases of examination and operations in children, especially the very young, and it must be regarded as a valuable addition to laryngology, and an important advance in aid of endo-laryngeal and endotracheal surgery.

The Diseases of Infancy and Childhood, for the use of Students and Practitioners of Medicine. By L. EMMETT HOLT, A.M., M.D., Professor of Diseases of Children in the New York Polyclinic; Attending Physician to the Nursery and Child's, and to the Babies' Hospitals, New York; Consulting Physician to the New York Infant Asylum and to the Hospital for the Ruptured and Crippled. With two hundred and four illustrations, including seven colored plates. D. Appleton & Co., New York, 1897. Cloth $7, sheep $8.00, half Morocco $8.50. Montreal agent, Geo. N. Morang, Publisher, Temple building, 185 St. James street.

The subject of Pediatrics has loomed up very conspicuously during the last decade, the enthusiasm impelling some writers to get beyond what might be considered the legitimate field of this branch of medicine, so much so, that unless one should look at the title page he would have difficulty in discerning any difference between works of this kind and an ordinary treatise on the practice of medicine. We are glad to see one of the foremost authorities in this department of medicine, in his new work on diseases of children, state that he will consider only those affections and pathological conditions which are peculiar to infancy and early childhood.

The work is largely a record of the author's personal experience, results and work, at the same time presenting all that is new and useful in the recorded results of the leading authorities on diseases of children. A pleasing feature of the work is the full space given to the discussion of the pathological lesions of the various diseases.

In the first part are three chapters: one on the hygiene and general care of infants and young children; a record on growth and development of the baby; and a third on peculiarities of diseases in children.

The first two sections of the second part are exceedingly interesting reading; the first describes the diseases of the newly born, such as asphyxia, congenital atelectasis, the acute infectious diseases of the newly born, birth paralysis, tumors of the umbilicus, mastitis, etc; the second,—nutrition and its derangements, and infant feeding and dietary.

The character of woman's milk is very fully discussed, in regard to the amount secreted, its composition, its examination, the con-

ditions affecting its composition, etc. Cow's milk is similarly considered, and compared with woman's, the methods and advantages of sterilization and pasteurization, peptonized and condensed milk, Kumyss, Matzoon, etc. On page 156 is a valuable table showing the relative proportion of the different constituents of different infants' foods compared with human and cow's milk.

The directions for breast feeding are useful, and worthy of being carefully studied, as well as the symptoms, given of inadequate nursing, and what to do when the child does not thrive. On artificial feeding, we find here all that one wants to know, and the principle instilled that the artificial food must contain all the constituents of human milk, in the same proportion in chemical composition and their behavior to the digested fluids, and the harmfulness of adding anything which is not in human milk. The modification of cow's milk, and how to adapt it to the different ages is described in detail, a number of schedules and formulæ are given, which will enable the practitioner to be as perfectly familiar with prescriptions of food for infants in health or when diseased as with those for drugs, and we are more than assured that the former qualification is vastly more essential to the welfare of the infant than the latter. The subject is continued on into childhood, and gradually merges into the derangements of nutrition and the consideration of marasmus, rickets, and that interesting disease, scorbutus, where full information is given for diagnosing this often overlooked affection.

Then follow the articles on diseases of the digestive system, and of the respiratory, circulatory, uro-genital, nervous systems; then diseases of the blood, lymph, nodes, bones, etc., and lastly the specific infectious diseases, and rheumatism and diabetes mellitus. The articles are very readable, pithy, full, each showing that the author has made himself acquainted with all the facts at present recorded, and the recommendations for treatment are detailed, and carry the conviction that the practitioner is being guided in the directions given by one whom he can easily regard as a master in this interesting portion of medical practice. Not the least interesting feature of this commendable book are the numerous well executed plates and cuts which illustrate the various topics; there are nineteen colored and other plates, and one-hundred and eighty-five cuts distributed throughout the text. The typography and binding are exceptionally good. In this work we have another example of the efforts of an able, conscientious, industrious and scientific worker, contributing the experience of years of patient work and thought, and furnishing the busy practitioner with a true guide book bearing the imprint of the honest adept.

PUBLISHERS DEPARTMENT.

LARYNGEAL OR WINTER COUGHS.

Walter M. Fleming, A.M., M.D., Examiner in Lunacy, Superior Court, City of New York ; Physician to Actor's Fund of America, etc., in giving his experience in the treatment of the above and allied disturbances, in *The Journal of Nervous and Mental Disease*, submits the following :

" In acute attacks of laryngeal or winter cough, tickling and irritability of larynx, faith in antikamnia and codeine tablets will be well founded. If the irritation or spasm prevails at night, the patient should take a five-grain tablet an hour before retiring, and repeat hourly until allayed. This will be found almost invariably a sovereign remedy. After taking the second or third tablet the cough is usually under control, at least for that paroxysm and for the night. Should the irritation prevail morning or mid-day, the same course of administration should be observed until subdued. In neuroses, neurasthenia, hemicrania, hysteria, neuralgia, and, in short, the multitude of nervous aliments, I doubt if there is another remedial agent in therapeutics as reliable, serviceable and satisfactory ; and this, without establishing an exaction, requirement or habit in the system like morphine.

" Finally, in indigestion, gastritis, pyrosis, nausea, vomiting, intestinal and mesenteric disorders and the various diarrhœas, the therapeutic value of antikamnia and codeine is not debatable. The antipyretic, analgesic and antiseptic properties are incontrovertible, and therefore eminently qualified to correct the obstinate disorders of the alimentary canal."

To American readers who have not ready access to the great bulk of the European periodical press, Continental as well as British (and who has ?), there is no magazine that can take the place of *The Living Age*. The whole world of literature is its field, and its readers get the best that the world offers. For the busy man and woman of this living age it is invaluable.

The publishers have purchased the serial rights to the publication of " In Kedar's Tents," by Henry Seton Merriman, author of " The Sowers." " In Kedar's Tents " is an attractive story of adventure in Spain during the Carlist war. It is said to be full of incident, and to contain some clever sketches of character. Mr. Merriman's style is direct and forcible, and his humor is delightful. Readers who are weary of the mobidly introspective in fiction will find this story refreshing.

Its quality abundantly sustains the reputation which Mr. Merriman's earlier stories have won for him in England and America. The first chapters of this work will appear in *The Living Age* of April 3, and continue through fifteen numbers.

The early April issues will contain some other papers of striking and timely interest. Among them, Mr. Gladstone's pamphlet on the Eastern question, which has so aroused the attention of the English people ; Max Muller's Literary Recollections ; Francis de Pressense on the Cretan Question; Leslie Stephen on Gibbon's Autobiography; and a reply by Sir Frederick Pollock to the article on the Hidden Dangers of Cycling, which appeared in a March number of the magazine.

The first April issue being also the first number of a new volume, the 213th, and a new year, the 54th, offers an excellent opportunity for the beginning of a new subscription.

The subscription has recently been reduced to $6.00 a year, and is published by *The Living Age Co.*, Boston.

The Arena, edited by JOHN CLARK RIDPATH, LL.D., and HELEN H. GARDENER. March, 1897. The Development of American Cities, by Hon. Josiah Quincy, Mayor of Boston, Massachusetts. The Solidarity of Town and Farm, Dr. A. C. True, Director of the Office of Exper. Stations U.S. Dep't. of Agriculture. The Relation of Biology to Philosophy, by Prof. Joseph Leconte, LL.D., of the University of California. Women in Gutter Journalism, by Haryot Holt Cahoon. Brains for the Young, by Prof. Burt Green Wilder, of Cornell University. Agnodice: A Poem, by Selina Seixas Solomons. The Unknown: Prevision of the Future, by Camille Flammarion. Despair: A Poem, by Eleanor Ford. Concerning a National University, by Ex-Gov. John Hoyt, LL.D., Chairman of the National University Committees. Wilfrid Laurier: A Character Sketch, by J. W. Russell. New Experiments in Sheathing the Hulls of Ships, by George Ethelbert Walsh. Falling Prices, by Dean Gordon. Maceo's Death: A Poem, by A. E. Ball. The Foundation of a Colony of Self-Supporting Artists: Appeal. The Armenian Refugees, by M. H. Gulesian. Compulsory Arbitration, by Prof. Frank Parsons. Democracy—its Origin and Prospects, by John Clark Ridpath, LL. D. An Olive Branch of the Civil War: A Story, by La Salle Corbell Pickett. Book Reviews: "Raja Yoga"; "Socio-Economic Mythes and Mythe-Makers"; "A Prophetic Romance"; "Modern Fairyland."

Boston; Arena Company, Pierce Building, Copley Square. Agents: Paris, Brentano's, 17 Rue de l'Opera; Librairie Galignani, 224 Rue de Rivoli. Copyright, 1897. All rights reserved. Single Numbers, 25cts. [Vol. XVII., No. 88.] Per annum, $3.00.

The Physician's Vest-Pocket Formula Book, published by McKesson & Robbins, will be found very useful to the practitioner. It contains a tables of weights and measures, antidotes to poisons, various tables of reference, and a very complete series of tables, showing the composition of foods and alcoholic liquors. These tables should prove valuable to the physician in cases where special attention to dietary is necessary. The book also contains an extended series of notes on some of the new pharmaceutical preparations and a complete list of formulae of the McK. & R. Gelatine Coated Pills. A copy will be sent free of charge to any of our readers on application to McKesson & Robbins, 91 Fulton Street, New York.

GIBSON'S NEW ENGLISH GIRL.

Charles Dana Gibson, in illustrating a short story that narrates the romance of a Princess, for the March *Ladies' Home Journal*, has created what he regards as his typical English girl. She is said to be as distinctive and striking as his famous American girl, and while essentially different she is quite as interesting. The drawing will illustrate Robert C. V. Meyers' story, "The Morning After the Servia Got In."

CANADA
MEDICAL RECORD

APRIL, 1897.

Original Communications.

VALEDICTORY ADDRESS.

Delivered at the Medical Convocation, University of Bishop's College, March, 1897, by Prof. W. H. DRUMMOND. M.D.

MR. CHANCELLOR, VICE-CHANCELLOR, PRINCIPAL, GRADUATES, LADIES AND GENTLEMEN.

In accordance with time-honored custom, I am called upon to address a few remarks to the Graduating Class of 1897. On an occasion like this, when we are honored by the presence of many ladies and also of gentlemen unconnected with the medical profession, it would be unseasonable and inappropriate to occupy the time with scientific technicalities, or anything else but common sense generalities, suitable to the events of the day, and thoroughly intelligible to every one. To-day you have attained the prize for which you have been striving hard for a long course of four years, during which you have shown, by your diligence in study and punctual attendance at the lectures of the various teachers, that you have fully earned the distinguished honor for which you have been toiling. You now go forth to pursue your medical career, and your diplomas testify to the fact that you are to a *certain* extent well equipped for the battle of life, in which you will necessarily be called upon to baffle many a form of disease, and procrastinate in all possible instances the unwelcome hour of death.

But athough your college training and apprenticeship is at an end, do not for *one* moment permit yourselves to think that your education is *finished.* Your novitiate alone is past, the foundations have been laid, but the *edifice,* which literally means the building up of your professional career, has yet to be reared. You must always remember, to quote the words of Lord Palmerston: "Education is the art which teaches men how to live. The education of a sensible and intelligent man continues to the latest day of his existence,

for there is no day of a man's life, there is no period of his activity, in which if his mind is alive, if he keeps his ears and eyes open to impressions and observations, he will not continually be adding to the stock of his ideas and of his thoughts, and in which he will not add to the store of his knowledge, and increase the amount of his information."

The science of the Medical art in all its branches is ever progressive, and rapidly expanding, particularly in our own time. To keep thoroughly abreast of the professional literature which is constantly pouring forth from the press will tax all your energies, and even draw heavily upon your finances; but you will be rewarded by the feeling that your labors and expenses are bestowed on a laudable object, namely, a desire to win success in the path of life that you have chosen, accompanied by the ability which you will exercise of alleviating the sufferings of humanity, and winning the respect and gratitude of your less scientific clients. At the same time it may not be amiss to warn you all against displaying on any occasion an affectation of *knowledge*, inscrutable to all except the adepts of Medical science, an air of perfect confidence in your own skill and abilities, or a demeanor too highly expressive of self-sufficiency. Such conduct cannot escape the censure of the more judicious or elude the ridicule of men of wit. Dr. Pillgarlic has often been humorously exhibited on the stage, but the satire is really directed against the habits and notions of *individuals*, and not against *genuine* medical science.

The practice of the healing art affords a vast field for the exercise of humanity. To a benevolent man this must be one of the greatest pleasures. Physicians and surgeons have many opportunities of displaying patience, compassion, generosity, and all the gentler virtues that do honor to human nature. A man endowed with these qualities diffuses consolation and comfort; he employs his talents, his time, and *occasionally* his *purse*, in relieving misery; and with a pride which I will not attempt to disguise I may be allowed to add that no other class of citizens perform their duty with as much zeal and courage as the members of the "Essential Profession." If fortunately a young man possesses positive medical *genius*, he nevertheless needs talents of an entirely different kind; he not only has the improvement of his own mind to attend to as his career develops, but he must study the temper, and struggle with the occasional prejudices of his patients and of the world in general. A physician must therefore have a large share of common sense and knowledge of the world, as well as medical skill and learning, or he will never become what that world designates as a *successful practitioner*.

The *moral* qualities peculiarly required in the character of a medical man may be briefly referred to, and the chief of course is *humanity*, or that sensibility of heart which makes us feel for the physical or mental distresses of our fellow-creatures, and powerfully incites us to relieve them. The *true* physician must possess what Shakespeare terms the "milk of human kindness," and must give evidence of this in the gentleness of his manners when dealing with his patients. The insinuation that a feeling heart is commonly associated with a weak understanding and a feeble mind is a libel on humanity.

On the contrary, a rough, blustering manner often accompanies a mean soul and a weak understanding, and indeed is sometimes affected to conceal natural defects. Gentlemen, we are all aware of the solemn nature of an oath, and of our obligation to keep it when taken, and with all our heart, soul, and strength. Your main duties are comprised in the vow to which you have pledged yourselves to-day, the substance of which was proposed by Hippocrates 2000 years ago. You have then pledged yourself on this important day to practise physic, "Caute, Caste, Probe,"—that is to say, cautiously, chastely, and honorably; and if I offer you a few observations upon these three points, you will perhaps not think that I have taken up your time and attention uselessly, or without a desire to throw some light on words which have only been recently introduced to your special notice. What then, may I ask, are we to understand by the word "Caute"? One meaning of "caution" in practice is carefulness not to expose the sick to any unnecessary danger. The best rule of conduct on this point is the comprehensive precept, "Do unto others as you would they should to you." Whatever a practitioner would do in his own case, or in the case of those nearest and dearest to him, he should do for the good of his humblest patient. Let the result be whatever God may permit, the physician has the greatest of all consolations, the "Mens conscia recti," the consciousness of rectitude, and this must be his solace, when the vulgar, the ignorant, the envious, the malicious, and others interested in the case, perhaps blame him unfairly for the death of his patient. These answers would be merited if he heartlessly said to himself "Fiat experimentum in corpore vite," and administered some dangerous drug, or performed a needless surgical operation, merely to gratify his own curiosity or zeal in the cause of science. Such conduct would convict him in the minds of all reasonable and feeling persons of a breach of medical ethics and of a high misdemeanor. The phrase "Corio humano ludere," literally to play with the human hide, shows in what light the Medical Faculty regard such conduct; and as there is always much inevitable danger in the practice of

physic, the important duty of caution in a physician cannot too strongly be emphasized. Whatever he thinks is best for his patient, it is the indispensable duty of a medical man to do; but in discharging this duty the word "Caute" must always be before his eyes. Another duty imposed upon the profession may here be appropriately mentioned—it is discretion, or secresy. Unlimited confidence is often reposed in a medical man, revelations are at times made to him which honor forbids him to publish or divulge in any way, excepting when compelled to do so by what is termed the strong arm of the law. "Non sine gravi causa" is the wording of the Edinburgh oath, which our own University has adopted, probably with reference to the interference of the law. Medical men have occasionally been reproached with hardness of heart, occasioned, as is supposed, by their being so frequently brought in contact with human suffering. I sincerely hope, I may say I firmly believe, that the charge is unjust, for habit may beget a command of the emotions and a seeming composure, which is often mistaken for absolute insensibility. When this insensibility is unfortunately real it is a misfortune for a physician or surgeon, as it deprives him of one of the most natural and powerful incitements to exert himself for the relief of his patient. On the other hand, a practitioner of too much sensibility may be rendered incapable of doing his duty perfectly from anxiety and excess of sympathy. These may at times cloud his understanding, depress his mind, and prevent him from acting with that steadiness and vigor upon which in a measure the life of his patient depends.

That you will not attain the professional success you desire without struggling against hosts of difficulties, and even encountering opposition, is most certain. The iron grasp of poverty for a considerable time may impede your progress and feeble your efforts. But it is the triumph of genius and talent to rise in proportion to the magnitude of difficulties, to trample down the opposition of malignant mediocrity, and while gaining its own merited elevation, to raise the profession he has chosen to a corresponding degree of affluence and prosperity. It has often been observed that these medical men who have not a laudable ambition to rise to eminence, by those talents, and honorable conduct, seldom if ever become renowned, may remain every-day characters, and never obtain the highest places in the profession. When a thirst for gold (auri sacra fames) is the only object of professional reputation it leads to mean and even unprofessional tactics, which should always be avoided, no matter how much money there may be in it.

In your intercourse with brother physicians, be careful to observe and carry out faithfully every detail of professional etiquette.

Remember that even physicians are not infallible, that they have their failures as well as their triumphs; and whenever you may succeed where others have failed, be modest, and do not boast of your success, for you never know when your own turn may come to be corrected in diagnosis by another. And bear in mind that "Whatsoever a man shall sow, that shall he also reap." In a word,—be gentlemen, and then you will always be ethical.

And now the farewell hour has come. No more will the bell of the faithful janitor summon the straggling and boisterous battalions to the lecture room. Many of you will doubtless have made friendships which shall endure as long as life itself; but, in the majority of cases, these friendships will become memories, for, scattered broadcast over the land, in village, town and city, most of you, perchance, will never meet upon earth again.

Forty years from now, if you are still living, pictures of the old classmates will smile down upon you from the neighboring mantelpiece, to remind you of departed days gone, never to return.

All of these College comrades will have grown older, and some may have passed away from God's green footstool; but to you they will be always living, ever youthful and vigorous, as you knew them in the dear days gone by. Do nothing that will make the features of the old comrades blush instead of smile. Farewell!

VALEDICTORY ADDRESS FOR THE CLASS OF '97—APRIL 7, 1897.

By C. A. Fortin, M.D.

Mr. Chancellor, Members of the Medical Faculty, Ladies and Gentlemen,

To be allowed the privilege of voicing the feelings of affection and of regret of the Class of 1897 on the day of Convocation is indeed a pleasure never to be forgotten.

This afternoon I will endeavor to convey to our Professors and Lecturers and all those connected with our college course, the most kindly feelings of gratitude and thanksgiving;—gratitude for their ever watchful care over us in our various branches of study; thanksgiving for having vouchsafed to allow us to get beyond the pale of the examination room intact, and without any irregularities in our legendary plumage.

To be associated with such an esteemed assemblage of men as the Faculty of Bishop's for a period of four years without begetting a certain amount of affection for them would be rather a bad slur either upon the Class of 1897 or upon the Faculty.

As a matter of fact, however, the members of the Class of 1897 feel proud of their University, proud of their Professors, which

augurs more for the popularity of the various teachers than if I had spoken for hours on the relative value of each and every man connected with the Faculty of Medicine.

The members of the Class of 1897 in the fall of 1893 had the choice of medical schools open to them.

We chose Bishop's, for a still small voice whispered that she had many practical advantages.

I can safely say that no member of our Class has ever yet regretted having entered Bishop's Medical Faculty. From the very day of our entrance into college we have been under the immediate supervision of the Faculty, and I am sure that nowhere in the Dominion will you find a Faculty with the welfare of the students more at heart than in Bishop's.

Unfortunately this fact is not taken advantage of enough by the student. The first two years in college for a student is one continual round of pleasure.

Loosed from the strings which have no doubt hitherto bound him, or awed by his initiation into such a vastly scientific study, he regales himself with the pleasures of life. Such days are now past however. Tales have been handed down to us from our noble predecessors of gay times spent during their course of study. With all due respect to these gentlemen, I must say that they could not have been troubled with as lengthy and severe a curriculum as we have had to plow through. The day for the rollicking, devil-may-care medical student has passed, and now he must be a veritable bookworm, or the presence of his name on the pass list will be rendered conspicuous by its absence.

I am glad to see that the public at large is beginning to recognize this fact, and that the medical student is no longer an outlaw from society. I can assure you, ladies and gentlemen, that if the actions of students of other Faculties were looked into more carefully, the ban of ostracism could be more safely placed upon them than on the inoffensive Medico. Since 1893 we have noticed with pleasure many changes in Bishop's. With the advancing tide of the great Medical science, Bishop's is also advancing. She sees the necessity of adding new subjects to her curriculum, and without much compunction she does so.

Much to our horror! we have seen two new subjects loom up before our eyes, and to our already much inflated cranium their massiveness seemed gigantic. We have succeeded in struggling through them, and now we can rest upon our oars and smile patronizingly upon our successors, and condescendingly say: "Oh! they are easy."

What confidence is inspired by the thought that the battle is

over. Had we been interviewed before the eventful day of examination we might perchance have shrieked aloud in the agony of our despair, "Alas! Alas! I am undone."

One of the most important changes has been the affiliation of the dental college with Bishop's Medical Faculty. I am sure that the members of the Medical class of 1897 are proud that they received their degrees at the same time and place as their dental confrères, the first students to receive the degree of D.D.S. since the affiliation. Surely this is a red letter day for our Alma Mater, when she demonstrates to the public that she not only strives to educate medical men, but also to elevate the standard of dentistry from being a mere trade to a profession.

Within the last few years the students of Bishop's have been treated to quite a new innovation. Students who hitherto have enjoyed a blissful rest during their first and third years suddenly awoke to the fact that they must "be up and doing." This stirring up was due to the introduction of sessional examinations. By this it is meant that students in their first year will pass examinations in the primary subjects, and third year students will pass examinations in final subjects, so that the Faculty may be assured that they are not loafing away their time until the final examination.

It cannot be denied that this is a most worthy undertaking, although as yet the full usefulness of the same has not dawned upon the student, nor has the "modus operandi" been clearly outlined, consequently much dissatisfaction has been expressed by the students.

We hope, however, that the Faculty will deal leniently with those who cannot grasp the situation properly, and that a clear understanding between the Faculty and the students will be forthcoming.

When a student has graduated it is easy enough to see the efficacy of these examinations, but it is much more difficult to persuade a student before graduation that additional examinations will benefit him in any manner, shape or form.

We have seen many changes in the College building. Taking advantage of the limited means at her disposal, the plucky, self-supporting Medical Faculty of Bishop's University seeks to fit herself to battle with the grander universities, which, although rolling in wealth, constantly grab everything within reach.

How well does she succeed?

The success of her various graduates will answer that question.

If some noble benefactor would lavish some of his goodnesses upon this worthy institution, rather than "carry coals to Newcastle," it would be a far more noble deed of kindness.

Competition is the spice of life, when that competition is equal;

but when a great handicap has to be contended with, it becomes a rather laborious duty.

Year by year the course in Bishop's is becoming more practical. The aim of the Faculty is to familiarize the embryonic M.D's. with their future life, rather than leave them to commit the inevitable breaches of Medical ethics, which will invariably follow when launched into private practice after a purely theoretical course. I doubt if there is a college in Canada,—indeed I may say in America—where the course is rendered more practical, and I can assure you, gentlemen, we appreciate this fact.

There are points, however, which might be improved upon, and if I could whisper into the ears of the Faculty, I would say, that the lectures are too much scattered over the day, necessitating too frequent journeyings to the College building, often at the sacrifice of hospital work. This little fault should certainly be remedied, so that our successors may get their full money's worth out of the Montreal General Hospital,—a truly grand institution, but rather too much controlled by individuals who display too great an amount of partiality.

We have, however, fortunately the privilege of attending two hospitals where partiality is alone extended towards ourselves, simply because we are the only ones to receive it. I refer to the Western Hospital, the Women's Hospital, and I might add the Hotel Dieu (the latter we share conjointly with Laval University).

The former hospital gives us the advantage of perfecting ourselves in Gynæcology, and at the same time we can witness many interesting cases in Medicine and Surgery. For its size, more good work is being done by the Western Hospital than any other of the many hospitals in Montreal.

The inhabitants of the western portion of the city are beginning to recognize the advantage of having a hospital in their vicinity, and are giving their support more readily.

It is to be hoped that they will spur themselves on to renewed vigor, and soon erect additional wings to the Western. The rapid growth of the city in that direction, together with the proximity of the various manufactories, certainly warrant the immediate enlargement of the hospital.

At the Women's Hospital a grand work is being done. Under the immediate supervision of our popular professor of Obstetrics, the students of Bishop's receive in this hospital instruction and practice second to none on the entire continent of America. The position of resident house surgeon is open to students of the Final Year, and those who have been fortunate enough to obtain the appointment have gained experience in that branch invaluable to them in their future practice.

On the teaching staff of the College there are and have been men who are second to none in their particular branches. Unfortunately we have seen men, who, having been nurtured, so to speak, by the Medical Faculty of Bishop's severed their connection with their foster mother to accept the tempting offers of our more wealthy adversaries.

We are glad to say, however, that we have also seen some of our professors refuse as tempting offers, from those who in their unknown days ignored them, but who were ready and anxious to receive them after they had been under the guidance of Bishop's for a few years.

We are proud of these men, whose principle is of more moment to them than the enticing bait of worldly goods. They will receive their reward for fidelity, for the day is fast coming and will soon be here, when Bishop's Medical Faculty will be known far and wide.

Nothing succeeds like success, so we will hope that as Bishop's success becomes known, some as yet unknown benefactor will open his coffers, and bestow upon this brave Institution his blessing, accompanied by a goodly cheque.

Strangely enough, our noted philanthropists seem loth to bestow their money upon medical schools.

Can you imagine, Ladies and Gentlemen, a more noble cause to assist than the training of medical men ?

Show me a profession where there is more self-sacrifice, more hardships to endure, more good to be done (and less money to be collected) than in the medical profession.

The lawyer pleads his cases in a court of law, and attends to his office duties, with careful attention to his meal hours and hours of rest.

The scientist attends to his laboratory, which is carefully heated and protected from the inclemency of the weather. The theologian pays his duty calls at convenient (and sometimes inconvenient) hours, and casually prepares his sermons for the following Sunday, and in fact in a great majority of cases they spend their days in blissful peace.

To the medical man is left the exposure, the loss of sleep, the irregularity of meals, the anxiety of difficult cases, on the issue of which oftentimes depends a human life.

To the doctor is left oftentimes the settlement of many an intricate family affair, which all the clergymen in Christendom could not begin to set straight.

He can with a little diplomacy nip in the bud many a fierce quarrel, and soothe the minds of the most suspicious individual.

He comes as a light to the sick-room, and gives peace to a

troubled mind, whereas often the presence of a minister will give your patient the horror of impending death.

The public at large have until a very recent date looked down upon Medico's, and have treated them like strange men from a strange land; but happily the much needed reformation is now at hand, and soon the wave of benefaction will roll in the direction of medicine.

Now that the time has come for us to bid adieu to our professors, our classmates and our many friends in Montreal, our hearts are indeed full. There will ever be treasured up in our minds pleasant reminiscences of our happy college days at Bishop's. The pleasant associations formed and the warm interest manifested in our welfare will cause us to exclaim "Came I ever a stranger here?"

Indeed in the new life which is opening for us, we will ever look for news of the advancement of Bishop's, and try in our different locations to advance the interests of our beloved Alma Mater.

To our Professors, let me thank them on behalf of my classmates, for their indulgence, and allow me to say that we heartily appreciate their kind, patient and painstaking instruction, and we hope that our actions in our future will be such as will reflect credit upon them, upon ourselves, and upon our Alma Mater.

If, perchance, fate should will that some of us attain the honor of becoming ourselves teachers in medicine, we will endeavor to follow in their well set example.

To our many friends we extend our hearty thanks for many kindnesses shown, and hope that they will never regret ever having extended the hand of friendship to one of the Class of '97.

To our fellow-students we wish all success for your future, and trust that you will follow on in the steps of your senior men of '96-'97, and keep up the honor and reputation of Bishop's Medical Faculty. Apply yourselves unto study and you will acquire wisdom.

To one and all we bid a most reluctant adieu.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

Associate Professor of Medicine and Neurology University of Bishop's College; Physician Western Hospital.

THE DIAGNOSTIC VALUE OF BLOOD EXAMINATIONS.

This is the title of a paper appearing in the *American Medico-Surgical Bulletin*, Feb., 1897, by Thomas P. Prout, M. D., pathologist and assistant-physician to the New Jersey State Hospital at Morris Plains. It covers the ground of this interesting subject so well that its reproduction here in full will prove instructive.

Perhaps in no department of medicine has there been greater activity with more splendid results than has been manifest in the science of hematology during the past three years. I daresay could any one of us have been assured of the real possibilities in this line of work five years ago, he would have been inclined to accuse his informant of taking a very utopian view of things, if he did not really put the stamp of "lunatic" upon him.

Beginning with the time about ten years ago, when the apparatus of Gower's first came into general use for making blood counts in the different forms of anæmia, there has been manifest a steady advancement, till at the present time not only anæmia, but a host of affections, the early diagnosis of which is often obscure, have at last bowed to science, and assumed an attitude becoming to things known, or at least knowable.

Since the laying of the broad foundations of this work by Ehrlich some years ago, a firm structure has gradually been builded, which I venture to say already exceeds the most sanguine hopes of its most enthusiastic projectors. The work of Ehrlich and his followers has enriched us with facts, which prove that conditions arise in the blood which are not only aids in diagnosis, but actually pathognomonic of certain diseases. No one will deny that in differentiating between a number of diseased conditions presenting a similar symptomatology, any single fact which eliminates any one of them is of vast importance, and any group of facts which establishes the correct diagnosis beyond question is of still greater import.

The facts presented by a carefully conducted blood examination have now become of sufficient importance that they cannot well be disregarded in any condition at all obscure. Let me present one or two examples:

A man of a dull, apathetic state of mind gradually began to show signs of illness. For several days he showed general malaise; took his meals very poorly, and was at last put to bed. A general physical examination at this time was entirely negative; there was no diarrhœa, nausea, or vomiting, and the patient seemed to suffer no particular discomfort. There was, however, regularly an evening rise of temperature amounting to a degree or a degree and a half. A blood examination was made in the hope of finding the malarial organism, as the patient had suffered from a slight chill on one occasion. It was, however, not found, but the nature of the general and differential blood count was such that a diagnosis of some form of latent tuberculosis was suggested. Five months passed with no apparent change in the patient's general condition. The evening temperature continued, sometimes higher, sometimes lower, but always present. The suspected disease appeared at least in the form of tubercular disease of the os calcis, about five and a half months after its latent presence had been suggested.

A woman about fifty-five years of age, who had been previously healthy, gradually began to show signs of failing health. A little later, persistent vomiting of a greenish, watery material manifested itself, and an irregularity of the bowels, which, together with the general appearance of the patient, suggested the existence of malignant disease of the stomach. Her downward progress was gradual, but persistent. Milk, well peptonized, became the only food she could retain. This, together with the existence of more or less persistent pain in the abdomen, and the general appearance of the patient, were considered quite conclusive evidence of the existence of malignant disease, notwithstanding the fact that no tumor could be felt in the abdomen. A blood examination was resorted to for the purpose of substantiating this diagnosis. The conditions found in the blood, however, were of such a nature that it could be unhesitatingly affirmed that cancer did not exist, and further, the blood state was such that a diagnosis of pernicious anæmia was substituted. Some months afterward the patient died, and this diagnosis was confirmed at the autopsy.

In another instance, a diagnosis of malignant disease of the liver was confirmed by a blood examination, and this diagnosis was also substantiated by subsequent autopsy and microscopical examination of the tumor.

The advancement in our knowledge of hematology during

the past five years has necessitated the addition to our vocabulary of something between fifty and sixty words, all of which refer to the number, size, shape, staining proclivities, etc., of the red and white blood cells. Thus leucocytosis refers to an increase, and laucopenia to a diminution in the relative number of leucocytes. Erythrocyte is another term given the red blood cell, and refers to its natural color, in the same manner that leucocyte refers to the natural color of the white cell. By their size the erythrocytes are known as macrocytes, megalocytes, and microcytes; by their shape, round cells and poikilocytes; by their staining qualities the leucocytes are known as acidophiles, basophiles, neutrophiles, eosinophiles, etc.; while their supposed origin is expressed in the terms lymphocyte, splenocyte, myelocyte, etc. These are the more common terms in general use.

The normal number of red cells is generally placed at about 5,000,000 per c.mm., and the normal number of white cells at from 7000 to 10,000 per c.mm. Any increase in the proportion of leucocytes above 1 to 500 red cells therefore constitutes a leucocytosis.

The existence or non-existence of a leucocytosis becomes of diagnostic value when those acute diseases are considered in which no leucocytosis ever normally exists. Tuberculosis is one of these diseases. It was by means of this fact that Limbeck was able to diagnose a tubercular meningitis from the suppurative form, and his diagnosis was confirmed by autopsy; and this fact is now also utilized to differentiate typhoid fever, in which no leucocytosis ever normally occurs, from a host of acute affections in which a leucocytosis is the rule. Such are, for instance, peritonitis, pyosalpinx, pelvic abscess, appendicitis, etc., all of which present a well-marked leucocytosis. I may add that its absence in suspected appendicitis should make one hesitate about operating.

In typhoid fever, the number of leucocytes may sometimes fall below normal (leucopenia). This is especially the case in the late stages of the disease. The absence of a leucocytosis, or an actual leucopenia, becomes of great diagnostic significance when we consider the fact that, besides tuberculosis and typhoid fever, there are only two other acute affections in which this condition of the blood normally occurs, viz., malaria and measles.

Ehrlich was the first to define the different forms of the leucocyte. He divided them into five principal varieties, depending somewhat on their staining reaction and supposed origin. The stains used were a slightly acid stain (orange), a markedly acid stain (acid fuchsin), and a basic stain (methyl-green), all of which were combined in proper proportion in a single mixture. The leucocytes were classified by Ehrlich

into lymphocytes, large mononuclear cells, transitional cells, polynuclear neutrophiles, and eosinophiles.

The lymphocytes are small and rounded, and in size a little larger than a red blood cell. The nucleus is large in proportion to the size of the cell, and is surrounded by a mere rim of protoplasm. Many of these are neutrophiles in the sense that their protoplasm stains with a combination of both acid and basic stains. In other instances the protoplasm remains practically unstained. The normal percentage of this form of leucocyte is about 24.

A typical large mononuclear cell presents a nucleus which has taken the basic (nuclear) stain but slightly, the cellular protoplasm remaining practically unstained, or but slightly tinged with the basic stain. These cells are, therefore, some of them basophiles, and their normal number is about 6 per cent.

In the transitional cell, the nucleus shows the same staining proclivities as in the preceding; but in addition, there is a tendency to divide and subdivide, as seen in the multinuclear cell. The protoplasm also shows a few granules which faintly take a combination of acid and basic stains. It would therefore seem that these are truly transitional cells—cells in a transitional stage between the large mononuclear cell, on the one hand, and the polynuclear neutrophile, next to be described, on the other. Their normal percentage is about 3.

The polynuclear neutrophile, or multinuclear leucocyte, is a large round cell containing two or more deeply stained nuclei, the cellular protoplasm at the same time showing granules tinged with a combination of acid and basic stains. These, therefore, are neutrophiles, and their normal percentage is about 65.

The eosinophiles are generally multinuclear cells, the protoplasm of which contains granules which take the acid stain only. They are also sometimes called acidophiles, and were named eosinophiles by Ehrlich on account of their marked tendency to take up eosin.

A differential count of the leucocytes consists in identifying the stained leucocyte in a dried film of blood and placing it in its proper column. This gives us the percentage of the different forms of leucocytes, and, to recapitulate, they are:

	Per cent.
Lymphocytes about	24
Large mononuclear cells about	6
Transitional cells about	3
Polynuclear neutrophiles about	65
Eosinophiles about	2

Normal blood may present a variation of 2 to 4 per cent. from these figures.

How does the differential count of leucocytes become of

value in differential diagnosis? For the sake of illustration, let us suppose that we are confronted by two cases, A and B, both apparently very seriously ill, both anæmic, both cachectic, both emaciated, but suffering from diseased conditions referable to different organs of the body.

A specimen of A's blood, stained in the usual way, shows, in addition to an increase in the number of leucocytes (leucocytosis), a poikilocytosis and megalo- and microcythemia, and a few nucleated erythrocytes. B's blood presents the same appearances to a more marked degree, except that there is no leucocytosis. The differential count of the leucocytes in the two cases will stand as follows*:

	A's Blood Per cent.	B's Blood Per cent.
Lymphocytes	5.8	54
Large mononuclear and transitional leucocytes	4.8	6
Polynuclear neutrophiles	89.4	39
Eosinophiles	0.0	1

When we take into consideration the primary findings in the blood, A's count is typical of malignant disease of the internal organs, B's is typical of pernicious anæmia. Both, it will be noted, vary widely. The condition of the blood in this form of malignant disease has also been successfully used in differentiating between cancer of the œsophagus and aneurism of the arch of the aorta. It can easily be seen how this is a point of great importance, when it is considered how possible it is to have the two conditions almost exactly simulated as regards their subjective and objective symptomatology. The blood, however, presents a practically normal state in aneurism, while in cancer, as we have already seen, changes of an unmistakable character are manifest.

Let us suppose another case, C, a case of tuberculosis, presenting, possibly, very much the same appearances as the two former cases. An examination of the blood, however, presents an entirely new picture. In addition to there being no apparent anæmia, there is no leucocytosis, no poikilocytosis, or macro-, or microcythemia. Further, there are no nucleated red blood cells. When we come to the differential count, we find, again, a very decided variation from either the normal standard or the two previous blood counts.

	C's Blood Per cent.
Lymphocytes	12.7
Large mononuclear and transitional leucocytes	8.8
Polynuclear neutrophiles	78.0
Eosinophiles	0.5

It will be noted that the lymphocytes, instead of being at the normal point, are very much diminished, and the mul-

tinuclear cells are correspondingly increased. This, together with the other facts, gives us some conditions quite characteristic of tuberculosis. The absence of nucleated red blood cells in tuberculosis distinguishes it also from a number of other affections in which the presence of this cell is a notable fact. Such, for example, are leukemia, pseudoleukemia, phosphorous poisoning, and the anæmia of tertiary syphilis, in all of which the nucleated red blood cell is present, as well as in the cachexia accompanying cancer of the internal organs and pernicious anæmia.

The blood count in pulmonary tuberculosis distinguishes it in an unmistakable manner from another disease of the lungs, croupous pneumonia. As distinguished from the blood count in pulmonary tuberculosis, pneumonia presents a very high leucocytosis. In fact, this condition is so constant that its absence, or a very slight leucocytosis, has been found to be associated only with the more serious forms of the disease. This is the case to such an extent that the existence of a very slight leucocytosis has come to warrant a very guarded prognosis, and its absence indicates the existence of a very grave condition, almost invariably fatal. On the contrary, the existence of a high leucocytosis augurs favorably. This is, in fact, the class of cases in pneumonia that usually recover. Then, again, the differential count in these two diseases is entirely different. The leucocytosis in pneumonia involves the polynuclear neutrophile cells, so that we have a great increase in the relative number of these cells, and a corresponding diminution in the lymphocytes. A differential blood count in pneumonia would therefore appear as follows:

	Per cent.
Lymphocytes	4
Large mononuclear and transitional leucocytes	6
Polynuclear neutrophiles	88
Eosinophiles	2

It will also be noted that in this instance the eosinophiles are normal in number, whereas in pulmonary tuberculosis they are quite frequently diminished. This last fact serves also to distinguish tuberculosis from those diseased conditions in which there is a positive increase in the eosinophiles, viz., Graves' disease, leukemia, nephritis, chronic malaria, and asthma.

In conclusion, I wish to say that I realize fully that I have failed to cover the whole field of this subject, and I have no doubt you will all point with one accord to the malarial organism, the presence of which is alone demonstrated by a blood examination, and remind me of a very serious omission. It was my purpose, however, in this paper to present some of

the newer aspects of hematology, leaving out of account those blood states which are still matters of theory. As a discussion of the malarial organism involves so much that is mere theory, I have omitted its consideration entirely.

If, in thus touching upon the borderland of a field, the horizon of which is growing brighter, and the scope of which is daily broadening and assuming more and more the aspect of a true science, I have demonstrated a few points indicative of the general direction in which we seem to be tending, I shall feel amply repaid.

A RESEARCH UPON ANAESTHESIA.

In the March number of the *Journal of Experimental Medicine*, Drs. H. C. Wood and Wm. S. Carter describe experiments, the object of which was: 1st. To ascertain what effect has lessened blood supply to the brain upon the respiration and upon the vaso-motor system. The animals experimented on were anæsthetized, and the carotids and vertebral arteries secured by ligatures or clips, and the blood supply could then be changed at will. An important observation was the rapidity with which the collateral circulation is established after tying the neck arteries. 2nd. Does the circulation recover itself more rapidly after prolonged deep etherization, than after a similar narcosis produced by chloroform? 3rd. Is it possible to have death produced by an anæsthetic some time after the cessation of its administration and the return of consciousness?

CONCLUSIONS.

The conclusions which have been reached by the series of experiments recorded in this memoir are:

First. Lowered arterial pressure has a comparatively feeble effect upon the respiration, but when the pressure falls sufficiently, respiratory depression does occur.

Second. Even excessive lowering of blood pressure primarily stimulates the vaso-motor centre, the sensibility of the centre being evidently necessary to the automatic regulation of the circulation.

Third. The circulation recovers itself more slowly after profound etherization than after a like chloroform narcosis.

Fourth. It is possible for ether as well as chloroform to produce death some hours after the cessation of its administration, at a time when the cerebrum has long freed itself from distinct evidences of the narcotic, so that consciousness and intellectual action have been restored.

In applying these conclusions to the subject of practical anæsthesia it is evident that the depression of the circulation produced by chloroform has effect upon the respiratory

centres only when the pressure has fallen very low ; and whilst it may be a factor in the production of respiratory failure during chloroformization, the failure must be chiefly due to the direct influence exercised by the drug upon the respiratory centres.

Clinical experience shows that nausea and general depression are more pronounced after the use of ether than after the use of chloroform, a difference which is strongly insisted upon by the advocates of chloroform as an important agent in favor of that anæsthetic. Our research confirms clinical observation, and experimentally shows that the depression of the circulation produced by ether is more permanent than that caused by chloroform ; the reason probably being the large amount of ether which is necessary to produce profound narcosis, with lowering of the arterial pressure; an amount so large that it can neither be burned up in the system nor yet eliminated in the time which would be necessary for the much smaller amount of chloroform to be gotten rid of after chloroformization.

BIANCHI'S PHONENDOSCOPE.

SCHWALBE (*Deutsche medicinisch Wochenschrift*, No. 31, 1896) describes the new instrument invented by Bianchi and Bozzi, and called the phonendoscope. It consists of a resonator and two conducting tubes of soft rubber similar to those of the ordinary binaural stethoscope. By its use one can appreciate all the normal and pathologic sounds of the body. Sounds that are ordinarily not audible are rendered readily appreciable. One is supposed to hear the respiratory murmur, the pitch, and other characteristics of the sounds of the circulatory apparatus, of the organs of digestion, of the ear, both in health and in disease ; further sounds of the muscles, joints, and bones (fractures) ; of the pregnant uterus, fœtal heart, and even the capillary circulation. By employing two instruments and using a tube from either, " comparative auscultation " may be practised. It may be used to determine the form, position, thickness, and relations of various viscera. To do this, one attaches a staff with a button at its distal end. This is placed over the organ to be outlined, and, by a series of gentle strokings with the finger, vibrations, readily appreciable, are produced which vary in intensity and character with the region examined. Percussion is thus replaced. The boundaries of organs are thus recognized, the individual lobes of the lungs can be outlined, the parts of the lobes overlying each other determined, as also the distinction between auricles and ventricles, etc. As numerous tubes can be attached to it, the instrument is serviceable for teaching purposes, and is warmly recommended.

BARUCH (*New York Medical Record*, October 31, 1896) also describes and recommends the instrument, mentioning how in cases of myocarditis, when the heart-sounds could not be distinguished with the stethoscope, they have been distinctly heard with the phonendoscope, and this through several thicknesses of clothing. Faint murmurs are distinctly audible; fine crepitant râles can be heard through the clothing, and the patient be examined without disrobing. As the instrument intensifies the sounds it will prove of great value to those with impaired hearing.

EGGER (*Münchener medicinische Wochenshrift*, No. 45, 1896) is of the opinion that the disadvantages of the phonendoscope far outweigh its advantages. He finds that sounds are heard at quite a distance from their seat of production, and, being much intensified, give rise to annoying admixtures. Vesicular breathing is heard relatively well, but bronchial breathing variously. Deep bronchial breathing is well heard, but variations such as amphoric breathing are very poorly transmitted. In general, low tones are well heard, higher ones, especially those of a metallic nature, very poorly. He is very sceptical regarding the possibility of distinguishing the lobes of the lung and the auricles and ventricles of the heart. For teaching classes it is of service, but for individual use the single stethoscope or the unaided ear is to be preferred.—*University Medical Magazine.*

THE DIAGNOSIS OF PERICARDIAL EFFUSION

EWART (*British Medical Journal*, March 21, 1896), intentionally directing but slight attention to various and valuable signs (friction sounds and fremitus) or symptoms (pain, alterations of respiration, position in bed, etc.), of pericardial effusion, describes other procedures of great value in making an accurate dignosis. These are (1) accurate percussion and palpation, (2) careful auscultation, and (3) observation of the pulse. The normal area of the deep cardiac dulness is carefully described, attention being directed to the fact that the lower end of the right limit of the total dulness does not drop vertically on the hepatic line, but curves gently inward, due especially to the shape of the right auricle. The left lower angle of this dulness is also rounded off, although corresponding to the angular projection of the apex-beat. The signs of pericardial effusion are arranged numerically: (1) Considerable extension of the lateral boundaries of the total area of dulness. (2) Great extension of the absolute dulness; the sternum absolutely dull. (3) The depression of the liver. (4) Dr. Rotch's sign; dulness in the right fifth intercartilaginous space. (5) The right lower angle of the pericardial

dulness extends to the right (outward), and is not curved inward towards the sternum as is the normal cardiac dulness,—an important point in differentiating between enlargement of the heart and pericardial effusion. (6) The left lower limit of the pericardial dulness extends outward to the left, and is not rounded off as is the normal cardiac outline. The apex can be felt or, at least, heard beating somewhat inside and above the boundaries of the pericardial dulness; but the apex is never as much elevated as has been popularly supposed, and for this there exist good anatomical reasons. (7) The first rib sign. In all cases of considerable pericardial effusion, it was possible to feel with the finger the upper edge of the first rib as far as its sternal attachment. This points to a raising of the clavicle, and a relaxation of the ligament between it and the first rib. (8) The posterior pericardial patch of dulness, an area of dulness at the left inner base, extending from the spine for varying distances outward, and ceasing abruptly; commonly it does not extend higher than the ninth or tenth rib, and here ends abruptly. (9) An area of tubular breathing below the right mamma. (10) A patch of tubular breathing and egophony to the left of the tip of the left scapula. (11) Secondary pleural effusions, frequently beginning in the right pleura, but ultimately occurring in both. (12) A large and slapping pulse, not unlike the Corrigan pulse. These signs may be modified by deviations from the typical normal cases.—*University Medical Magazine.*

THE BICYCLE FOR WOMEN.

Prendergast, in *American Journal Obstetrics*, writes that: "For physical exercises for both sexes the bicycle is unexcelled." He thinks it will benefit the present and coming generation, and will be noticeable in the form of "better health, finer physical development and more stable nervous systems." "Exercise is a necessity for continued good health and mental vigor," and it is universally conceded that outdoor exercise to women and girls is of much value. Continually "housed up," dressed conventionally (extremely unhygienic), the writer argues has made them nervous wrecks. "To these the bicycle will prove a blessing.

"All the muscles of the lower extremity (those of the pelvic floor, the back and the abdomen) are brought into play; the muscles of the back in maintaining an erect posture and in balancing the wheel; the abdominal muscles in hill climbing and hard pushing, unless confined by tight corsets; the muscles of the arms in guiding the wheel and in helping carry the weight of the body in crossing rough spots in the road.

"The heart and lungs are benefited by the increased force of the circulation and by the deep inspirations.

"This increased circulation means better nutrition to starved nerves. The muscles grow larger, firmer and respond more readily to volition. In bicycle riding, the muscles must begin to work in the proper order, and the energy of each must increase, halt and diminish according to a certain law, so that the result shall be the proper position on the wheel in order to maintain one's balance and to exert the force in the proper direction. Thus bicycling is not mere muscle gymnastics, but also, to a high degree, nerve gymnastics, if for the sake of brevity we may apply the term nerves to the whole nervous system.

"Bicycling is a better form of exercise than horse-back-riding : (1) because hundreds can ride a wheel where one can ride a horse. (2) It is a better form of exercise. (3) The clothing can be and should be perfectly comfortable."—*Monthly Retrospect.*

ACTION OF THE NEW YORK CITY BOARD OF HEALTH IN REFERENCE TO TUBERCULOUS DISEASE.

Dr. Hermann M. Biggs, pathologist and director of the Board's bacteriological laboratories, and Dr. T. Mitchell Prudden, the Board's consulting pathologist, have addressed a long communication to President Wilson, of the Board of Health, urging the necessity of taking some radical steps to rapidly and materially diminish the prevalence of pulmonary tuberculosis in this State.

The steps recommended, and which have been approved by the Board of Health, are :

First : That such action be taken by the Health Board as seems necessary and proper to at once secure the providing of hospital accommodations under its charge, for the care of the poor suffering from pulmonary tuberculosis, who, as active sources of danger to the community, may properly come under its supervision.

Second : That an amendment be made to the Sanitary Code, declaring that tuberculosis be officially considered a communicable disease, and formulating regulations under which its sanitary surveillance shall be exercised.

Third : That all the institutions of the city which admit and treat cases of pulmonary tuberculosis be subjected to regular and systematic inspection by officials of this Board, and that specific regulations be established for the conduct of such institutions, in accordance with the proposed amendment to the Sanitary Code.

Fourth : That the scope of the measures designed for the education of the people in regard to the nature of pulmonary tuberculosis, and the methods to be taken for its pre-

vention be enlarged, and a closer sanitary supervision be maintained over individuals suffering from this disease in the closely populated tenement districts and in the crowded workshops and public buildings of the city.

There is no doubt that any power entrusted to our present Board of Health would be used with proper judgment and with wise forethought; but in the legislation necessary to change the Sanitary Act in conformity with the recommendations of Drs. Briggs and Prudden, it should be borne in mind that our Board of Health, influenced as it must be to a certain extent by political combinations, may not always be of the high standing of the one now in power, and that an act which touches the comfort of so many should be guarded with the utmost care against the possibility of hasty or unwise action. The subject is a most important one, and calls for the wisest legislation.—*The Medical Times.*

THE ETIOLOGY OF CHOLELITHIASIS.

A very convenient classification of the causes of cholelithiasis is that of Gumprecht (*Deutsch. Med. Woch.*, 1895, 224. *The Journal of the Am. Med. Assoc.*, April, 1897.) He divides them into: first, *physical*, such as age and sex: second, as *sequelæ* of other diseases: third *chemic* alterations in the composition of the bile; and fourth, *bacteriologic.*

Age is an important predisposing factor. With advancing years we find an increase in the proportion of cholesterin in the blood, and gallstones are recognized as an appendage of middle and late life. Brinton gives the average age at which they are found as 53⅓ years. They are occasionally seen even in newborn children, though of 395 cases collected by Hein only 15 were under 25, and only 3 were under 20 years of age.

As regards sex, all authorities seem to agree that they occur more frequently in female. Authors differ, however, as to the relative proportion; thus Brinton says they are four times more frequent, others give five to two, three to two, two to one, etc. The predilection for the female sex would seem to be due to sedentary habits, which are universally recognized as a potent factor. Obesity is closely allied to the foregoing, and Budd and Murchison state that they are more common in persons of stout habit. Frerichs, however, makes no mention of obesity apart from sedentary habits, and some authorities advance the view that obesity is merely a coincidence of cholelithiasis, and depends on the same causes as the latter.

Confinement has been noticed to favor gallstone formation, for instance, in prisoners and stall-fed cattle. According to Thudichum these calculi are not found in wild animals

until they have been in captivity for some time. Lunatics lead rather sedentary lives, so we may expect to find biliary concretions more frequent in them, if this factor has any influence. On examining the statistics we find this to be the case. Beadles (*Jour. Mental Science*) found them in 36 per cent. of necropsies on insane females. Gorstell stated that in 1,400 examinations at the West Riding Asylum, calculi were found in 20.28 per cent. Snell (*Neurolog. Centralbl.*, June 1, 1893) in 1,000 necropsies found them in 9.2 per cent. of the 500 examinations of the insane males, 19.4 per cent. of females. The forms in which cholelithiasis most frequently occurred were dementia following melancholia, epilepsy and senile dementia.

Here it may be pointed out that statistics as to the frequency of gallstones vary. Thoma, in his General Pathology, says they occur in 25 per cent. of all bodies over sixty years of age, Mayo Robson and Naunyn in 10 per cent., and Schroder, from the necropsies at the Strassburg hospital, 4.4 per cent. of males and 20.16 per cent. of females. Paulsen *Centralb. f. Chirurg.*, Feb. 4, 1893) calls attention to their infrequency in Denmark. From 1870-90 only 111 cases (30 males) were treated in the Copenhagen hospital, and during the same period 9,172 necropsies were performed. Of the 5,448 males calculi were found in 2.34 per cent., and of the 3,724 females in 5.9 per cent. Harley thinks the influence of locality, if there is any, is due to the dietary, and states that in his experience patients suffering from this affection are usually fond of fatty foods. He found these calculi very frequent and of large size in Russia, where oleaginous food is much used, while in Finland, Sweden and Denmark, where fish is the main article of diet, he states they are much less common.

In regard to gallstones as sequelæ of other diseases, Frerichs states that they frequently develop after long illness. In most instances they are apparently due to the long confinement to bed, which would seem to corroborate the theory of sedentary habits being a factor. The frequent association of gout and cholelithiasis is looked upon by several authors (Harley, Murchison, Trosseau) as pointing to a close relationship between these two affections. As calculi are usually found in carcinoma of the gall bladder, the question arose as to which was the primary affection. At first opinions differed on this point, but recent statistics all agree in looking upon the calculi as the cause, not the result. Courvoisier found them in 74 out of 84 cases, Brodowski in all of 40 cases, Bertrand 14 of 15, and Siegert believes they occur in 95 per cent. of primary carcinoma. Roger Williams, in a note to the *British Medical Journal* (Sep. 9, 1893), says in his experi-

ence gallstones are more frequently found associated with cancer of the breast than that of most other parts of the body. According to Dufort (*Rev. de Med.*, 1893, p. 274) phlegmonous or gangrenous cholecystitis is sometimes met with following an attack of typhoid fever. Hagenmulle collected eighteen of these cases in 1876. Bernheim states that he has seen the first attack of biliary colic occur during the course of typhoid. As we shall see later, Chiari found the typhoid bacillus in the gall bladder in several cases of typhoid. Dufort thinks the B. coli may also cause the cystitis in typhoid.

Coming now to the *chemic* cause of cholelithiasis, it is evident that all the constituents of gallstones can be found in normal bile, save mucus, epithelium and foreign bodies, such as parasites and their eggs. It is also probable that if the bile continues healthy, the elements forming the calculi will remain in solution and not separate. What then causes the formation of these concretions? According to Naunyn, biliary stasis is the primary cause. As we have seen, they are more common in the aged and in persons of obese or sedentary habit, all conditions favoring stagnation. With biliary stasis we get a catarrh with casting off of the epithelial cells; these furnish quantities of albumin. This albumin leads to the precipitation of bilirubin, which combines with the lime salts. In addition we have cholesterin, which is usually the principal component of gallstones. Cholesterin is found in many vegetables, in eggs, red blood cells and the brain. As it is so important a feature in the production of calculi, it has been suggested that the use of foods containing it be restricted as much as possible in persons subject to cholelithiasis.

With the catarrh it is possible to have infection of the contents of the gall bladder, so we may have *bacteriologic* causes added. When the normal bile of man or animals is contained in the healthy biliary passages and periodically discharged it is sterile (Gilbert and Girode). While bile is aseptic it is not antiseptic, so pathologic changes allow the entrance of micro-organisms from the duodenum or from the blood, thus infecting the bile. Microbes have been found both in calculi and in the contents of the gall bladder. Gallipa in 1886 was the first to announce *il y a des parasites dans les calculs biliaires*." Letienne found B. coli, S. albus and S. megatherium, and Dupré found the S. albus in three cases. Charcot and Gombault, after ligating the common duct, found that the bile above the ligature became infected. Here as elsewhere in the intestinal tract the B. coli plays an important role. Naunyn, after ligating the ductus communis so as to produce stasis, injected B. coli into the gall bladders of healthy dogs, and found the animals speedily died with evid-

ences of acute cholangitis and general septic infection. Netter, Gilbert and Girode also found the B. coli.

Chiari has lately investigated a series of twenty-two cases of typhoid fever. In all these cases save three, typhoid bacilli were obtained from the gall bladder. They were generally present in considerable numbers, and in fifteen were obtained in pure culture. In thirteen out of the nineteen cases there was inflammation of the gall bladder with infiltration of small cells, œdema and hyperæmia. Cultures from the heart's blood, the contents of the thoracic duct, and the cerebro-spinal fluid were all negative. The diagnosis of typhoid was confirmed in the entire series of twenty-two cases by cultures from the spleen, mesenteric glands, etc. The routes by which the bacilli reach the gall bladder may be, according to this author, either by the blood, by the bile ducts, or directly through the walls of the gall bladder itself. Chiari regards the last method as very unusual, and owing to the difficulties in experimentation he does not attempt to decide between the other two. The bacilli undoubtedly multiply in the gall bladder, and thinks they possibly may cause post-typhoid cholecystitis, gallstones and relapses of typhoid.

Gilbert and Fournier have lately published a paper (*C. R. Soc. de Biologie*, Feb. 14, 1896) on the rôle of microorganisms in the formation of gallstones. These observers examined a number of stones from human beings mostly, with a few from cattle, and of different ages. In the old stones the cultures were sterile, save in one case. In more recent stone, coverslips showed organisms from time to time which could not be cultivated. The fresh stones gave cultures and coverslips of B. coli. As a result of their observations these authors conclude that the gallstones are due to the action of the microbes contained in them. They are also of the opinion that while different organisms may cause cholelithiasis the B. coli is most frequently found.

NON-BACTERIAL TOXINS AND THE MECHANISM OF IMMUNITY BY ANTITOXIN SERUMS.

Calmette and Delarde, in *Ann. de L'Inst. Pasteur* (1896), *American Medico-Surgical Bulletin*, April 10, 1897, furnish their report of a series of investigations on some toxins which are of non-bacterial origin, and in a second part of the same paper some theoretical deductions bearing upon the subject of immunity are discussed.

The toxins investigated were: (1) The aqueous and ethereal extracts of jequirity seeds, yielding an impure abrin, and (2) a mixture of various snake venoms.

The toxic action of abrin was investigated in a large

number of animals, most of which succumbed to small doses of the poison. A few only were found to be relatively immune—these were the hedgehog, hen, tortoise, viper, and frog. These animals could, however, be killed by larger doses.

Experiments of the same order were made with purified abrin. Of this double doses were required to get the same action as with the impure material.

The researches with the mixture of venoms developed the facts that certain of the venomous snakes were relatively immune. The authors formerly held that this immunity was absolute, but were led to modify their opinions by those studies. The horned viper of Egypt, boa constrictor and garter snake succumbed following the injections of doses larger than that normally developed in the glands of the reptiles. Certain other animals were experimented upon and shown to be absolutely immune, *i.e.*, the hog, hedgehog and mongoose.

In discussing the theory of immunity in reptiles, the authors hold that there are "no antitoxic substances in the serum of reptiles that could explain their relative immunity, or if such a substance does exist, it is found in juxtaposition with some kind of a toxic substance which it has been impossible to isolate." Therefore the cause or causes of the relative immunity of serpents must be sought elsewhere.

The authors studied the substance of the liver and central nervous system; these organs were bruised and the blood and lymph carefully filtered, and this fluid was used with or without an addition of venom as an injection fluid, the results were negative, the animals dying as before.

Some interesting experiments were made with the serum from the hogs, which animals are notoriously immune. The mixed hog serum and venom gave absolutely negative results.

The authors' general conclusions, in so far as studied, were:

1. The serum of those animals, which are naturally refractory to toxins, rarely possesses antitoxic power with reference to these toxins.

2. Refractory warm-blooded animals can produce antitoxins by means of repeated injections of non-lethal doses of toxins. Cold-blooded animals under the same conditions do not produce these antitoxins.

3. Refractory cold-blooded animals, as the frog, can acquire an immunity against lethal doses of toxins without having their serum show any antitoxic action.

4. Antiabrin and antivenom serums can be practically utilized to produce passive immunity in man and animals, and are also of value in toxicological research in the hands of experts.

5. The active substances in antitoxic serum are not destroyed by certain chemical agents which destroy the toxin.

6. Certain substances deprived of all specific toxic action, as the serum of vaccinated animals, can exercise preventive action in various infections and intoxications.

Finally the authors come to the standpoint that "It is still an open question whether there exist any antitoxic substances, *per se*, in the serum, or whether the phenomena are not due to purely biological reactions, such as motility, inhibition, chemotaxis, etc." Further, the following admissions are given:

(1). The antitoxic function is independent of immunity, because immunity can be found to exist, and yet no antitoxins are to be found.

(2). That the two varieties of immunity, natural and acquired, are the resultants of a specialized biological property of the cells.

SERUM THERAPY.

Professor Whitla (*Dublin Med. Jour.*, No. 201; *American Medico-Surgical Bulletin*, April 10, 1897) says that there is a natural immunity and an acquired immunity to certain infective diseases. Like facts were known to obtain among animals.

The discovery of Metschnikoff was thought to explain acquired immunity through the phenomena of phagocytosis. This gives way in some minds to the view advanced by Buchner, that this depends upon chemical or unorganized substances or bodies in the blood. Metschnikoff established the fact that phagocytosis is the main defensive means possessed by a body against microscopic foes. Although this new treatment comes directly from the results of Pasteur's work, there is no Pasteurism in the history of this serum therapy, as related by various writers. Pasteur worked along the same line as Jenner. He carried it further. He showed that the introduction of the attenuated virus was not only preventive, but curative. Salmon made the next step, when he showed that an animal could be made immune by the injection of gradually increasing doses of the chemical substance made by the bacilli, without the injection of any living microbes. Behring proved that Pasteurism applied to diphtheria, as well as to anthrax and other diseases. He went still further, and found that the blood serum of the protected animal contained chemical substances. These were developed in process of immunization. These had the power of immunizing another animal if injected into its tissues. This result was found to be true not only in diphtheria, but experiment proved that like results were obtained with other infective

microbes. Behring found that the serum was not only preventive, but curative. It was an antidote in those cases where infection with the original microbe existed.

Explanation of these facts brings us into pure speculation. Martin found two poisons. One was precipitated from the diphtheritic membrane, and produces, in a single infinitesimal dose, paralysis and death in the rabbit. This poison is not found in the blood and tissues of one dying from diphtheria. In the blood of these is found another poison, which is an albumose or digested proteid. Injection of this produces all the characteristics of diphtheria. Bacilli grow in the forming membrane. They secrete a ferment. This is absorbed in the body. It produces, through action on proteids, digestive products. The chief one of these belongs to the albumose class and is a poison.

Experiments on animals prove that the antitoxic serum is an antidote to the toxin of diphtheria. The phenomenon of diphtheria in the human subject widely differ from that produced in animals. In animals it is known definitely how much toxin has been absorbed.

It cannot be determined what amount of toxin has been absorbed in man. Hence, the antitoxic dose cannot be regulated.

It is said that if the dose of toxin considerably exceeds the minimum lethal dose, there are no existing antitoxins capable of preventing death. But the element of time enters as a factor. The longer from the time of the taking in of the poison, the less the antitoxic dose required.

All elements considered, epidemics severe, and epidemics mild, show a lessened death-rate following the use of the serum.

SURGERY.

IN CHARGE OF

FRANK R. ENGLAND, M D.,

Prof. of Surgery and Lecturer on Clinical Surgery University of Bishop's College;
Surgeon Western Hospital.

LAPAROTOMY AND SUTURE FOR GASTRIC ULCERS.

Morse (*British Medical Journal*, February 13th, 1897) reports three cases of perforating gastric ulcer, in which he performed laparotomy with suture of the stomach and a thorough washing out of the peritoneum. Two of the cases recovered. In both the operation was performed within five hours after the perforation had taken place. The operation consisted in an incision, three and one-half inches long, one inch to the left of the median line, commencing at the costal cartilage and

extending down towards the umbilicus. It was made to the left of the median line in order to allow the stomach to be more easily brought out. The perforation was closed by means of Lembert's sutures, which penetrated the serous and muscular coats, two rows were inserted approximating areas of the stomach two inches wide. The peritoneal cavity was washed out with boiled water cooled to a temperature of 105° F by the use of siphon-drainage, and two long glass nozzles which were passed in all directions, thoroughly cleansing the cavity. There was considerable shock, which was treated by warmth and brandy enemata. Both patients made good recoveries and remained well, with no further sign of gastric ulcer. In the third case the patient died; she was not seen until 24 hours after perforation, and although the same operation was performed, the patient recovered from the anæsthesia severely shocked, with a rapid, hardly perceptible pulse, rapid respiration, and low temperature. She lived only a few hours.

The author says: "The duration of life after perforation of the stomach may be estimated at twenty-four hours; hence the importance of early and distinct diagnosis cannot be exaggerated. The shock following perforation is severe, and its effects can be observed to increase so rapidly that it is apparent the chances of success are diminishing in direct proportion to the length of time that is allowed to elapse between the occurrence of the injury and its repair by surgical means.—*American Journal of Medical Sciences*, April, 1897.

THE TREATMENT OF WOUNDS WITH IODOFORM AND CALOMEL.

Springel (*Centralbl. F. Chir.*, No. 5, 1897; *British Medical Journal*, April 10th, 1897) recommends the use of a mixture of equal parts of calomel and iodoform in the treatment of those wounds which, from their nature, are especially liable to undergo decomposition,—for example, a tracheotomy wound; and also in those cases where it is not possible entirely to remove all the morbid growth, such as operations on tuberculous joints. Under the influence of light the iodoform combines in some way with the calomel, and forms a reddish powder, having antiseptic and escharotic properties. But it is the cauterizing properties which the author especially values. It is used as follows: After all bleeding has been arrested, the wound is lightly sprinkled and rubbed with the powder, and then gently packed with sterile gauze. At the end of three or four days if the gauze is removed, a slight superficial slough will come away with the dressing, and the wound will present a healthy granulating surface. A special advantage of the powder is that the gauze will not adhere to the wound; it comes away readily without causing pain, bringing the slough with it.

DISINFECTION OF HANDS.

After a critical study of the literature on this subject, and an exhaustive series of carefully conducted experiments, Fürbinger and Fieyhan (*Deutsch Med. Woch.*, February 4th, 1897) conclude that the concensus of opinion and evidence shows that it is practically impossible to sterilize absolutely the hands with soap and water, even in conjunction with ordinary antiseptics, but that sterilization is more nearly approached, caeteris paribus, the more alcohol is employed in the process.

The procedure advocated is the washing with soap and warm water, and brush for five minutes, rinsing in sterilized water, washing in alcohol for five minutes, washing in sterilized water, with or without a further washing in an ordinary antiseptic solution. The action of the alcohol their experiments show to be three-fold: 1. Its bactericidal action. 2. Through its properties of dissolving fats and mixing with water it prepares a way, not only for its own germicidal action, but also for that of any subsequent antiseptic. 3. It loosens the epidermis, and with it the dirt and contained bacteria, washing them away.—*American Journal of Medical Sciences*, April, 1897.

Dr. H. Merks (*N. Y. Medical Record*, March 13th, 1897) gives a report of two cases of intussusception, concluding with following remark:—

"Of the two cases reported occurring in my own personal experience, Case 1 belonged to the enteric variety, according to the classification in Treves' 'System of Surgery,' and was interesting from the fact that nothing whatever passed through the bowels, the characteristic bloody and mucous discharge from the anus being absent. If no purgative had been given in this case, and operation had been resorted to within the first forty-eight hours, or even seventy-two hours, I think there can be little doubt that the operation would have been successful. Case 2 belonged to the ileo-colic variety, the most acute and rapidly fatal of all the various intussusceptions (Treves' 'System of Surgery'). This patient was operated on less than ten hours following the onset of symptoms, and, as ascertained during the operation, none too soon. If the case had gone another ten hours, I do not think the operation could have saved the little patient's life.

"The lesson learned by me from these cases has been, in intussusception operate early or not at all. Do not waste time by attempting to reduce by inflation with air or water, but follow the teachings of common sense, viz., under strict asepsis open the abdomen before adhesions have formed and reduce the inverted bowel."

OBSTETRICS.

IN CHARGE OF

H. L. REDDY, M.D., L. R. C. P., London,

Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

Dr. W. E. Parke's (*American Gynæc. and Obstet. Journal*) Paper on "When shall we use the Forceps?" is summed up as follows:—

1. The indication for the use of the forceps never or rarely arises during the first stage of labor before the membranes have been ruptured,

2. It may be necessary to employ the forceps during the first stage, when the waters have escaped, on account of the increasing exhaustion of mother or child.

3. It is proper to apply the forceps during the first stage of labor for accidents, whenever they may arise, notably in certain cases of convulsions, placentæ prævіæ, and prolapse of the cord.

4. In the second stage it is proper to apply the forceps one half hour after the head ceases to advance when there is no disproportion between the passage and passenger.

5. When, however, there is a tight fit between the child and the birth canal, the use of the forceps may be delayed. This delay should rarely exceed two hours after the head ceases to advance.

6. If the head is engaged, and neither advances with a pain nor recedes after the pain, the forceps should be applied promptly.

A LONG PREGNANCY.

E. F. Ross of Sidney reports the case of a III para, whose previous pregnancies were uneventful, in whom fœtal movements were first felt on September 30th, 1895, and recognized by the writer, October 6th, and noted weekly by him until her delivery May 20th, 1896. As fœtal movements cannot be recognized by the examiner before the third month of pregnancy, at least eighty-four days must be added, which make the period of her gestation three hundred and eleven days. Menstruation persisted for three months after the appearance of fœtal movements. The delivery was accomplished by artificial dilatation of the cervix and high forceps under chloroform. The fœtal membranes were very thick, and there was very little liquor amnii. The placenta was adherent. The child, a female, weighed about ten pounds. The posterior fontanelle was closed, the anterior fontanelle was small.—*The American Gynæc. & Obstet. Journal.*

HYPEREMESIS GRAVIDARUM.

W. W. Holliday, Cleveland, O., reports two cases on this subject. The first was a lady of twenty-seven, who gave a history of general malaise, some vomiting and continuous nausea for three or four days. Some nine months before, she had aborted at the sixth week. Had always been irregular and scanty in her menstruation, and had had attacks of vomiting. No family history of cancer or tuberculosis. It was six weeks since the last menstruation. Examination of uterus, cervix and abdomen showed no changes indicating pregnancy. Slight pain in epigastric region and in back of neck, no tenderness of vertebræ. Bowels readily moved, urine normal. Being suspicious of pregnancy, rest in bed with powders of calomel and bicarbonate sodium was ordered, with counter-irritation over the stomach. No relief was given, and bismuth subnitrate with carbolic acid in mucillaginus acaciæ and peppermint water was tried but not retained. Bismuth and oxalate of cerium were tried with no benefit. She was sustained by peptonized milk enemas. Drop doses of wine of ipecac and Fowler's solution also failed.

Another examination revealed no changes in uterus or cervix. Lavage was refused until after consultation with another doctor, when it was tried once a day for three days with no benefit whatever. Strychnia was given hypodermically with morphine, and hydrochlorate of cocaine tablets were given by mouth. The patient failed in strength, and a surgeon was called who examined the patient thoroughly, *except* the uterus under ether, with negative conclusions. The death of the patient followed, and the post mortem showed a pregnancy of three months. The growth must have been very rapid during the last few weeks. The writer says: "We have been told of some of the mistakes of Moses. We occasionally make them ourselves, and while it may not be pleasant or even fashionable to talk of them, it occurred to me it might be practical if we did it more."

The second case showed unmistakable signs of pregnancy, and remedies similar to those used in the preceding case were tried with no benefit. Copland's plan of dilating the cervix after dipping the instrument in pure carbolic acid was tried, but failed to give relief. As there was erosion of the cervix, a tampon saturated with a ten per cent. solution of ichthyol in glycerine was applied to the cervix. This was retained for four days, and complete freedom from nausea resulted. La Terre of Rome recommends a twenty per cent. solution of ichthyol in glycerine. Another writer has found that vesication over the fourth and fifth dorsal vertebræ gave relief. The necessity of not waiting until the patient is exhausted before operating is very apparent from all the literature on the subject.

IMPORTANCE OF ABDOMINAL PALPATION COMPARED TO VAGINAL EXAMINATION.

Ahlfeld (*Deut. Med. Woch.*) does not agree with the recommendations of Leopold to employ abdominal palpation exclusively as a means of diagnosis during the progress of labor. Abdominal palpation alone *is not sufficient to recognize* existing or impending dangers; intra-partum, its execution is difficult, and if thoroughly performed not free from danger. The obstetrician who manages a labor case without performing vaginal examination is largely trusting to chance. *With proper asepsis vaginal examinations are free from danger.*

DIAGNOSIS OF PREGNANCY IN THE EARLY MONTHS.

Rinman observed in two cases as an early symptom of pregnancy, slender cords radiating from the nipple, which he believes to be the hypertrophic acini of the glands. Secretion was not yet present. This observation has been confirmed by others.

TECHNIQUE OF CÆSARIAN SECTION.

The following is Dr. Hirst's technique.

Preparation for an Abdominal Section.—Give patient on admission a full hot bath. Have the patient kept in bed from the time she enters the hospital until the operation is performed. Administer pill strychnia gr. $\frac{1}{20}$, digitalis gr. $\frac{1}{2}$, quinine grs. 2 t. i. d. before operation. Secure movements of bowels by 2 drachms Rochelle salts every evening. Have the heart and lungs examined, also examine urine.

Day before Operation.—Diet as follows: gruel for breakfast, soup for dinner, milk toast for supper, one glass of milk 10 a.m. to 4 p.m. and 9 p.m.

Medicine.—5 p.m. afternoon before the operation, 10 grains sulphonal in half glass of boiling water cooled down to temperature that permits of its being drunk if patient is nervous and has been sleepless. 9 p.m., half ounce Epsom salts in a tumblerful of water.

Evening before Operation.—First cleansing of the abdomen as follows:

Cleansing.—1. Sterilize the following articles for twenty minutes at 240°, soft bristle brush, absorbent cotton, one-half dozen towels, gauze unmedicated, binder, long gown.

2. The resident physician, or under his supervision the nurse who cleanses the abdomen, must prepare his or her hands and arms as though about to operate, namely, remove rings, scrub with brush, hot water and tincture of green soap for ten minutes; clean nails with nail file. Scrub hands and

arms with benzine and then with alcohol, immerse hands and arms in bichloride solution (1 : 1000) for two minutes. Then put on the gown.

3. The abdomen from ensiform to symphysis and from flank to flank must be scrubbed with soft bristle brush, tincture of green soap and hot water thoroughly (for at least ten minutes), paying special attention to navel and to pubic regions. Wipe off the razor with cotton and alcohol. Shave pubis, and then scrub thoroughly with alcohol. Cover up the abdomen with the sterile gauze and put on the binder.

Morning of the operation.—Give cup of beef tea at 7 a.m. Hands of nurse or the doctor cleansed as described above. Articles re-sterilized as described above, same cleansing of abdomen repeated as above described, but in addition before alcohol scrubbing, scrub abdomen with benzine. Wring out a sterile towel in 1 : 1000 bichloride solution, and cover the abdomen with the towel, put over it a thick layer of sterile cotton ; apply binder. Catheterize the woman just before anæsthetization with sterile glass catheter in aseptic manner. Give vaginal douche, 1 quart of 1 : 4000 solution followed by a little sterile water. If bowels have not opened freely give enema, a pint of soapsuds, and one drachm of turpentine.

The Operation.—With a large scalpel held firmly in the full hand a free incision is made from two inches above the umbilicus to just above the symphysis. This incision may be carried entirely through the abdominal wall in its upper part, as the intestines are out of the way. The abdominal opening is enlarged with scissors downward as low as possible. An assistant makes the wound gape while the operator delivers the womb from the abdominal cavity. The assistant then approximates the edges of the abdominal wound as closely as possible around and above the cervix, at the same time squeezing the latter with the outspread hands. With a few rapid but light strokes of the knife the operator makes an incision an inch in length, through the uterine muscle, and not through the membranes, so as not to cut the child. Then with one rapid movement of the left hand and arm, the uterine wall is torn down to the internal os, the membranes are ruptured, the placenta if in the way is detached and pushed aside, the child is seized by the most accessible part, either shoulder or leg is delivered, and with the placenta still attached to it is dropped into a sterile sheet spread over the outstretched arms of an assistant, who stands directly at one's left hand, and whose duty it is to revive the child if it is asphyxiated, and to tie and cut the cord.

Up to this point the operation rarely requires seventy-five seconds. Then follows an easy hysterectomy, ligation of the ovarian arteries and of the arteries of the round ligaments,

application of clamps, cutting of the broad ligaments, preparation of peritoneal flaps, and amputation of the womb, ligation of the uterine arteries, and over-sewing of the stump which is dropped.

The abdominal wall may be closed by close-set interrupted stitches,—the easiest plan for a beginner, or by any other method that a more experienced operator may prefer.—*The Amer. Jour. Obstet.*

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, December 31st, 1896.

GEORGE WILKINS, M.D., PRESIDENT, IN THE CHAIR.

A CARDIAC CASE FOR DIAGNOSIS.

Dr. W. F. HAMILTON exhibited a boy aged ten years, the subject of a cardiac lesion. He read the history of the case, demonstrating the physical signs present, and pointed out the difficulty of classifying it among any of the recognized heart lesions. The case was examined thoroughly by the members present, but no one was able to give a satisfactory solution of the problem.

A CASE OF VICARIOUS LABOR PAINS.

Dr. WYATT JOHNSTON read for Dr. D. D. MACTAGGART and himself a paper on this subject.

ASSOCIATIONS OF TONSILLITIS AND DIPHTHERIA.

Dr. J. C. CAMERON related this case.

Dr. C. W. WILSON related the history of two of the cases referred to by Dr. Johnston. The first was a case of hernia, and was seen on the second day after tonsillitis had developed. The follicles were filled with a dirty grey secretion which could be rubbed off, and was discrete, not in patches. A swab was taken and sent to Dr. Johnston, who found no diphtheria bacilli microscopically, but next morning the growth upon the culture medium showed diphtheria bacilli distinctly. Three cc. of Schering's antitoxin were injected, and nothing further developed. Two days later, although no constitutional symptoms were present, another swab was submitted and diphtheria bacilli found once more, and four days later again they had disappeared. A case of diphtheria had occurred two weeks previously in the house of a cousin, where frequent visits were interchanged.

The second case occurred in the Montreal General Hospital. A child suffering from hip-joint disease developed a tonsillitis with acute symptoms. A swab was submitted and a negative report received. The tonsillitis subsided; but a second swab, taken two days later, showed diphtheria, and the child was sent to the Civic Hospital, to avoid causing infection to the other occupants of the ward, and the disease has had an uneventful course.

Dr. A. W. HALDIMAND referred to a case in which there was a distinct membrane on the tonsils, soft palate and pharynx, and which he immediately diagnosed as diphtheria. A culture was submitted to Dr. Johnston who reported that no bacilli were present. The membrane gradually disappeared under the use of peroxide of hydrogen spray. From a second swab a report was received of "present (?)"

Dr. G. T. ROSS thought the subject was of great practical importance, and that Dr. Johnston's statements supported the progressive infection theory of diphtheria put forth by several authors. They considered that many cases were of the nature of ordinary angina, infective, but containing no true bacilli, and that later true diphtheria was engrafted upon them, perhaps a week after the appearance of the tonsillitis. He alluded to an epidemic which had been recently reported of 100 cases of sore throat, in a school of 300 pupils, where there were no symptoms of diphtheria, but later on a case of diphtheria came in contact with one of these, and the disease developed. He asked if Dr. Johnston had done any work on the microbic theory of rheumatism. This disease was said by some writers to develop from tonsillitis by the lymphatics supplying the tonsils, conducting the poison into the system.

Dr. WYATT JOHNSTON in reply said he did not consider it necessary to isolate cases in which only a few bacilli were found. It was, however, a good plan to give a dose of antitoxin. He had had no experience of rheumatic tonsillitis.

THE QUANTITATIVE ESTIMATION OF THE SERUM REACTION BY THE DRIED-BLOOD METHOD.

Dr. WYATT JOHNSTON read a report of this method by Dr. D. D. MACTAGGART and himself.

Stated Meeting January 15th, 1897.

JAS. BELL, M.D., IN THE CHAIR.

"TIC CONVULSIF."

Dr. F. G. FINLEY exhibited two brothers suffering from this malady.

Dr. W. F. HAMILTON said that these patients reminded him of a case which was a puzzle in diagnosis. The first case shown by Dr. Finley illustrated the character of the movements in his own case; there were increased and spasmodic movements on voluntary motion, but, in addition, the trunk muscles were involved as well as the diaphragm and other respiratory muscles, causing a quick expiratory puff at times during the height of a seizure. He had classified it as one of paramyoclonus multiplex. The disease dated from the age of three years to the present age of twenty-three. There were no mental changes or epileptiform seizures, and the family was not one showing neuropathic tendencies.

Dr. W. E. DEEKS suggested that the movements might be due to a loss by control of the cerebral centres over the lower or spinal cord centres, the result being that the latter acted in an irregular manner; the cerebral centres initiating movements which they could not control.

Renal Calculi.

Dr. J. B. McConnell read the medical and Dr. G. E. Armstrong the surgical report of this case.

Renal and Vesical Calculi.

Dr. Jas. Bell exhibited the specimens.

Dr. Lapthorn Smith asked Dr. McConnell if he considered the disease preventable, and if he knew whether the patient was in the habit of abstaining from water before the disease began. Questioning whether the case could have been one of traumatic delirium, he referred to one occurring in his own practice following a total hysterectomy which he had attributed however to the large quantity of iodoform in the gauze packing.

He asked Dr. Bell if he did not think it would be better to operate on the kidney through the abdomen, as he had himself extirpated a kidney by this method. He thought it was of the greatest advantage before removing one kidney to feel the other, and also to see that it contained no stones. He felt that it was only prejudice that favored the operation in the back. The latter's only advantage was from the better drainage secured. He thought the fear of infecting the peritoneal cavity an ephemeral one, as the kidney which he had removed contained several quarts of pus and many calculi, and he had had no difficulty in disinfecting the peritoneal cavity; the same was true after the rupture of stinking pus-tubes.

Dr. McConnell, in reply to Dr. Smith, said that he was quite unable to give any directions as to how one might prevent the formation of stone. He could not suggest keeping the urine either acid or alkaline, as calculi formed under both condirions. Of the patient's previous habits he knew nothing. He was very temperate, took good care of himself, but indulged a great deal in Turkish baths. He was inclined to attribute the final event to the condition of the kidneys to a large extent, and thought that chloroform would have been preferable to ether as the anæsthetic.

Dr. Armstrong said that the diagnosis had been made by Dr. McConnell. The man was failing in health, and passing pus and blood in the urine after exercise. This pointed directly to the kidneys. He had been in doubt of finding stone, as he did not understand how a calculus could be present without producing pain.

The question of abdominal section was important, and a great deal might be said in its favor in cases of contemplated nephrectomy. Exploring through the front, too, would establish the presence of a second kidney or of any contraction of the ureter.

He felt that the impression that ether was likely to have an injurious effect upon the kidneys was not well founded. The only evidence he had seen of the relative effects of chloroform and ether on the kidney was in Prof. Schede's Clinic, where upwards of a hundred cases of each had been examined before and after anæsthesia, and the results were in favor of ether as being the less injurious.

Dr. Bell's cases opened up a very important field for discussion, namely, the treatment of vesical calculi in old men with large prostates. He personally preferred the crushing operation, as the statistics were far ahead of the other methods.

The modern operation of litholopaxy gave most satisfactory re-

sults. It was true, stones were sometimes re-formed in the bladder after litholopaxy, but they sometimes increased after perineal and suprapubic lithotomy. Mr. Reginald Harrison was now suggesting that in suitable cases double vasectomy should be performed some time previous to the crushing of the stone. By this means he sought to bring about an atrophy of the prostate and thus facilitate the litholopaxy.

Dr. JAMES BELL, in reply, said he thought there were many obvious reasons for not operating in pyonephrosis through the abdominal wall, but for nephrectomy it was otherwise. It was important to verify the existence of the second kidney, and it offered greater facilities for dealing with the pedicle, especially on the right side, where the renal veins were short and often difficult to secure. In comparing pus from the kidneys with that from stinking pus-tubes one must remember that pus differed in virulence. Thus, pus from an appendix abscess was much more dangerous than that from the Fallopian tubes, and probably kidney pus was also more virulent; consequently, the escape of urine and pus into the abdominal cavity would be a very serious complication. He referred to the frequency with which stone occurred in both kidneys at once, and to the extreme difficulty of making a definite diagnosis, many cases with hæmaturia giving no clue as to which kidney contained the stone.

The statement that ether was injurious in kidney cases, Dr. Bell looked upon as simply and purely a libel upon ether. Wood and others, during the last few years, had proved the contrary. With reference to the question of crushing, his reason for not doing so in the young man was that he was suffering from cystitis, and had had urethral fever every time an instrument had been passed. Besides this, he was, speaking generally, in favor of the cutting operation, especially in old men. With a large prostatic shelf and possibly a sacculated bladder, there was the greatest difficulty in washing out the last fragments of the stone. In females, and young men with healthy bladders, litholopaxy might be preferred, though he saw no reason why a cutting operation should be dangerous. The results of the former were better, as Dr. Armstrong had said, but that was because the statistics included the operation of pre-aseptic days. He entirely dissented from the statement that litholopaxy was better than cutting in inexperienced hands, for no surgical procedure required more technical skill and experience than the use of the lithotrite.

THE BIOLOGICAL CONSIDERATION OF MENSTRUATION.

Dr. J. CLARENCE WEBSTER read a paper on this subject.

Dr. WESLEY MILLS said he regretted that so interesting and exhaustive a paper had been read at so late an hour, as he would like to have heard it discussed and to have considered most of the points raised, himself. As he had said at a recent meeting, he was not prepared to believe that, in primitive peoples or among perfectly normal women at the present time, there was no connection between ovulation and menstruation. The phenomena of rut in the lower animals and menstruation in the human female had points of biological resemblance. Rut was divisible into stages and was accompanied by psychic phenomena,

which had their analogies in the human subject during menstruation. It might well be that in our complex modern life there might result some dislocation of processes that were once more closely related in time and physiological sequence. Apart from rut, it did not seem to be possible to understand the evolution of menstruation. No doubt the advances in our knowledge of the innervation of the viscera, together with a deepening conviction of the importance of the essential connection of the nervous system with nutritional changes (metabolism) as such, in all parts must lead to the belief that menstruation, like other vital processes, was controlled by the nervous centres. Nevertheless, to assume that there was one single nerve presiding over menstruation in the same sense as nerves do over glands did not seem to harmonize well with physiological conceptions. Menstruation was part of a series of changes in the uterus, over all of which the nervous system presided; further, menstruation was but one of a series of related processes in the generative organs, all of which were correlated by the nervous system. Such views, and the conception that there was throughout a difference between the sexes not confined to the generative organs of the body, but extending to the mind, were doctrines Dr. Mills had long been accustomed to teach, and the realization of which seemed of vital importance now that the social and economic relations of the sexes were undergoing such radical changes.

Dr. LAPTHORN SMITH felt indebted to Dr. Webster for his timely paper. The generally accepted views concerning menstruation, as taught in the text-books, were wrong; and Dr. Webster had performed a useful task in collecting the more correct and modern views, scattered through the literature of the last few years into one paper. Dr. Smith felt convinced that ovulation was going on long before menstruation began and long after it had stopped; that nature prepared a fresh nest every month, and intended that a fecundated egg should invariably come down to occupy it, but that if by any chance the egg was not fertilized, it died, and the nest being of no use degenerated and came away. In other words, the menstrual flow was the funeral of a dead ovum. Sir William Hingston and others, including the speaker, knew of many women in this province who were normal, that is to say, had never menstruated, having become pregnant before menstruation began and were either pregnant or nursing until the menopause. Professor King, of Washington, in an able study of hysteria, pointed out that primeval women instinctively took measures, such as feigning sickness and attracting the attention of a male or calling for help, &c., to ensure that their ovum should become impregnated before menstruation appeared or as soon as their uterus was ready to receive the egg and nourish it, so that a menstrual flow was exceedingly rare among them. Menstruation as we see it to-day is a product of civilization; the more highly civilized and cultivated the woman, the more, as a rule, did they flow. Dr. Smith also agreed with Johnston, of Cincinnati, that menstruation, like a tidal wave of blood towards the uterus leading to the formation of a nest, was under the control of the great sympathetic nerve, and that by tying the main uterine branch of it near the corner of the uterus, menstruation would be stopped. The removal of the ovaries alone without tying the nerve under the tubes did not arrest menstruation. He had several cases still men-

struating after removal of every particle of both ovaries. But the removal of the tubes and leaving the ovaries would stop menstruation. Some are of the opinion that pregnancy takes place after menstruation, but this is an error ; if that were so, the Jews, who abstain from intercourse for a week. and among some for twelve days, would not be more prolific than Christians ; and yet they are. Probably keeping the males away for twelve or fifteen days was an advantage, because breeders of animals found that when the males and females were kept apart for some time they would breed more surely than if they were kept constantly together. He had carefully inquired from women who had been seduced and became pregnant, and had learned that the only intercourse had been just before a period, and that the period then due did not make its appearance. A leading physician had told him that he had several young ladies in his practice who had to be locked up every month for a few days before their period in order to avoid a scandal, but they could be safely allowed out the moment the flow appeared. This, he thought, proved that nature meant women to be married before menstruation began, and to be pregnant or nursing all the time for the next thirty years.

Dr. W. E. DEEKS thought we must look upon menstruation as analogous to rut in the lower animals. If not, what in the process of evolution had become of this function, and what in the lower forms corresponded to menstruation?

In invertebrate life, as well as in a great many forms of vertebrates, ovulation was not necessarily periodical not depended in any way on the access of the male, but went on continuously for months. Why not then look upon ovulation in the same way as a gland functionating independently and producing ova more or less continuously between and during menstrual periods?

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CANADA MEDICAL RECORD

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Editorial.

TWENTY-SIXTH CONVOCATION OF THE MEDICAL FACULTY OF THE UNIVERSITY OF BISHOP'S COLLEGE.

Wednesday, the 7th of April, 1897, was a red letter day for the Medical and Dental students of Bishop's College. It was the first combination Convocation for conferring degrees in Medicine and Dentistry, and the result was the most successful Convocation which the University has ever had. The students had decorated the large Synod Hall with the University colors, while the flags of the Medical and Dental students made a fitting background to the platform. The *tout ensemble* was very pleasing to the eye, and removed that bareness of the Hall which has been so noticeable in former years. The attendance was very large, every available spot being occupied, while several hundred could not even get admission, and were reluctantly obliged to turn away. The proportion of young ladies in the audience was unusually large, and they evidenced their interest in the proceedings by nearly all remaining to the very last. The day was a brilliant one, the sun shone brightly, and the air was balmy and warm. Such weather no doubt did much for the success of the meeting. The procession entered the Hall, headed by the Venerable Chancellor Heneker, and the Vice Chancellor, the Rev. Dean Norman, and the Rev. Dr. Adams, Principal of the Uni-

versity. The students, who were present in unusual force, gave them a warm reception, and during the whole proceedings showed that they considered themselves entitled to play their part in the programme of the day.

The Chancellor in opening the proceedings referred in feeling terms to the very great loss which the University had sustained in the recent death of Mr. A. D. Nicolls, the Bursar of the University. He also referred to the great success which was attending the College during the present session, the attendance of students being fully up to, and even beyond, the accommodation in the College. He stated that the financial position was good,—there being a balance—though small —on the right side of the ledger, and that they had every reason to be satisfied at the position of the Jubilee Fund. He called upon the Dean, Dr. F. Wayland Campbell, to make his report.

Dr. Campbell, on rising, was received with applause and by very hearty cheering from the students. He said that it was with great satisfaction he was able to state that the Session which had just terminated was the most successful they had ever had—the number of enregistered Students being 104. Such a record was not only an encouragement for the future,—but was an acknowledgment that the labors of the Faculty during the past twenty-six years had not been in vain. With the day of small things vivid in his memory he would, he knew, be excused if his breast swelled with pride at the record of to-day, and with hope for a brighter future. In fact, if the attendance became much larger, the accommodation at their disposal would be taxed to the utmost. He referred to the great improvements which had been made in the College building, especially as regards the comfort of students, and that still others in the same direction would be made after the Summer season had closed.

After reading the Pass List the following were presented, and had the degree of C.M., M.D., conferred on them by Chancellor Heneker: W. M. Cass, C. A. Fortin, Miss Catherine Lorigan, Miss Helen McDonald, B.A., H. R. Meikle, William Oppzoomer, D. A. Roger, W. J. Webb and John Empson.

The awarding of the prizes and medals followed, the following being the recipients. As each advanced to the

platform, they were loudly applauded—their fellow-students especially being very enthusiastic.

Wood Gold Medal—for the highest aggregate number of marks on all subjects—C. A. Fortin.

Nelson Gold Medal—for best special examination in Surgery, open to all students who have taken honors—William Oppzoomer.

Chancellor's Prize—for the best final examination. Miss McDonald.

David Silver Medal—for the highest number of marks on the Primary examination.—Mr. E. L. Sutherland.

Senior Dissector's Prize.—Mr. T. D. McGregor.

Junior Dissector's Prize.—Mr. F. G. Henry.

Histology Prize.—Mr. F. C. Nichol.

The following also received the degree of D.D.S. (Doctor of Dental Surgery) : Messrs. J. A. Munroe, W. S. McLaren, D. J. Berwick, B. S. Stackhouse, B. J. S. Stackhouse, C. W. R. Rondeau and D. N. Garneau.

The Valedictory on behalf of the Medical Graduating Class was given by Dr. Fortin, and on behalf of the Dental Graduating Class by Dr. Munroe.

The address on behalf of the Medical Faculty to the Graduating Class was given by Dr. Drummond, and on behalf of the Dental Department by Dr. S. Globensky. Brief addresses followed by Vice-Chancellor Norman and Principal Adams.

BRITISH MEDICAL ASSOCIATION.

Montreal Meeting, 1897.

We publish with very great pleasure the list given below, of the officers appointed by the Home authorities for the forthcoming Meeting of the British Medical Association in Montreal. It would, we think, be difficult to have a more distinguished list of office-bearers, especially when it is taken into account how many of the leaders in the profession in the Old Country have already filled the most important posts at previous meetings, and, as a consequence of the wise system of rotation adopted by the Council of the Association, were not eligible to serve here. That so many who have not previously accepted office have consented to

preside here in Canada, is a matter for genuine self-congratulation.

Of those appointed to deliver addresses we need say little. Dr. Osler is one of ourselves, even if a great American University has for a time secured him for its staff—and as a Canadian, is a most happy choice, inasmuch as he belongs to Toronto as well as to Montreal. Mr. Mitchell Banks is a most popular surgeon in the North of England, is a speaker of great power, and is already no stranger in Canada.

Of Presidents of Sections, we heartily congratulate the Association as well as ourselves that we have secured two such Canadians as Dr. E. P. Lachapelle and Dr. R. M. Bucke. Most of the names of the remaining Presidents are familiar to all of us : Stephen Mackenzie, Christopher Heath, Watson Cheyne, Edward Nettleship and Malcolm Morris; these names must immediately gain the approval and self-congratulation of every Canadian. Drs. Sinclair, Waller, Leech and Greville Macdonald may not be so generally known, though each is recognized as a leader by those interested in his special line of work. W. J. Sinclair, Professor of Gynæcology at Owens College, Manchester, is a brilliant and thoughtful writer in matters gynæcological. Dr. Leech, another of the Professors at Owens College, is Senior Physician to the Manchester Royal Infirmary, the founder of one of the very few active schools of Pharmacology in Great Britain, and an authority upon that subject. Dr. A. Waller, the brilliant son of a celebrated physiologist, is perhaps the brightest and most original of metropolitan physiologists. Dr. Greville Macdonald, another brilliant son of a celebrated man (his father is George Macdonald, the novelist), is one of the most popular and highly esteemed of English laryngologists.

Referring to the lists of Vice-Presidents in the various subjects, it will be seen that a most conscientious attempt has been made by the parent Association, at the suggestion of the Local Executive Committee, to embrace the whole of the Dominion. When Montreal of its own free will gave up the opportunity of appointing its leading practitioners as Presidents of the various sections, it is but becoming that leaders in the profession in Montreal should be appointed to

Vice-Presidential posts, and no one can object if this list contains a considerable portion of well-known Montreal names; but it will be seen that Toronto, Quebec, Ottawa, London, Winnipeg, Hamilton, Halifax, St. John, N.B., Victoria and all the leading centres are given recognition, and are duly honored so far as it is in the power of the authorities to do so. Naturally there has been a difficulty in appropriately including all the leaders in the Sections of Medicine, Surgery and Gynæcology, it has in fact been impossible to include all whom we would have desired to see nominated as Vice-Presidents, but it must be confessed that as far as they go the lists in these subjects are excellent; thus, in short, by these lists a successful Meeting is ensured, both from an Imperial and a National point of view.

PRELIMINARY PROGRAMME.

President: Henry Barnes, M.D., M.R.C.S., F.R.S.E., J.P., Physician Cumberland Infirmary, Carlisle; President-Elect: T. G. Roddick, M.D., M.P., Professor of Surgery in McGill University, Montreal; President of the Council: Robert Saundby, M.D., F.R.C.P., Physician to the General Hospital, Birmingham, 83A Edmund Street, Birmingham; Treasurer: Charles Parsons, M.D., Dover.

Addresses will be delivered as follows: Medicine.—Dr. W. Osler, F.R.C.P., Professor of Medicine in the Johns Hopkins Univ., Baltimore, U.S.A.; Surgery.—Mr. William Mitchell Banks, F.R.C.S., Surgeon to the Liverpool Royal Infirmary; Public Medicine.———

The Scientific Business of the Meeting will be conducted in eleven sections, as follows, namely:—

Medicine.—President: Dr. Stephen Mackenzie, London. Vice-Presidents: Dr. J. E. Graham, Toronto; Dr. W. Bayard, St. John, N.B.; Dr. J. P. Rottot, Montreal; Dr. F. W. Campbell, Montreal; Dr. J. Stewart, Montreal; Dr. H. P. Wright, Ottawa. Hon. Secretaries: Dr. H. A. Lafleur, Montreal; Dr. W. F. Hamilton, Montreal; Dr. Wm. Pasteur, 4 Chandos Street, Cavendish Sq., London, W.

Surgery.—President: Mr. Christopher Heath, London. Vice-Presidents: Sir Wm. Hingston, Montreal; Hon. Dr. Sullivan, Kingston, Ont.; Hon. Dr. Farrell, Halifax, N.S.; Dr. I. H. Cameron, Toronto; Dr. F. LeM. Grasett, Toronto; Dr. James Bell, Montreal; Dr. G. E. Armstrong, Montreal. Hon. Secretaries: Dr. R. C. Kirkpatrick, Montreal; Dr. Thomas Walker, St. John, N.B.; Mr. Jordan Lloyd, F.R.C.S., Broad Street, Birmingham.

Public Medicine.—President: Dr. E. P. Lachapelle, Montreal. Vice-Presidents: Dr. Montizambert, Quebec; Dr. R. Craik, Montreal; Dr. P. H. Bryce, Toronto; Sir James Grant, Ottawa; Dr. R. H. Powell, Ottawa. Hon. Secretaries: Dr. Wyatt Johnston, Montreal; Dr. E. Pelletier, Montreal; Dr. H. Harvey Littlejohn, Town Hall, Sheffield.

Obstetrics and Gynæcology.—President: Dr. William Japp Sinclair, Manchester. Vice-Presidents: Dr. Wm. Gardner, Montreal; Dr. James Perrigo, Montreal; Dr. J. A. Temple, Toronto; Dr. J. C. Cameron, Montreal; Dr. T. J. Alloway, Montreal; Dr. James Ross, Toronto. Hon. Secretaries: Dr. D. J. Evans, Montreal; Dr. W. Burnett, Montreal; Dr. A. E. Giles, 58 Harley Street, Cavendish Sq., London, W.

Pharmacology and Therapeutics.—President: Dr. D. J. Leech, Manchester. Vice-Presidents: Dr. A. D. Blackader, Montreal; Dr. James Thorburn, Toronto; Dr. C. R. Church, Ottawa; Dr. J. B. McConnell, Montreal; Dr. F. J. Austin, Sherbrooke; Dr. Walter George Smith, Dublin. Hon. Secretaries: Dr. F. X. L. DeMartigny, Montreal; Dr. J. R. Spier, Montreal; Dr. Charles Robertshaw Marshall, Pharmacological Laboratory, Downing College, Cambridge.

Pathology and Bacteriology.—President: Mr. Watson Cheyne, F.R.S., London. Vice-Presidents: Dr. J. G. Adami, Montreal; Dr. J. Caven, Toronto; Dr. J. Stewart, Halifax; Dr. J. C. Davie, Victoria; Dr. L. C. Prevost, Ottawa; Dr. M. T. Brennan, Montreal. Hon. Secretaries: Dr. W. T. Connell, Kingston; Dr. C. F. Martin, Montreal; Dr. Robert Boyce, University College, Liverpool.

Psychology.—President: Dr. R. M. Bucke, London, Ont. Vice-Presidents: Dr. D. Clark, Toronto; Dr. T. J. Burgess, Verdun, Que.; Dr. A. Vallée, Quebec; Dr. G. Wilkins, Montreal. Hon. Secretaries: Dr. J. V. Anglin, Montreal; Dr. Geo. Villeneuve, Montreal; Dr. J. G. Blandford, London County Asylum, Banstead, Surrey.

Ophthalmology.—President: Mr. Edward Nettleship, F.R.C.S., London. Vice-Presidents: Dr. F. Buller, Montreal; Dr. R. A. Reeve, Toronto; Dr. Ed. Desjardins, Montreal; Dr. A. A. Foucher, Montreal. Hon. Secretaries: Dr. W. H. Smith, Winnipeg; Dr. Jehin Prume, Montreal; Mr. Thomas Herbert Bickerton, 88 Rodney Street, Liverpool.

Laryngology and Otology.—President: Dr. Greville Macdonald, London. Vice-Presidents: Dr. W. Tobin, Halifax; Dr. G. A. S. Ryerson, Toronto; Dr. H. S. Birkett, Montreal; Dr. G. R. McDonagh, Toronto. Hon. Secretaries: Dr. A. Chrétien, Montreal; Dr. H. D. Hamilton, Montreal; Dr. W. Permewan, 7 Rodney Street, Liverpool.

Anatomy and Physiology.—President; Dr. Augustus D. Waller, F.R.S., London. Vice-Presidents: Dr. F. J. Shepherd, Montreal; Dr. A. B. McCallum, Toronto; Dr. T. Wesley Mills, Montreal; Dr. A. Primrose, Toronto; Dr. J. B. A. Lamarche, Montreal; Dr. D. B. Fraser, Stratford, Ontario. Hon. Secretaries: Dr. J. M. Elder, Montreal; Dr. W. S. Morrow, Montreal.

Dermatology.—President: Mr. Malcolm Morris, London. Vice-Presidents: Dr. J. E. Graham, Toronto; Dr. F. J. Shepherd, Montreal; Dr. J. A. S. Brunelle, Montreal; Dr. J. L. Milne, Victoria, B.C. Hon. Secretaries; Dr. Gordon Campbell, Montreal; Dr. J. M. Jack, Montreal; Dr. James Galloway, 21 Queen Anne Street, Cavendish Square, London, W.

PROVINCIAL PROGRAMME.

Wednesday, August 18th to Thursday, August 26th.—Meeting of the British Association for the Advancement of Science at Toronto.

Thursday, August 26th, to Monday, August 30th.—Excursion for Members and Guests of the British Association, from Toronto via Niagara, Kingston, The Thousand Islands, Ottawa, etc., to Montreal.

Monday, August 30th.—Meeting of the Canadian Medical Association at Montreal.

British Medical Association.

Tuesday, August 31st.—12.00 a.m.—Service in the English Cathedral. 2.30 p.m.—Windsor Hall: Opening ceremonies and addresses of welcome. 3.00 p.m.—Address by the President-Elect, T. G. Roddick, M.D., M.P. 4.00 p.m.—Garden Parties, Excursions, around the Mountain, etc. 9.00 p.m.—Soirée at Laval University.

Wednesday, September 1st.—1.00 p.m.—McGill University: Opening of sections. 3.00 p.m.—Windsor Hall: Address in Medicine, by Dr. Wm. Osler. 4.00 p.m.—Excursion down the St. Lawrence, etc. 9.00 p.m.—Sohmer Park: Conversazione and Dance.

Thursday, September 2nd.—9.30 a.m.—McGill University: Sectional meetings. 1 30 p.m.—Lunch on the Mountain. 3.30 p.m.—Windsor Hall: Address in Surgery, by Mr. T. Mitchell Banks. 4.30 p.m.—Excursion across the Island, etc. 7.45 p.m.—Annual Dinner of the Association, Windsor Hall.

Friday, September 3rd.—9.30 a.m.—McGill University: Sectional Meetings. 3.00 p.m.—Windsor Hall: Address in Public Medicine, by ——, and concluding General Meeting. 4.15 p.m.—Excursion to St. Anne's and down the Lachine Rapids. 9.00 p.m.—Soirée at McGill University.

Saturday, September 4th.—Excursions to Ottawa, Quebec, Kingston, St. Agathe, Lake Memphremagog, etc.

Arrangements for and Opportunities Afforded to Guests of the Association.

American guests attending the meeting of the Association, will, it is trusted, be accorded by the Railway Companies the same privileges as are granted in the case of other large Scientific meetings upon this continent, namely, they will be enabled to obtain the ticket to Montreal and return at the rate of one fare and one-third, a rebate being given in Montreal upon presentation of the return ticket.

In Canada they will have the same privileges granted to them by the Grand Trunk and the Canadian Pacific Railways as are accorded to the members of the Association, namely, they will be able to travel to nearly all parts of the Dominion, from Halifax on the one hand, to Victoria, B.C., on the other, at half rates for the single journey, and single rates for the return journey.

During the meeting there will be several afternoon excursions in the neighborhood of Montreal, given to them by the Montreal Branch of the Association.

Fuller particulars as to excursions will be afforded at a later date.

Guests of the Association may be invited by the Presidents and Officers of the various sections to contribute papers and to take part in the discussions at the sectional meetings.

For the convenience of those attending, a suite of rooms will be placed at the disposal of the guests, for enregistration, distribution of tickets, etc.

Personals.

Dr. Maud E. Abbott (M.D. Bishop's, 1894), who ever since graduation has been in Europe, on the 8th April passed her examination in Edinburgh for the triple qualification.

Dr. Benny (M.D. Bishop's, 1896) is still in Prince Edward Island *locum tenem* for Dr. Macphail, who is in Europe.

Dr. Fortin (M.D. Bishop's, 1897) has been appointed House Surgeon to the Western Hospital.

Dr. Irvin (M.D. McGill, 1896) continues another year as House Physician to the Western Hospital.

Dr. Grace Ritchie (M.D. Bishop's, 1891), Montreal, was married early this month to Dr. F. R. England (M.D. Bishop's, 1885). They at once proceeded to Europe on their honeymoon, and will be absent about six months.

Dr. Hall (M.D. Bishop's, 1896), late House Surgeon Western Hospital, will in a few weeks proceed to Europe to further pursue his studies.

Dr. G. T. Ross, Professor of Laryngology and Rhinology in Bishop's College, who has been seriously ill, has quite recovered, and has resumed work. This will be gratifying news to his many friends.

Dr. Montgomery (B.A., M.D. Bishop's, 1894) has removed from Farnham to St. Johns, Que., where he is rapidly getting a good practice.

Dr. N. C. Smillie (M.D. Bishop's, 1881), of Gaspé Village, will pay Montreal a visit very shortly.

Dr. C. A. Wood (M.D. Bishop's, 1877), of Chicago, is Chairman of the Committee for the United States, charged with the duty of arranging an excursion of Medical men to the Medical Congress which meets in Moscow this summer.

Dr. C. C. Brymer (M.D. Bishop's, 1895) has commenced practice at Point St. Charles, Montreal.

Miss Dr. Cunin (M.D. Bishop's, 1895) has commenced practice at Point St. Charles, Montreal.

Dr. Antonio Internoscia (M.D. Bishop's, 1895) is practising in New York city.

Dr. Foley (M.D. Bishop's, 1880) and Dr. Jack (M.D. Bishop's, 1889) are the only Dermatologists—special—in Montreal.

Dr. Douglas Macrae (M.D. Bishop's, 1893) is a Surgeon on one of the Red Line Steamships sailing between Philadelphia and Liverpool.

Dr. Purvis (M.D. Bishop's, 1892) is practising successfully at Athens, Ont.

The Hon. Dr. F. W. Borden, Minister of Militia, is slowly recovering from the results of the railroad accident which occurred some three months ago on the Intercolonial. He is at present in Boston undergoing treatment. His many friends will rejoice to see him again able to resume his Ministerial duties, for he is admittedly the best Minister the Militia Dept. has perhaps ever had.

Dr. Bazin (M.D. McGill, 1893) has resigned the position of Medical Superintendent of the Montreal General Hospital to enter upon practice in Montreal.

Book Reviews.

A System of Practical Medicine. By American Authors. Edited by Alfred Lee Loomis, M.D., Late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Materia Medica, Therapeutics and Clinical Medicine in the New York University. To be completed in four imperial octavo volumes, containing from 900 to 1000 pages each, fully illustrated in colors and in black. Vol. I.—Infectious Diseases. Just ready. Vol. II.—Diseases of the Respiratory and Circulatory Systems, and of the Blood and Kidneys. In Press. Vol. III.—Diseases of the Digestive System, of the Liver, Spleen, Pancreas and other Glands, Gout, Rheumatism, Diabetes and other Constitutional Diseases. In active preparation. Vol. IV.—Diseases of the Nervous System and of the Muscles. Diseases of doubtful origin, Insolation, Addison's Disease, etc. In active preparation. Per volume, cloth, $5.00; leather, $6.00; half morocco, $7.00. Lea Brothers & Co., Publishers, Philadelphia and New York. McAinsh & Kilgour, Dominion Agents, 15 St. John Street., Montreal, 12 Confederation Life Building, Toronto.

The first volume of this new System of Medicine is to hand, and at a glance one is impressed that it is a work of unusual merit. It aims to be a thoroughly practical work of ready reference for the practitioners of general medicine. It is not a mere compilation, as

original investigations expressly for the work have been undertaken by the various authors which are evident in text and illustrations. The latter are striking features, and one rarely sees finer colored plates than those of the malaria parasite, dysenteric amœbae and vaccinia on the tenth day.

The following gentlemen constitute the list of contributors to this volume: Drs. I. E. Atkinson, Baltimore; John M. Byron, New York; Warren Coleman, New York; George Dock, Ann Arbor, Mich.; Alvah H. Doty, New York; Iradan Dyer, New Orleans; J. P. Crozier Griffith, Philadelphia; Martin B. James, New York; Thomas S. Latimer, Baltimore; William Osler, Baltimore; William Walluck Park, New York; P. Gervais Robinson, St. Louis; Wm. Francis Robinson, Chicago; George M. Sternberg, Washington; James Stewart, Montreal; Wm. Sydney Thayers, Baltimore; Wm. H. Welch, Baltimore; Wm. M. Welch, Philadelphia; Hamilton Atchison, West Galveston, Texas; James C. Wilson, Philadelphia. The infectious diseases are considered in this volume, and as the greatest advances have been made in this class of cases, it represents in its nine hundred and fifty pages much of the results of modern bacteriological investigations. No special general article appears, but in each disease where the cause is known a detailed account appears in regard to the bacteriology or parasitology. The article on diphtheria represents our present knowledge of all relating to the Klebs Loeffler bacillus from its discovery by Klebs in 1883 to the most recent points in regard to antitoxin. The characteristics of the bacillus when cultured on various media, collection of blood serum, preparing cultures, the microscopical examination of the exudate, and cultures for diagnosis, etc., are fully considered. In the first article on malaria there is much interesting reading, there are one hundred and fifty-four pages; a condensed review is given of the history of this disease and its parasitology. Laveran's discovery of the plasmodium malariæ is fully described, and the confirmation of his discoveries by others, its zoological position, the methods of investigation and general morphology and biology are detailed and illustrated. Then follows a section on classification, in which it is concluded that three varieties exist, that of quartan fever, tertian and aestivo autumnal; the latter group, it is admitted, may comprise varieties which will hereafter be satisfactorily differentiated from each other. The differential diagnosis of the varieties, the internal structures of the parasite, phagocytism, pathogenesis, similar haematozoa in the lower animals are the titles of other sections, then follow: etiology, pathological anatomy, symptoms, diagnosis and treatment. The subject of treatment in all the articles is especially full and detailed, and constitutes a prominent and useful feature of this work, and one that will commend it as a guide and work of reference for the every day wants of the general practitioner. This is especially apparent in the articles on Typhoid, Diphtheria, Syphilis and Tuberculosis.

The index is very full, enhancing its value to the busy consultant; it is well printed and bound, the style being similar to Dennis' System of Surgery, by the same publishers. The various articles being written by different authors, each bears the impress of its writer, who in each instance is regarded as being specially qualified by experience and investigations for giving a thoroughly

comprehensive elucidation of the disease under consideration. No one who desires a system of medicine can make a mistake in purchasing this latest representative, as it portrays, as far as the subjects considered in this volume are concerned, in a clear and concise manner our complete knowledge of these diseases as it exists to-day and from an American standpoint.

The Diseases of the Stomach.—By Dr. C. A. Ewald, Extraordinary Professor of Medicine at the University of Berlin. Director of the Augusta Horjetatte. Translated and edited with numerous additions from the third German edition by Morris Manges, A.M., M.D., assistant visiting physician to Mount Sinai Hospital; Lecturer on General Medicine at the New York Polyclinic. Second revised edition. D. Appleton & Co., New York, 1897. Geo. N. Morang, publisher's agent, Temple Building, St. James St., Montreal.

Ewald's Diseases of the Stomach has been, since the first edition appeared in 1892, the highest authority available to practitioners for reference and study. The present edition is the second English translation from the third German edition, which was published in 1893. Dr. Manges has, besides giving a true translation of Dr. Ewald's book, endeavored to add all that is new up to the present year, and some thirteen cuts exist which are not in the German edition.

Ewald in the last edition found it necessary but seldom to alter the opinions held in his first editions, and warns the reader not to be too dependent on the results to be obtained by the modern chemical methods, but rather to take into complete consideration all the symptoms and all the diagnostic resources available.

There are six hundred pages, forty-six illustrations, and the subject matter is included in twelve chapters, and discussing the subject in the following order: Methods of examination, stenosis and strictures, the various forms of gastritis, dilatation, cancer, ulcer, the neurosis and the correlation of the diseases of the stomach to those of other organs.

The stomach tube, which has been the means of introducing the new era in investigating diseases of the stomach, it is stated, was first used in 1829, and in 1659 a stomach brush was used which has its modern representative in Türck's gyromele which is here fully described. The first chapter is one of the most interesting in the book, dealing with all the methods of examination. Here is considered the method of using the stomach tube, aspiration and expression, test meals, examination of stomach contents, tests for acidity, determination of the digestion of albumen and starch. One is struck by the amount of new information that has been added by the translators, and without which the work would not maintain its position as representing our latest knowledge. Although many of the paragraphs inserted are simply confirmatory of the text, yet many new practical points and correction of old views are here recorded, such as the inutility of the potassium iodide test for demonstrating absorption and the views now obtaining that the stomach is rather a receptacle for food than a region where absorption is active, and that this power of the stomach has hitherto been much overestimated. The salol tests are stated by the translators to be too unreli-

able in determining the motility of the stomach, and Leube's is the best method.

Dehio's method for determining the size of the stomach is the best means for ascertaining the tone of the muscular fibres, and he also criticizes Einhorn's gastograph and Hemmeter's intra gastric bags.

The physical methods of examination are then described, palpation, distension of stomach with gas, air and water. Einhorn's gastrodiaphane is described, and the method of using it explained. The technique of the treatment of stomach diseases is then discussed, and the methods of syphonage of the stomach, the translator describing among new devices Hemmeter's recurrent tube and Türck's pneumatic force irrigator.

In each special disease the methods of diagnosis are minutely described.

The book is a mine of knowledge on everything that pertains to morbid conditions of the stomach and their management, and easily takes the first place as our standard work of reference in diseases of this viscus. It represents the life work of one who his more than any other in this field made the medical world his debtor, and the translator has ably supplemented this work by the valuable compilation of recent advances added.

The Year-Book of Treatment for 1897.—A critical review for Practitioners of Medicine and Surgery. Crown octavo, 488 pages. Cloth, $1.50. Philadelphia and New York. Lea Brothers & Co., 1897.

This Year-Book is one of the most useful of the many annual reviews which are now available to the general practitioner. It is supplied at a very low price, and contains an epitome of all that has been found during the year to be improvements and additions to our methods of treating disease in all the various branches of medicine, including medicine, surgery, obstetrics, gynæcology, diseases of the skin, eye, ear, nose and throat, tropical diseases, public health and hygiene, and medical jurisprudence, and at the end is a summary of the therapeutics for the year 1896.

The contributors are mostly British, twenty-six in number, each in charge of a department. Among the list are the names of Sydney Copland, A. E. Garrod, M. Hannaford Jones, Reginald Harrison, Malcolm Morris, W. J. Walsham, W. Hale White, Sydney Phillips, St. Clair Thompson. All able to write authoritatively on the subjects of their department. The review of the year's advances is condensed and critical, giving the author's personal views on each new method, drug, or therapeutic suggestion. The book is thoroughly classified and arranged for ready reference with a full index. The four hundred and eighty pages teem with valuable extracts and suggestions for treatment from the most reputable writers throughout the world. We find in this volume a very interesting and full résumé of the Schott treatment of heart disease by baths, saline and effervescing and special exercises. The methods, rationale, criticisms, and general considerations of the Nauheim treatment makes very instructive reading. In the department of diseases of the lungs is a full résumé of the progress of the serum treatment of tuberculosis after Maragliano's method. Also a review of the surgical

treatment of tuberculosis. On the treatment of nervous and mental diseases, we find a full résumé of lumbar puncture and the use of animal extracts in insanity. In the next section we find considered operation on typhoid fever with perforation, lavage, the treatment of Glenard's disease by abdominal section. Further on, strontium lactate in nephritis, uranium nitrate in diabetes mellitus, how to distinguish diabetic from non-diabetic blood, the treatment of uric acid concretions, dangers and secondary effects of antitoxin, Pasteurization and modification of milk, local anæsthesia according to Schleich, new chloroform inhaler illustrated, surgery of the thyroid, surgical treatment of tubercular glands, treatment of gonorrhœa by argonin, potassium permanganate and formalin, intra-uterine photography, symphysiotomy, streptococcus antitoxin in the treatment of puerperal septicæmia, and hundreds of other references, which makes the book invaluable to one who desires to keep apace with the advance which is being made in all departments of therapeutics.

Lectures on Appendicitis and Notes on other Subjects.—By Robt. T. Morris, A.M., M.D. Second edition, 169 pages, 1897. G. P. Putnam's Sons, New York.

The first four chapters of this book are taken up with a comprehensive discussion of Appendicitis under the following headings: "Preparation of Surgeon and Patient," "The Appendix Vermiformis Ceci," "Appendicitis" and "Surgical Treatment of Appendicitis."

In the opening chapter are many valuable hints with regard to surgical technique which show much careful thought and observation. The second chapter discusses the appendix and contents, while the third deals very fully with the pathological condition of the appendix, and is profusely illustrated with excellent cuts. After discussing carefully the surgical treatment, he reviews carefully a hundred cases, criticizing the cases in which death occurred, and drawing valuable lessons from them.

The fifth and last chapter is composed of a collection of notes on various surgical subjects principally pertaining to abdominal work. Most of these are out of the beaten track, and show much thought followed up by experimentation on the lower animals where practicable. This work is of much value to both practitioner and student.

Assays and Addresses.—By Sir J. Russell Reynolds, Bart., F.R.S., M.D. Lond., LL.D. Edin., LL.D. Aberd. President of the Royal College of Physicians of London, President of the British Medical Association, Physician to Her Majesty's Household, and Consulting Physician to University College Hospital. MacMillan & Co., Limited, London. The MacMillan Co., New York, 1896. Agents: The Copp Clark Co., Ltd., Publishers, 9 Front St. West, Toronto.

These essays and addresses are published in a neat volume of 307 pages, by his wife, Frances Russell Reynolds. They are only representations of a larger number of papers which Sir Russell Reynolds intended publishing when they were more complete. A sketch of his life is given, written by his private secretary, which is well written and of exceeding interest, illustrating the upward pro-

gress of a man endowed to begin with by uncommon natural ability, and by industry and concentrated attention mounting from pinnacle to pinnacle until every honor that his imagination could aspire to in a medical career had been conferred upon him. Then follow thirteen lectures and addresses delivered at various times between 1858 and 1895; during the latter year he was President of the British Medical Association, and his presidential address on the organized progress of medicine is a masterly effort. Other papers of interest are: The Facts and Laws of Life, the Types of Students, the Definition and Nomenclature of Disease, Specialism in Medicine, the Harveian Oration 1884, the Value of Competition, Sanitary Science and Preventive Medicine, etc.

These themes are all ably discussed, and contain the results of years of thought and research, and the views and experience of one who for nearly half a century was a leader of medical thought.

Appearing in less than a year since his death, these valuable essays should be widely circulated; such a result will keep his memory fresh among all who honor true greatness, will be a small token of respect for his name, and the possessor of the book will have a work rich with the choicest gems of thought and wisdom.

PUBLISHERS' DEPARTMENT.

"Is there danger of the plague being imported to this country?" "Yes," Prof. Victor C. Vaughan answers in the May number of *Appletons' Popular Science Monthly*, "there is danger; but this, being foreseen, may be easily avoided." No effective treatment of the disease, however, which is a septicæmia, is known. Prof. Vaughan's whole article is a valuable contribution to the knowledge which the public is seeking of this fearful disease.

EX-PRESIDENT HARRISON'S SCCUESS AS AN AUTHOR.

Ex-President Harrison will conclude his series of papers on life in the White House in the May *Ladies' Home Journal*, and take a respite from his literary labors which have so profitably and congenially occupied him for more than a year. General Harrison is the first President to show the public through the White House, "upstairs, downstairs," etc., and to detail the President's daily routine, and the social and domestic phases of life in the Executive Mansion. He is also the first Chief Magistrate to crystallize his knowledge and the experience gained as Chief Executive in a series of lucid, instructive and interesting magazine articles on the functions of our government, such as were "This Country of Ours" papers.

SANMETTO IN BRIGHT'S DISEASE.

I have been using Sanmetto in my practice for two years or more, and am nearly always well pleased with its effects. Have had splendid success with it in Bright's disease, sometimes using it alone and at other times in connection with digitalis.

SHELL, ALA. H. GREEN, M.D.

DIABETES WITH PAINFUL MICTURITION.

It is with the greatest pleasure that I report the good results from the use of Sanmetto upon myself. I have been a sufferer for five months from diabetes, with great pain just before passing my water. From the use of two and one-half bottles of Sanmetto, the pain was removed and the inflammation checked. I have prescribed Sanmetto several times since, and shall continue to do so.

HILL, N.H. J. N. STOREY, M.D.

A PHYSICIAN AND HIS PATIENT IMPOSED UPON BY A DRUGGIST'S SUBSTITUTION.

I gave Sanmetto to Mrs. H., aged twenty-eight years, for frequent micturition and tenderness in region of kidneys. Patient was compelled to rise four or five times during the night, passing nearly a half gallon of urine during this time. After using a bottle of Sanmetto she was greatly relieved, but instead of getting more Sanmetto as I directed, patient was induced by her druggist to get a preparation of Palmetto; this had no appreciable effect whatever. Patient is now using Sanmetto, and is not likely to be imposed upon again.

CROSS, OKLA. T. W. OCELLUS HARTSHORNE, M.D.

BLOND AND BRUNETTE IN EUROPE.

In a rough way, the extremes in the distribution of the blond and brunette varieties within the population of Europe are as follows: At the northern limit we find that about one-third of the people are pure blondes, characterized by light hair and blue eyes; about one-tenth are pure brunettes; the remainder, over one-half, being mixed with a tendency to blondness. On the other hand, in the south of Italy, the pure blondes have almost entirely disappeared. About one-half the population are pure brunettes, with deep brown or black hair, and eyes of a corresponding shade; and the other half is mixed, with a tendency to brunetteness. The half-and-half line seems to lie about where it ought, not far from the Alps. Yet it does not follow the parallels of latitude. A circle, described with Copenhagen as a center, sweeping around near Vienna, across the middle of Switzerland, thence up through the British Isles, might serve roughly to indicate such a boundary. North of it blondness prevails, although always with an appreciable percentage of pure brunettes. South of it brunetteness finally dominates quite exclusively. It should not fail of note that toward the east there is a slight though constant increase of brunetteness along the same degrees of latitude, and that the western portion of the British Isles is a northern outpost of the brunette type.

Thus we see at a glance that there is a gradual though constant increase in the proportion of dark eyes and hair from north to south. There are none of those sharp contrasts which appeared upon our map showing the distribution of the long and broad heads in Europe. On that map the extremes were separated by only half a continent in either direction from the Alps; whereas in this case the change from dark to light covers the whole extent of the continent. It is as if a blending wash had been spread over the map of head form, toning down all its sharp racial division lines. —Prof. WM. Z. RIPLEY in *Appletons' Popular Science Monthly* for April.

A DESERVED EUROPEAN INDORSEMENT.

Health, a weekly journal of medicine and surgery, diet and sanitary science, London, Eng., says editorially:—"We have received from The Antikamnia Chemical Company, St. Louis, Mo., U.S.A., a brochure dealing with the action, history, indications and administration of their preparation, antikamnia. There is no remedy so useful and attended with such satisfactory results in the treatment of melancholia with vaso-motor disturbances, anæmic headaches, emotional distress, and active delusions of apprehension and distrust; and it also increases the appetite and arterial tension, and promotes digestion, as well as being particularly serviceable in relieving the persistent headache which accompanies nervousness.

"In neurasthenia, in mild hysteroid affections, in the various neuralgias, particularly ovarian, and in the nervous tremor so often seen in confirmed drunkards, it is of peculiar service. In angina pectoris this drug has a beneficial action; it relieves the pain and distress in many cases, even when amyl nitrite and nitro-glycerine have failed entirely. In pseudo-angina frequently observed in hysterical women, its action is all that can be desired.

"To patients who suffer from irritable or weak heart, needing at times a pain reliever, it can be taken without untoward after-effects, knowing that the heart is being fortified. It increases the elimination of urea and purifies the blood without increasing the destructive tissue metamorphosis. It lessens coma and loud delirium by contracting the capillaries of the brain. In delirium tremens, it relieves when there is great restlessness with insomnia, as well as general lowering of the nervous power."

THE ARENA.

EDITED BY JOHN CLARK RIDPATH, LL.D., APRIL, 1897.

The Problem of Municipal Reform, Hon. H. S. Pingree, Governor of Michigan and Mayor of Detroit, Michigan. The Doorway of Reforms, Eltweed Pomeroy. Italian Immigrants in Boston, Frederick A. Bushée. The Priesthood of Art, Stinson Jarvis. The Catholic Question in Canada: 1. A Struggle for Freedom, F. Clement Brown, M.A.; 2. The Index Expurgatorius in Quebec, Geo. Stewart, D.C.L. Lincoln and the Matson Negroes, Jesse W. Weik. Abraham Lincoln, a poem, Franc Remington. The Nina Arcadia, Gertrude G. de Aguirre. Co-education in Secondary Schools and Colleges, May Wright Sewall, Ex-President of National Council of Women, etc. The Scripture-Errancy Conflict, Benjamin F. Burnham. The Past and the Future of the American Negro, D. W. Culp, A.M., M.D. Claims of Spiritualism upon Christianity, Rev. T. E. Allen. Development of Naturalization Laws. Clifford S. Walton of the Washington Bar. The Man in History, John Clark Ridpath. The Urgent Need of our Pacific Coast States, Edward Berwick. The Editor's Evening. Book Reviews: Once more "The Alhambra"; A new book on Darwin; Mr. Bryan's Book.

AN ACROSTIC—LA GRIPPE.

A-ll the nerves gone on a bender,
N-ot an organ is exempt,
T-eeth and scalp and muscles tender,
I-cy chills, the bones pre-empt;
K-aleidoscopic are the symptoms legion,
A-s they over-run the system,
M-aking life a weary region,
N-o one able to resist them.
I-s there nothing that will cure?
A-ntikamnia will, I'm sure!

ATLANTA, GA. FREDERICK B. SUTTON, M.D.

CANADA
MEDICAL RECORD

MAY, 1897.

Original Communications.

NOTES ON VARICOCELE CIRSOCELE; ITS PATHOLOGY, CLINICAL HISTORY AND TREATMENT.*

By THOMAS H. MANLEY, M.D, NEW YORK.

Professor of Surgery at New York School of Clinical Medicine.

Something more than a year ago, it was my privilege to submit here a few brief notes on the pathology and therapy of hydrocele, in the male and female.

It will be my purpose on this occasion to call your attention to another important group of lesions involving the inguino-scrotal areas, which have their seat in the vascular elements of the different vessels of the testis and the parenchymatous substance of the gland itself.

In the beginning, it is important to note, that the vascular apparatus of the spermatic cord presents several unique features, in order to adapt itself to the demands of the economy, in the full exercise of the function of generation.

For example, we will find that the parenchyma of the testicle is supplied by one artery only, while the number of emulgent veins comprising the leash of vessels, known as the pampiniform plexus, is very large.

Nature has not only provided a numerous supply of return vessels, but in order to fulfil necessary requirements, in periods of excessive activity and to overcome the influence of gravity, has endowed them with marked distensile properties, and unusually thick investments; for under the microscope we will at once observe that the muscularis is as thick as in the arteries anywhere in the body, of the same calibre.

* Read before New York Celtic Med. Society, April 8, 1897.

We have evidence that the spermatic cord conveys numerous filaments from the sympathetic system of nerves. These are lodged in the loose, myxomatous tissues, which constitute the interstitial frame-work of the cord.

Everyone who has had much experience in hernial operations has noted the common tendency of the fine thread-like element of the cord to pass down in the most diverse directions, by the peritoneum, and beome so intimately blended with its areolar investment as to be often isolated with difficulty.

If we critically examine the anatomical elements of the cord, it will be observed that they are often, in places very intimately fused together, the sperm-duct, the blood vessels, nerves and lymphatics. As we approach the inguinal canal, where the internal veins have nearly all converged, they become larger, and less characteristic, and the tubular structures of the cord are more independent and readily separated.

Cirsocele or varix of the internal spermatic veins presents pathological changes and clinical features quite unique and characteristic.

In advanced or aggravated cases, there is marked atrophy of the cremaster muscles, with a descent and dragging of the testis. Owing to recurring phlebitis and periphlebitis, the spermatic tributaries undergo great thickening, become tortuous, spiral and sclerosed; the overlying nerves and lymphatics undergo severe tension and compression; the nutrition of the testicle is interfered with and under many circumstances an impeded spermatic circulation is the initial step to several consecutive and ulterior changes in this organ.

As internal spermatic veins are in no manner connected with the scrotal vessels, the dartos or other overlying parts are not involved. There are no atrophic dangers as seen in saphenous, vulvar, or hemorrhoidal varix. On the contrary, there is a true hypertrophy of all the cutaneous elements, especially in the elastic felting of the corium, which now elongates and thickens to support the enlarged pendulous testis, deficient in muscular support.

It will be generally observed, that varicocele is unilateral and is an infirmity which becomes manifested at an early date and after sexual activity commences, and hence the reason why it must be regarded as a disease of early life.

CLINICAL MANIFESTATIONS.

Roddick observes that "the mental condition of many of those suffering from varicocele is peculiar. Its presence has often a most depressing influence and I know of few affections in which the attention of the person is concentrated upon his malady as this." (*Can. Med. Journal, June*, 1884.) This short paragraph very laconically gives us the clinical picture. As the author well observes the constant weight of the scrotum and the perpetual aching pains up along the cord and down the thighs, tend to direct his thoughts to his ailments, and his life is in consequence rendered miserable.

This class *par excellence* provides rich game for the charlatan and the quack, who picture to him in their trashy tracts the evils in store for him if he neglect their infallible remedies. As a matter of fact, however, their sufferings are real and of a dual character. First, from the effects on the local parts and secondly through the effects of the reflexes on the brain. Psychical disturbances are sometimes most accentuated and distressing. Howe has recorded the case of a man with cirsocele, whose mind was rapidly giving way under the morbid influence of the disease; but who in twenty months after operation and care, was entirely restored to mental vigor. He said: "We have evidence of great good having been done in these cases by operation, not only in curing the varicocele, but restoring a mental state which bordered on insanity."

It should not be over-looked, that in all these cases, there is a sympathetic irritation of the sound testicle, and the functions of generation are most decidedly impaired. There is a certain degree of impotence present. Azoo-spermatorrhœa is not uncommon, and the patient will sometimes complain of emissions with very imperfect erections.

If we examine the prostate and the seminal vesicles in these cases, we will find a marked tenderness. The urethra participates in this excessive sensitiveness, especially in the membranous portion, and with few exceptions complaint is made that the force or bladder-expulsion is markedly weakened.

It has long been noted that the symptoms emanating from a varicocele, or enlarged spermatic veins, bear but little

relation to the size of the varix ; or in other words that one may suffer as much or more, from a small as a large mass. This is a clinical feature peculiar to enlarged veins in any situation, because pain only attends their presence or evolution, in the presence of inflammation or phlebitis.

It therefore follows that we should bestow as much attention on the minor cases, as those of massive proportions. And further if we can only see those early, before the larger tributaries are involved, the infirmity may be cured before complicating elements present themselves.

TREATMENT, PALLIATIVE AND RADICAL.

In the greater portion of simple, uncomplicated varicocele, the source of no inconvenience, the simplest and safest therapy is the best to be approved. Abstinence from excessive venery, masturbation, too long standing, or violent athletic exercise should be observed. Daily bathing of the scrotum, with an elastic scrotal supporter, removed every night, will suffice in most cases.

It is only when the enlarged veins give rise to pathological symptoms, to marked diminution of virility, to pained heat, or a sense of weight in the scrotum, that the radical measures of treatment of a surgical order are to be considered.

And in this respect, it may be laid down as a rule, that the operation or measures of treatment which entails least mutilation or division of the tissues is the better. In my own experience, excision of the redundant scrotum is very seldom called for. With cocaine locally applied we can usually painlessly perform the necessary manipnlations. Needle-electrolysis, ligature, or excision of the vessels is not difficult. Few if any have to lay up during treatment.

CONCLUSIONS.

1. Varicocele or phlebectasia of the spermatic cord is an infirmity of early life ; its evolution being contemporaneous with the advent of sexual activity.

2. Pathologically, while the vescular inertia, dilatation, thinning, sclerosis, or thrombosis, are quite indentical with varix in other situations, in this instance, an organ intimately associated with vital processes with procreation and individuality is involved, we have severe local symptoms with

reflex disturbances made manifest through psychic derangement.

3. Spermatorrhœa, azoo-spermia, limited impotence, urethral irritation and vesical incompetence are not unusual concomitant conditions, and in all protracted cases, the testicles are consecutively the seat of organic changes.

4. The pathologic mutations which give rise to the most concentrated distress, are a localized phlebitis, periphlebitis, tension and pressure on the medullary and sympathetic nerves, which are sometimes as pronounced in the incipient as in voluminous varicocele.

5. As this condition is not uncommonly associated with rupture, present or impending, the relief of this is something of the highest import, even by operative procedures, as a truss only aggravates the condition, if it does not sometimes induce it. Bathing, massage, electrolysis and support should be always thoroughly tried, as curative agents first; then, if pain still persist, ligation, excision, or divulsion under cocaine, is prompt and effective as a radical cure. In all but unusual cases the patient remains at his usual occupation

SHOCK AFTER ABDOMINAL OPERATIONS AND HOW TO PREVENT IT.*

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. ENGLAND.

Fellow of the American Gynecological Society; Surgeon-in-Chief of the Samaritan Hospital for Women; Gynecologist to the Montreal Dispensary and to the Western Hospital; Professor of Clinical Gynecology in Bishop's University, Montreal.

The inspiration to write this paper was derived from a remark made at our last meeting by one of our most distinguished surgical members that we did not know exactly what shock is. As my own views as to the nature of shock have assumed a very definite form during the last year or two, I now place them on record with the hope that they may lead to a better general understanding as to what shock really is, and how best to prevent it. If by so doing my own or some other operator's death-rate should be reduced by even one per cent., I would feel quite satisfied that my labor had not been in vain.

As I mentioned at the meeting referred to, the word

*Read before the Medico-Chirurgical Society of Montreal, February 26, 1897.

shock has long been employed to cover a multitude of sins. This is especially the case in abdominal surgery, and as most of my experience has been obtained in this department of our work, my remarks will especially apply to shock after abdominal operations; although what is true of them is true also, in a lesser degree, of the surgery of the thorax, brain or limbs.

Properly speaking the term shock should be applied only to a vivid impression or powerful irritation of the great sympathetic nerve leading to a forcible contraction of the arterioles of the surface and throughout the body, including the cerebro-spinal system, and a corresponding rush of blood into the great venous trunks, especially in the abdomen, which we know are capable of holding all the blood in the body.

As an instance of non-surgical shock, might be mentioned the effect of some horrible sight upon the great sympathetic nerve in women, in whom this nerve is more highly developed than in men. The arteries of the skin contract and it becomes pale, and the body surface becomes cold; the arteries of the brain contract and for want of blood it ceases to act, the woman becomes unconscious and swoons. And yet nothing has touched her except the rays of light from the horrible object or ghastly sight which have fallen upon her retinæ.

As an instance of surgical shock might be mentioned a moderate blow upon the testicles or abdomen, which is followed by deathly pallor and insensibility to painful or other impressions. If the abdomen were to be opened just at this time the arteries would be found partially emptied, although the patient has not lost a drop of blood; the latter having poured into the large veins. At the moment of tying or cutting any large trunk of the sympathetic, such as happens in the removal of the ovaries or testicles, this impression of the whole sympathetic takes place to some extent as those who are watching the pulse have often remarked to me. The pulse grows fast and the face becomes pale, but only for a moment, the spasm of the arterioles being quickly followed by a relaxation or paralysis, leading to flushing and slowing of the heart's action. Another instance in which the term

shock can be less correctly applied is when a very large quantity of fluid or a very large tumor is suddenly removed from the abdomen, the support which the abdominal veins have in the course of months or years gradually grown accustomed to is thus taken from them. There is a rush of blood into these unsupported veins, and the same phenomena are observed as when the great sympathetic is irritated. And yet this is not really shock, because it is not a nervous condition but more truly a hemorrhage. This variety of shock, which has killed many a patient in former times, when large tumors were plentiful, can be easily prevented in several ways; first by removing gradually the pressure to which the veins have been accustomed, by emptying very large cysts when possible on the day previous to the operation, by tapping with a small trochar, as I did on one occasion in an old lady from whom I extirpated two large carcinomatous ovaries weighing five or six pounds each, and who was besides greatly distended with ascitic fluid; two buckets of water were removed in two hours without any inconvenience, and next day the operation was performed absolutely without shock, the patient speedily recovering from the operation. When the tumor is solid and cannot be lessened in size by tapping, there are two other means of preventing this form of shock, or hemorrhage into the veins. One is by performing these abdominal operations with the patient in the Trendelenburg posture, so that the blood from the limbs and even from the abdominal veins, may flow by gravity towards the heart and brain; and the other by filling the abdominal cavity, immediately on removing the tumor, with normal salt solution, which not only supports the thin-walled veins, but also, by osmosis being absorbed, so fills the vascular system that the abdominal veins may be filled with impunity. Still two other methods have been employed in my cases with advantage: one being to have an assistant trained to transfer normal salt solution, one teaspoonful to the pint, directly into the median basilic vein; the other, which I employ almost constantly, to gently inject a quart of normal salt solution into the rectum with a fountain syringe, hung only a foot or two higher than the rectum, so that, entering slowly, the liquid may be tolerated and absorbed, which would not be the case if it were injected quickly.

As a preventive measure, it is, I think, important to send our patient onto the table with the vascular system well filled by inducing them to drink large quantities of water *alias* beef tea and chicken broth, on the day or two before the operation, so that the inevitable loss of blood will not be too greatly missed. This brings me to the point where I wish to enforce my deliberate conviction that the majority of deaths from so-called shock are really due to hemorrhage; either before the operation, as in ruptured tubal pregnancy; during the operation, as in removal of segments of intestine, and of tumors bound down and surrounded by many and vascular adhesions; or hemorrhage after the operation, owing to slipping of ligatures off their stumps, or the slipping of the artery off of the ligature, by retraction. I have had one or more deaths from each of these causes, and it is with regret, not however unmingled with hope, that I confess that they were all preventable, and that they will probably never occur again in any patient of mine. If we know anatomy we can find the arteries and tie them before cutting them. In my last case of total abdominal hysterectomy for cancer, the two ovarian, the two uterine and the two round ligaments, which sometimes bleed a good deal, were felt for and tied individually before cutting the broad ligaments, so that the uterus was removed without the loss of as much as four ounces of blood, and there was a total absence of shock, the pulse being just as good at the end of the operation as it was at the beginning. The same method should, I believe, be applied to all surgical operations involving the cutting of arteries, to tie all the principal sources of blood supply before cutting; if this were done, many of the most bloody operations would become almost bloodless, and death from so-called shock would become almost a surgical curiosity.

Some physiologists may here raise the objection that deaths from operative shock are known to have occurred where the quantity of blood lost was not more than is frequently lost with impunity from non-operative hemorrhages. A woman, for instance, may lose three quarts of blood in three weeks from a bleeding fibroid every month for several years, and is still able to go around and attend to her duties; and yet at the operation for removal of the tumor and uterus

she may lose exactly the same quantity of blood in five minutes, causing her death upon the table. Although the physiologist may tell us that she has died from shock, she has really died from hemorrhage. With the same loss of blood the patient's life may be lost or not according to how long a time the hemorrhage is spread over; in the former case she is losing only nine and a half drops in five minutes, a quantity which she can easily replace, while during the operation the whole three quarts may be lost so quickly that the arterial pressure falls so low that no blood is forced into the coronary arteries, and the heart muscle stops for want of food. This is why the heart will not beat when there is only a small quantity of very rich blood in the arterial system; and why it will beat indefinitely if the arteries be full of the very poorest quality of watery blood. Teachers of physiology do not perhaps lay sufficient stress upon this fact when teaching the functions of the heart; if they did there would probably be fewer deaths from what is often called shock. Many patients go on the operating table with almost empty coronary arteries, who might have them filled beforehand by the means already mentioned; while other patients who die during the operation, or soon afterward from empty coronary arteries, might be saved by filling the abdomen or even injecting the veins with normal warm salt solution. It is of great importance in abdominal operations that the intestines be thoroughly emptied in order that they may be out of our road while operating, and also that it may not be necessary, owing to their distension, to turn them out of their natural cavity; but in emptying the intestines with cathartics, especially with saline solutions of greater density than the blood, we must take care at the same time not to empty the coronary arteries of the heart. I have dwelt at some length upon the circulatory changes which lead to so-called shock because I believe that there is in certain quarters too great a tendency to attribute most of the ills that flesh is heir to to disorders of the nervous system. With but few exceptions the nerves are never any better than what their blood supply makes them; and so the beautiful ganglia of the heart and the still more wonderful structure of the brain are absolutely useless without a constant supply of blood. There is another cause of shock

which is not always sufficiently recognized, namely, prolonged anæsthesia. On the one hand we know that shock is a depression of the vital functions, while on the other we have the original investigations of Dr. Gordon Campbell, a distinguished member of this Society, which prove that the vital functions begin to fail from the first moment that anæsthesia begins. By the careful analysis of urine drawn at the end of each hour he has shown that the quantity of urea diminishes, which is just exactly what we might expect; for life is merely combustion, and like every other fire goes out when its supply of oxygen is shut off or is replaced by carbonic dioxyde. Can any one say that this does not occur with the Clover inhaler and, indeed, to some extent with any inhaler? How can it be otherwise when the patient receives but two breaths of air in every three, and not good air at that; not fresh country air or even deteriorated city air; not even the bad air of the hospital, but the worst air of all, that of a crowded operating-room; two inspirations of air and of ether, and this during several hours, sometimes. Is it any wonder that the vital fire burns low and that urea decreases? This, I presume, is inevitable, unless some anæsthetist genius should devise a plan to provide the patient with a life-sustaining anæsthetic mixture of oxygen and ether. From that moment my objection to the Clover inhaler would cease, for our investigating member will then find, when he analyses the urine, that the uric acid has disappeared and that the urea has increased. Until that time comes it is our duty to cut down the duration of the anæsthesia by every means in our power, saving here a minute and there a minute wherever it can be done without neglecting the minutest details of asepsis and hæmastasis.

When I heard of the low death-rate of Joseph Price and Howard Kelly I lost no time in placing myself under their instruction, and I soon perceived that rapidity of operating played no small part in their success. In the case of the latter, who was surrounded by skilled assistants, every operation being a continuous performance, there being at no time any consecutive five seconds without something being done; and it is evident that ten or twelve hands can do the same work in less time than only two, be they ever so skillful. I have tried to imitate him at the Samaritan Hospital, and for

what measure of success I have had there I wish to tender my gratitude and praise to my faithful assistants, whose only reward has been the experience they have gained. But I wish once more to make my meaning clear that I am advocating speed, not carelessness in operating. How many operations I have seen, my own in former days among the number, where useless conversation distracted the attention of nurses and assistants, by which second after second was lost in handling ligatures and instruments. For my own part I would like, if it were possible, that all in the room except the patient would hold their breaths until the anæsthetic has been removed. How I envy the military discipline which pervades the German operating-rooms, where a single whisper is regarded as the grossest breach of etiquette. How I dread the well-meaning fellow who tells a funny story or relates an interesting case, or tells me how to do the operation; if he realized how much he has to do with death from prolonged anæsthesia he would surely hold his peace.

There is another and most important cause of shock, and because of its effect upon the nervous system it causes true shock, namely, prolonged exposure and handling of the intestines. As I have already hinted, this accident occurred more often formerly than now because we take such infinite pains to have the intestines empty and out of sight· not only must they be empty of solids and liquids, but they must also be free from gas, so that they lie collapsed at the back of the abdomen. When thus prepared, and with the patient in the Trendelenburg posture, they will be near the diaphragm and quite out of sight. This ideal condition of the bowels can only be obtained by careful dieting, careful catharsis and by the free use of strychnine. I learned of the surpassing value of strychnine in abdominal surgery at the San Francisco meeting of the American Medical Association, and now I do not know how I could get along without it. Since I have used it the bowels are rarely seen, and if seen they are never touched or handled, a hot sterilized towel being placed upon them at the beginning of the operation and not removed until the end. We are frequently requested to perform a serious operation on the same day that the patient arrives in from the country, so that the family physician and friends

may get away by the afternoon train, with the knowledge that the dreaded ordeal is over; it need hardly be said that it would be rash to do so; all these cases should be in bed in a public or private hospital at least three days beforehand; otherwise we may impart shock from exposure and handling of the intestines.

One more common cause of shock and I shall have done. During prolonged operations, while the patient is surrounded with towels wrung out of hot antiseptic solutions, there is sometimes great cooling of the body temperature. As has been already said, the body furnace is burning low because not only is the damper closed but the fire is choked with carbonic dioxyde, so that in addition to the wet cloths another serious factor of vital depression is added, namely, the cold sweating which always accompanies carbonic acid gas poisoning. This sweat turns into vapor as does the water spilled upon the patient, and evaporation is always accompanied with loss of heat. Under these conditions there must be, if not genuine shock, at least great lowering of vitality. It can be avoided by covering the patient with a sterilized rubber sheet with an opening in the centre, and upon this the sterilized or antiseptic towels are placed, so that no drop of water gets upon the patient's clothing; and secondly by having zinc pans made the size of the operating table about two inches thick, which are previously filled with hot water, so that the patient's temperature may be kept up. When the water becomes cool during a long operation a few gallons are drawn off from an opening underneath and as much hot water added by an opening on the top, all of course without delaying the operation for a single moment. I made this suggestion about three years ago to my late lamented friend, Professor Fenwick, of Kingston, who at once carried it out, and I saw it in use in his operating-room shortly before his death. The diagnosis between shock, hemorrhage and sepsis is beset with difficulties, because they are so often complicated, one with the other; but this alone would occupy the time allowed for a paper. I might just say that the low temperature and rapid pulse of shock alone take place on the table, and quickly improve when the patient is placed in bed and surrounded with hot bottles. A fast pulse without a low

temperature means hemorrhage ; a fast pulse with a rising temperature generally means sepsis ; if the hemorrhage is going on the pulse will grow softer and more rapid ; in sepsis it will grow stronger, or at least maintain its strength. As a rule the temperature will help us but little, our main reliance being placed upon a careful study of the pulse before and after the operation.

CONCLUSIONS.

To sum up : shock is a powerful irritation of the great sympathetic, causing anæmia of the brain and heart and lowering of temperature.

2d. The same results may be obtained by too much blood being lost during an operation owing to defective hæmastasis.

3d. The same results may be obtained by hemorrhage into the abdominal veins by the sudden removal of large tumors or quantities of ascitic fluid.

4th. Shock is often due to prolonged anæsthesia in a badly-ventilated room. Not a moment should be wasted during anæsthesia.

5th. Depression of vital powers may also be due to prolonged exposure in wet clothing ; the patient should be kept warm and dry.

6th. Anæmia of brain can be prevented by operating in Trendelenburg posture ; anæmia of heart can be prevented by having the arteries well filled before the operation, and by filling the abdomen with normal salt solution during the operation, or by rectal enemas of salt solution after operation.

7th. The administration of strychnine in doses of one-twentieth of a grain for three days before and three days after the operation diminishes danger of shock, partly because it keeps the intestines contracted and thus saves them from being handled ; partly because it stimulates even a badly fed heart to contract.

8th. Important organs, such as the uterus, or kidney, or even large segments of intestines, can be removed almost without shock provided the operation is performed quickly, with little hemorrhage, and without much handling or exposure of the intestines.

250 Bishop Street, Montreal.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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ESTIMATING THE PERCENTAGE OF HEMOGLOBIN.

C. E. Ide, M.D., of Buffalo, N.Y., gives a preliminary report of a simple and accurate method of doing so in *Medicine*, June, 1897.

He speaks of the liability to error in the case of Fleischl and Gowers' hemometer amounting to from 2 to 20 per cent. The specific gravity method he thinks has not received the attention it deserves. One of the most prominent characteristics of the blood is the preserving of the consistency of its specific gravity. It will return to normal shortly after injecting larger quantities of fluid. The specific gravity of venous and arterial blood is about the same, so that the percentage of solid constituents and hemoglobin can be determined from the specific gravity. According to Hammerschlag the percentage varies from 1.057 to 1.062 in the male and from 1.058 to 1.061 in the female.

According to Jones the specific gravity of the blood varies with age and sex; is dimished after eating, increased by exercise, falls slowly during the day, rises during the night, and varies greatly in individuals; "so much so that a specific gravity which is normal for one may be a sign of disease in another."

The relation of hemoglobin to the whole amount of blood is as fourteen to one hundred.

The specific gravity of the blood corresponds more closely with the hemoglobin than with the number of red blood-corpuscles, according to Jones, Hammerschlag, Schmaltz and others. The study of the specific gravity of the blood and its relation to the percentage of hemoglobin was begun about 1839. Since then various observers have given attention to the subject. Those whose results interest us most in the consideration of the subject of this paper are Roy among the earlier observers, and Siegel, Jones, Schmaltz, Sherrington, Hammerschlag, Copeman, Hoch, Schlesinger, Hoppe-Seyler, Busch and Kerr among those who have recently furnished valuable contributions to the subject.

To two medical students, F. C. Busch, B.S., and A. T. Kerr, Jr., B.S., belong the honor of being the first to take up the study of this important subject in this country. This they did in 1894-1895 along with their medical studies.

Several methods have been employed in estimating the specific gravity of the blood. In 1873 Haro estimated the density of unknown specimens of the blood by observing the time which they occupied in passing through a tube of narrow caliber, denser blood passing through more rapidly.

Schmaltz weighed blood in a pycnometer of 0.1 cubic centimeter capacity and definite weight, and calculated the specific gravity of the same by comparing its weight with that of the same amount of water.

Fano in 1882 weighed blood immersed in a solution of gum in water, on the principle that a body when immersed in a fluid will float indifferently in that fluid (neither rising nor sinking) when the specific gravities of the two are equal. The solution of gum was made heavier by adding a denser solution of gum, and lighter by adding water. When the blood-drop floated indifferently in the solution the specific gravity of the solution was taken, and that corresponded to that of the blood. All later methods depended upon the same principle.

Roy, in 1884, on the same principle employed solutions of salts, ranging in specific gravity from 1.035 to 1.075, with a modified hypodermic syringe. The needle of the latter was prolonged upward into the interior of the syringe barrel, so as to be seen through its glass sides. The syringe having been nearly filled with salt solution, a drop of blood was drawn into it. He noted whether it sank or rose in the solution. If it sank a new solution of greater density was used; if it rose one of less density. When a solution was found in which the blood neither rose nor sank this indicated the specific gravity of the blood.

Jones used solutions of glycerol in water ranging in specific gravity from 1.027 to 1.075, differing from each other by .001 specific gravity. Into a glass jar of one drachm capacity he poured one of the solutions, chosen by guess from the appearance of the patient. Into this by means of a glass pipette, drawn out to a point and bent at right angles near the tip, he introduced a drop of blood, impetus being given to it in a horizontal direction. If it sank or rose other solutions were chosen until one was found with the specific gravity of which that of blood agreed. This gave the result.

Landois employed solutions of sodium sulphate ranging in specific gravity from 1.050 to 1.070. This method was modified by Siegel, who covered his solutions by a layer of olive oil to prevent evaporation, and introduced the blood

through this by means of a tube with a rubber cap; and by Dastre, who employed a mixture of chloride of carbon and olive oil, which neither mixes with the blood nor coagulates it.

The last method which I shall record, and which I wish to recommend, is that of Hammerschlag, No series of solutions which must be continually standardized is necessary, and the apparatus required is simple and cheap and can be carried about by every physician. It is as follows: (1) a hydrometer jar; (2) a hydrometer (or urinometer); (3) a pipette of small caliber; (4) a glass rod; (5) some steel pens; (6) a bottle of chloroform; (7) a bottle of benzol; (8) a bottle containing a mixture of the latter two; and (9) some filter paper. The procedure is as follows: The mixture of chloroform and benzol (beginning at the first test with equal parts, for instance) is poured into the hydrometer jar, the finger-tip of the patient is sterilized with a solution of carbolic acid and pricked with one of the pens (from which one of the nibs has been broken), which has been sterilized in a flame. A drop of blood which has been allowed to ooze from the puncture (not squeezed out) is sucked into the pipette and then gently forced into the centre of the mixture and shaken off. To avoid mixing air with the blood-drop all the blood is not to be forced out from the pipette, but a little left in its tip. If the blood-drop sinks the mixture must be made heavier with a little chloroform; if it rises benzol must be added. The mixture must be agitated after each addition of either fluid with the glass rod, to keep the chloroform and benzol well mixed, avoiding the breaking up of the blood-drop. When the drop remains stationary, twirling around but neither rising nor sinking, the specific gravity of the mixture corresponds with that of the blood and is taken with the hydrometer. The same mixture is used indefinitely, the blood being filtered out after each test. The hydrometer jar must be kept absolutely clean, that no fine particles of foreign matter may float in the mixture and adhere to the blood-drop.

The glycerol-water and chloroform-benzol methods give practically the same results, according to Siegel, and Hammerschlag states that there is little difference between the results obtained by using the chloroform-benzol mixture and the pycnometer; but it is readily seen that the former method is much the simplest, and dexterity is soon acquired.

The following table by Hammerschlag is given showing the percentage of hemoglobin which corresponds with the determined specific gravity. Fleischl's instrument was used by him in getting up this table, and hence is not quite correct; the author states that he is endeavoring to construct one that will be more accurate.

Specific gravity.	Hemoglobin.
1.033-1.035	25-30 per cent.
1.035-1.038	30-35 per cent.
1.038-1.040	35-40 per cent.
1.040-1.045	40-45 per cent.
1.045-1.048	45-55 per cent.
1.048-1.050	55-65 per cent.
1.050-1.053	65-70 per cent.
1.053-1.055	70-75 per cent.
1.055-1.057	75-85 per cent.
1.057-1.060	85-95 per cent.

According to Hammerschlag this table holds good for anemia, chlorosis, malignant tumors, and tuberculosis. In interstitial nephritis the specific gravity is relatively lower than the percentage of hemoglobin. In fever, again, it is relatively lower, rising after defervescence. In disturbances of the circulation, even when there is edema, the specific gravity is generally normal.

Jones states that the specific gravity is frequently above the normal in the post-epileptic state; also that the specific gravity in syphilis is low. I have found it up to the normal in some cases of this disease.

In Busch and Kerr's series there was a case of splenic leukemia in which the specific gravity was 1.052. The hemoglobin by Fleischl's hemometer was 40 per cent., by Gowers' 68 per cent., and by specific-gravity method about 68 per cent.

Busch and Kerr studied systematically one hundred and fifty cases, at the same time determining the amount of hemoglobin with Fleischl's and Gowers' instruments. Their cases embraced a wide range of diseases, and hemoglobin percentages varying between 12 and 110. In their researches the results obtained by the Fleischl method differed from those by the specific-gravity method by from 5 to 20 per cent. The readings were higher by the specific-gravity method than by the Fleischl.

The readings by Gowers' apparatus differed from those by Fleischl's by from 5 to 20 per cent. As a general rule they were higher with Gowers' than with Fleischl's, but not as high as with the specific-gravity method. The Gowers' readings differed from the specific-gravity by from 5 to 20 per cent., the average difference being higher than with Fleischl's.

In one-half of the cases the hemoglobin as determined from the specific gravity corresponds quite well with that by the Fleischl instrument. This correspondence is *fair* between the specific-gravity method and Gowers' in more than one-half of the cases. There is a closer correspondence between the determinations by the specific-gravity and the Gowers' instrument than between those by the Gowers and

the Fleischl. The Fleischl instrument gave relatively lower readings.

In any given series of cases the specific gravity and the hemoglobin percentage as determined by it will vary to an insignificant degree.

From the foregoing we may conclude:

That there is a crying need of a method of determining the percentage of hemoglobin in blood which is within the reach of every physician.

That the methods of Fleischl and Gowers are liable to considerable error.

That Fleischl's hemometer is liable to an error as high as ten per cent.

That Gowers' instrument is liable to an error even greater than that of Fleischl's.

That the percentage of hemoglobin in blood may generally be accurately estimated from the specific gravity as found with Hammerschlag's chloroform-benzol method, for clinical purposes.

That different observers obtain the same results with this method.

That in using this method the necessity of fine discrimination between different tints is obviated.

That the error in technique in employing the specific-gravity method is slight or none at all.

That even if, since Hammerschlag's table is not entirely accurate, we have at present no definite guide for determining the exact amount of hemoglobin as compared with the ascertained specific gravity, we know the average normal specific gravity for males and females, and can determine whether any one specimen of blood contains the normal amount of hemoglobin, and can by further tests determine from day to day whether our treatment is producing an increase of the same.

A VISIT TO BAD NAUHEIM, WITH THE PURPOSE OF INVESTIGATING THE "SCHOTT TREATMENT" FOR CHRONIC HEART DISEASE.

In the May Johns Hopkins Hospital Bulletin, C. N. B. Camac, M.D., first assistant resident physician, contributes a paper giving the results of his investigations at Nauheim, in regard to this treatment, from personal observation. On undertaking to introduce this treatment into the hospital certain questions which they were unable to answer presented themselves, such as:

(1) Is any massage to be employed during or after the bath?

(2) What drugs are to be employed during the treatment, and what drugs are contraindicated ?

(3) Should the baths and exercises be given together; or if separately, which should precede ?

(4) Are stimulants to be administered before or after the bath ?

(5) What should be the diet of the patient?

(6) Are cases of hydrothorax or ascites to be tapped? etc., through quite a list with which it is hardly necessary to weary you.

At Dr. Osler's suggestion, therefore, he visited Nauheim. Nauheim is in the Grand Duchy of Hesse, three-quarters of an hour from Frankfort on the Main. The Bad Nauheim is at the eastern slope of the Johannesburg, the last spur of the Taunus mountains.

It was not until 1834 that we begin to hear of Nauheim as a resort for invalids. It was not until 1860, however, that Dr. Beneke of Marburg considered scientifically the value of the medicated bath treatment. From 1859-1870 several articles by Beneke of Marburg, upon the waters of Nauheim, appear in the Berlin. Klin. Woch. From 1870 to 1890 August and Theodore Schott and J. Groedel were frequent contributors on this subject to the Berlin. Klin. Woch., also to the Deutsch. Med. Zeitung. August Schott died, but his brother Theodore continued the work, and published in 1892 an article in the Lancet which caused little comment.

In 1894 W. Bezley Thorn became an ardent advocate of the bath treatment, and published an article in the Lancet and also a small book in which he described quite fully the baths and exercises. With the appearance of this systematic little book up to the present the treatment has been very popular in England. Nauheim, its waters, and the resistance exercises, have been frequent topics in English and German medical journals. In France and America the treatment has as yet received no very thorough trial. It is interesting to note here the increase in the number of visitors from 1871 to 1895. In 1871 the visitors numbered 5,249; in 1891, 9,244; 1892, 10,272; 1893, 10,384; 1894, 11,681; 1895, 14,136.

Although the season was over when I visited Bad Nauheim, I had the opportunity of seeing the baths through the courtesy of Dr. Hirsch, Dr. Schott's assistant, who showed me over the grounds and described very fully the details of the treatment. It can best be described in Dr. Schott's own words: "The springs of Nauheim may be divided into two classes, those suitable for bathing and those suitable for drinking. Together with other ingredients the bath waters contain from two to three per cent. of sodium chloride, from

two to three per 1000 of calcium chloride, various salts of iron, above all, very large amounts of carbonic acid.

"Coming from the depths of the earth, they have a temperature of 82-95° F. Springing from a depth of 180 metres, supercharged with carbonic acid gas by the pressure to which they are subjected, the waters gush far above the surface; for example, spring No. 12 rises to a height of 56 feet and falls again in white seething masses." This is a most striking condition; so richly charged with carbonic acid are these waters that the reservoir into which they fall has the appearance of a great mass of clouds. "Conveyed directly from the main by means of subterranean pipes, these waters charged with their natural gas are allowed to completely cover the body of the bather. Little bubbles of gas are seen to immediately cover the whole surface of the body; the waters of springs Nos. 7 and 12 escape from a pressure of from 1½ to 2½ atmospheres, and afford a surf bath which compares accurately with the strongest surf bath of sea water."

The first question which arose when this matter came to be scientifically investigated was, how do these baths and exercises act? That they were very efficacious in the relief of chronic cardiac disease had been demonstrated for some years back, but their action had never been investigated. There are several explanations given:

(1) That given by Dr. Schott in the following words: "Physiological research of recent years seems to show that the salts held in solution in water externally applied have no direct action on the system; the light and mobile molecules of the gas, on the other hand, pass rapidly through the skin to the corium with its rich supply of blood. We must look upon the salts held in solution as passing by imbibition through the outermost layer of the epidermis, and so acting on the terminal nerves of the skin as to exert a reflex action on the internal organs. The warm baths act in their own peculiar manner on the organism as a whole; increased tissue change seems to be induced by an increase of the oxygen absorbing power of the cells, and hence follows the sense of the need of rest and sleep as an immediate consequence of the bath, as well as influences speedily brought to bear on the nervous system as a whole. Excessive bathing induces an excitable state of the nervous system, sleeplessness, loss of appetite and consequent loss of strength. The principal changes which ensue in the system and in the function of the special organs are that the heart beats more slowly and strongly, the pulse becomes full and increases in force, and the blood pressure may rise to the extent of 20, 30 mm. of mercury; the breathing becomes regular and quiet, and the capacity of the lungs increased.

"While the patient is in the bath he becomes flushed and a feeling of comfort and warmth ensues which may even rise to one of an agreeable intoxicating character. Almost invariably the excretion of urine is increased; exudates in the body cavities, especially from the peritoneum, pericardium and pleura, are absorbed. This latter action and that on the valves of the heart can only be explained on the theory of reflex action produced by influences acting upon the terminal nerves."

Another explanation is that given by Dr. Bezley Thorn, that there is a dilatation of the muscular arteries and afterwards those of the skin, and thus there is a relief of the heart from backward pressure.

In Lauder-Brunton's massage experiments he demonstrates that more blood flows through the massaged part and that blood pressure at first rises and then falls, and that on the conclusion of massage more blood collects in the massaged part. These experiments were confirmed by Dr. Oliver.* T. Grainger Stewart† concludes that the passive exercises (1) improve the circulation of lymph within the tissues, and (2) bring a larger volume of blood into the muscles. He quotes the conclusion of Ludwig to the effect that the capacity of muscles for blood is equal to the combined capacities of the internal organs and the skin. If therefore this be so and Dr. Lauder-Brunton's experiments be correct, the increased amount of blood in the muscles must indicate a relief of the congestion in the internal organs.

In Dr. Schott's explanation there are two actions:

(1) A cutaneous excitation induced by the mineral and gaseous constituents, and

(2) A more prolonged stimulation of the sensory nerves excited by imbibition into the superficial layer of the corium. The salt producing this excitation is the calcium chloride.

Whatever the explanation of their action may be, two points seem established:

(1) That the apex beat alters its position;

(2) The area of cardiac dulness is diminished. These two facts, especially the first one, were most strikingly obvious in our first cases, and both facts were most forcibly demonstrated to me in the cases which I saw abroad. One can scarcely credit the results published until he has seen for himself these marked changes.

The case reported by Dr. Bowles in the Practitioner for July, 1896, shows a change of 3 cm. in the apex beat before and after a bath of ten minutes' duration, and he says after

* Brit. Med. Jour., June 13, 1896.
† Ibid., Sept. 19, 1896.

his visit to Nauheim, which was made for the purpose of seeing for himself, "that which I thought impossible is shown to be quite possible." This case reported by Dr. Bowles was one of chronic myocarditis, moderate pleural effusion, general anasarca and general enlargement of the heart. The age of the patient was not given. I shall not at this time attempt to report cases, but merely mention this one of Bowles in order to confirm what has been our experience of the effect of the bath upon *the position of the apex beat*, and many other reports confirmatory of this remarkable change are to be found in the literature on this subject.

The diagrams of the cardiac outline made by Dr. Bowles are not quite accurate, but there can be little difference in opinion as to the position of the maximum cardiac impulse.

To quote Dr. Schott again: "The methods of administering the baths are of the greatest importance. It is advisable to begin with a 1 per cent. salt bath containing $\frac{1}{1000}$ of chloride of calcium, freed from gas and at temperatures varying from 92° to 95° F., the bath lasting from six to eight minutes. The course of treatment should be interrupted by frequent intervals of one day. The temperature of the bath should, if possible, be gradually lowered, while the proportion of solids in solution and the duration of the bath are gradually increased. At a later stage it is permissible to proceed to the baths containing carbonic acid. The temperature may then be rapidly lowered, especially if chloride of calcium be added in order to increase the mineral strength of the bath."

The course consists of six baths: the first and the second being simply with salts, calcium chloride and the sodium chloride; the third, fourth, fifth and sixth contain carbonic acid as well as these salts.

The preparation of the baths artificially was taken up especially by W. Bezley Thorn, in London, in 1895, since which time Ewart, Bowles and Broadbent have employed them in London, Moeller in Brussels, and Heinemann in New York. Following the analysis of the Nauheim waters made by the chemist Fresenius of Wiesbaden, the artificial baths may be readily prepared. We have now packages made up at our pharmacy, each containing the proportion of salts for the different strengths of the baths, each package corresponding to 40 gallons of water, which is just about enough to entirely immerse the body. The baths of different strengths are given to appropriate cases.

I have not attempted in this note in any way to speak for or against the treatment nor to report cases. I have thought it best for the present simply to give an outline of the trip to Bad Nauheim, the purpose of which was to see the effects of the treatment and to learn something about it with

the object of trying it in the Hospital here. We have now five cases under treatment, and I trust by keeping careful records of the effects of these baths and exercises that we shall be able to pass judgment upon the weak points as well as the strong points of the method. Only by a careful trial can one place himself in a position either to recommend or to condemn the treatment. I take this opportunity of expressing my appreciation of the patience with which Dr. Schott heard and answered my many questions. I also wish to thank Dr. Heinemann for the instruction in the movements which he so carefully gave me.

In regard to the exercises, which are worthy of a lengthy description, something must be said. They consist of nineteen movements, each movement restrained by the very lightest resistance. This part of the treatment, under the supervision of a physician, is entrusted to the nurses, to whom we have given careful instructions as to the method of carrying it out.

The following are the instructions which are laid down for the nurses in the adminstration of the bath, also the chart showing the observation which should be made.*

Rules for Schott Bath.

(1) Always understand clearly from the doctor the following points: (1) Strength of the bath to be given; (2) temperature of the bath; (3) length of time patient is to remain in the bath. *Note.*—Give the bath in the morning unless otherwise ordered.

(2) Observe carefully the chart and note the points therein called for. (1) Give bath on an empty stomach. (2) Note the time from the moment patient is immersed to that when he is taken out. (3) Allow the patient to make as little exertion as possible; assist him in every way. (4) A sheet may be drawn over the tub, but not around the patient. (5) Be sure the entire body is immersed. (6) Keep the finger on the pulse during the entire time the patient is in the bath.

Danger Signals.—Cyanosis (bluing of the face), dyspnœa (difficult breathing), apnœa (gasping), inappreciable pulse. On the appearance of any of these, take the patient out of the bath immediately, put him to bed and keep him as quiet as possible. Friction while in the bath is not necessary, but if the fingers and toes become bluish the extremities may be rubbed slightly towards the trunk. Friction should be cautiously employed; when the patient is out of the tub rub him to a glow; give him a glass of milk or cup of bouillon and allow him to rest for an hour.

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*These rules are made after perusal of the literature, also from instruction obtained from Dr. Schott personally.

Diet.—Small quantity. q. 4 h. Meat—boiled chicken, mutton chops; eggs, two a day; oysters, raw or panned; vegetables—peas, beans, lettuce; liquids—beef tea, bouillon, cocoa, lemonade, milk. *Note.*—Never give more than 4 ounces of fluid at a time. Should be sipped. Wine—Port, Rhine, sherry, brandy, dram to half ounce.

Note.—Something light (cocoa and toast) should be taken one-half hour before the bath; something light and hot (bouillon, milk punch and toasted crackers) should be taken directly after the bath. If the heart's action is poor, sherry, brandy or port wine may be given after the bath. Last meal to be taken three hours before retiring.

Bath No. I. Sodium chloride, 4 pounds; cal. chlor., 6 ozs.

Bath No. II. Sodium chloride, 5 pounds; cal. chlor., 8 ozs.

Bath No. III. Sodium chloride, 6 pounds; cal. chlor., 10 ounces; sodium bicarb., 6 ounces; HCl, 7 ounces.

Bath No. IV. Sodium chloride, 7 pounds; cal. chlor. 10 ounces; sodium bicarb., 8 ounces; HCl, 12 ounces.

Bath No. V. Sodium chloride, 9 pounds; cal. chlor., 11 ounces; sodium bicarb., 1 pound; HCl, 1 pound.

Bath No. VI. Sodium chloride, 11 pounds; cal. chlor., 12 ounces; sodium bicarb., 1 pound; HCl, 2 pounds

Each bath consists of 40 gallons of water.

NOTE.—By using a little more $NaHCO_3$ than is required to take up the HCl, the metal tubs may be employed without doing them any harm.

$$\underbrace{NaHCO_3}_{83.75} + \underbrace{HCl}_{36.37} = NaCl + H_2O + CO_2.$$

THE EXERCISES.

The exercises are called by Dr. Schott "Widerstandgymnastik," or resistance gymnastics, and consist in slow movements executed by the patient and resisted by the physician or operator. A short interval is allowed after each movement, during which the patient sits down. The exertion employed must be very small, and should cause no increase in respiratory movements, flushing or pallor. The patient should be loosely and lightly clothed, and instructed to breathe quietly. The resistance made should be of such a kind that the patient may always feel himself easily the master. The operator must not grasp or in any way constrict the limb, but should oppose by the hand held flatly. The movements are nineteen in number:

Arm. (1) Arms extended in front of body on a level with shoulder, hands meeting; arms carried out until in line, and brought back to original position. (2) Arms hanging at

sides, palms forward ; arms flexed at elbow until tips of fingers touch shoulder, back to original position ; *one arm only moved at a time.* (3) Arms down, palms forward, arms carried outwards and upwards until thumbs meet over head ; back to original position; one arm only moved at a time. *Not always advisable.* (4) Hands in front of abdomen, fingers flexed so that the second phalanges touch those of opposite hand ; arms raised until hands rest on top of head; back to original position. (5) Arms down, palms against thighs, arms raised in parallel planes as high as possible ; back to original position.

Trunk. (6) Trunk flexed on hips ; return to original position. *Resist with both hands.* (7) Trunk rotated to left, to right ; return to original position. *Resist with both hands.* (8) Trunk flexed laterally. *Resist with both hands.* (9) As No. 1, but fists clenched. *Resist with both hands.* (10) As No. 2, but fists clenched. *Resist with both hands.*

Large Arm Movements. (11) Arms down, palms against thighs, *each in turn* raised forwards and upwards until arm is along side of ear, then turned outward, and arm descends backwards. Not always safe. (12) Arms down, palms to thighs, *both together* moved backwards in parallel planes as far as possible without bending the trunk forwards. Not always safe.

Legs. (13) Thighs in turn flexed on trunk, opposite hand resting on chair. (14) Lower extremities in turn extended fully, and bent on trunk forwards and backwards to extreme limits of movement, opposite hand resting on chair. (15) Legs in turn flexed on thigh, both hands on chair. (16) Feet together, lower extremities in turn abducted as far as possible and brought back to original position, opposite hand on chair.

Hands and Feet. (17) The arms, extended horizontally outwards, are rotated from the shoulder-joint to the extreme limits forwards and backwards. (18) The hands in turn are extended and flexed on the forearm to extreme limits, and brought back in line with arm. *Resist with both hands.* (19) The feet in turn are flexed and extended to extreme limits, and then brought back to their natural position. *Resist with both hands.*

We have arranged these in 5 groups, as in this way they may be more readily committed to memory.

Rules for Operators.

1. Each movement to be performed slowly and evenly at an uniform rate.

2. No movement to be repeated twice in succession in the same limb or group of muscles.

3. Each single or combined movement to be followed by interval of rest. Count five.

4. Patient's breathing should not be accelerated.

I. *Avoid.* 1. Dilatation of the alæ nasi (dilating of nostrils).

2. Drawing of corners of mouth.
3. Huskiness and pallor of cheeks and lips.
4. Yawning.
5. Sweating.
6. Palpitation.

If any of the above make a complete interval; or if excessive, stop the exercises for the day.

5. Direct patient to breathe regularly. If he holds his breath, make him count in a whisper.

6. Do not constrict the part which is being moved.

JOHNS HOPKINS HOSPITAL.

THE AMERICAN PÆDIATRIC SOCIETY'S REPORT ON THE COLLECTIVE INVESTIGATION OF THE ANTITOXIN TREATMENT OF LARYNGEAL DIPHTHERIA IN PRIVATE PRACTICE, 1896-1897.

In this second and supplementary investigation, the aim has been to ascertain: (1) What percentage of cases of laryngeal diphtheria recovers without operation under antitoxin treatment. (2) What percentage of operated cases recovers. The report now submitted may properly be limited to answering these two inquiries.

Since the beginning of the general use of intubation, no disease has been more thoroughly observed and more fully reported than laryngeal diphtheria. Operative cases especially, whether ending fatally or favorably, have been fully and promptly put on record. The result has been a collection and tabulation of cases available for control, such as few diseases offer. There are thousands of intubation cases before the days of antitoxin, and thousands since, available for comparison. It is, then, to cases of laryngeal diphtheria, especially those requiring operative interference, that we may apply the crucial test of the value of the antitoxin treatment.

Sixty thousand circulars containing the following questions have been distributed:

Age of patient?

Diagnosis confirmed by:

(1) Presence of other cases in the family?
(2) Appearance of membrane elsewhere?
(3) Bacteriological cultures?

How many days and parts of a day after the first appearance of the disease was antitoxin first administered?

How many doses of antitoxin were administered?

Dose of each injection in antitoxin units?
Whose antitoxin used?
Non-operative cases—evidence of disease:
Hoarseness?
Aphonia?
Stenosis?
Operative cases:
(1) Intubation? On what day?
(2) Tracheotomy? On what day?
How long, in days and fraction of a day, was tube in the larynx or trachea?
Sequelæ (in recoveries):
(1) Broncho-pneumonia?
(2) Paralysis?
(3) Nephritis?
Death, cause of, and on what day?
(1) Broncho-pneumonia?
(2) Extension of membrane to the bronchi?
(3) Sudden heart paralysis?
(4) Nephritis?
(5) Sepsis?
(6) Accidents of operation?
Recovery?
Remarks, especially on fatal cases?

These circulars were distributed throughout the United States and Canada, the following means being employed: contributors to first report, members of the society acting as agents for their respective localities, boards of health, local medical societies, and antitoxin manufacturers. At the outset, in this connection, it is a pleasure to acknowledge that the labors of the committee have been much lightened by the uniform good will of all addressed, more aid coming spontaneously than in the previous investigation. It is also a pleasure especially to acknowledge the society's indebtedness for efficient aid in distributing circulars and securing returns to H. K. Mulford Company, Parke, Davis & Co., Lehn & Fink (Gibier's), the health departments of Chicago, St. Louis, New Orleans, Denver, San Francisco, Boston, Washington, Buffalo, Providence, Ann Arbor, Newark, Montreal, Toronto, and others.

To the New York health department are due the thanks of the society for every possible courtesy in distributing blanks and, through their inspectors, of securing returns f operative cases.

In order to reduce sources of error it was desirable to bring together a large number of cases, from widely distributed localities, from many different observers and operators, and from a period of time including all seasons of the year. All

returns have been examined by the committee and only such cases accepted as bore satisfactory evidence that they were, first of all, diphtheria, and secondly, that the lesion had invaded the larynx.

A total of 1,704 cases of laryngeal diphtheria are ours for present study. A few cases (228) had not satisfactory evidence that there was laryngeal involvement; indeed some were reported through a misunderstanding of the fact that only laryngeal cases were wanted, and a few were reported in which there was no mention that antitoxin was used. These cases are of course not included in the number referred to above. Of the 228 cases, 218 recovered and 10 died.

In a total of 1,704 antitoxin-treated cases of laryngeal diphtheria, there was a mortality of 21.12 per cent. (360 deaths).

TABLE OF ALL CASES SHOWING AGE AND RESULT OF TREATMENT.

Age.	Fatal Cases.	Recoveries.	Totals.	Mortality, Per Cent.
1 year and under.....	25	35	60	41.66
1 to 2 years.....	77	219	296	26.01
2 to 3 years.....	81	260	341	23.75
3 to 4 years.....	42	216	258	16.27
4 to 5 years.....	47	160	207	22.70
5 to 10 years.....	72	345	417	17.26
10 to 15 years.....	9	64	73	12.32
15 to 20 years.....	2	24	26	7.65
Over 20 years.....	5	17	22	22.72
Unknown.....	0	4	4	
	360	1,344	1,704	21.12

CASES NOT OPERATED ON.—The first inquiry of the circular was what percentage of cases of laryngeal diphtheria recovers without operation under antitoxin treatment.

Of 1.704 total cases, 1 036 were not operated upon (60.79 per cent.). Of these most did not require operative, interference; a few cases were thought to require it, but operation was refused. All cases are included, and it will be noted there are no eliminations.

Among the 1,036 cases not operated on, there was a mortality of 17.18 per cent. (deaths 178), or, to answer the inquiry of the circular exactly, of 1,036 cases not operated on 82.82 per cent. recovered (or 858 cases).

As good as is this percentage of recovery in so large a number of cases of diphtheria of the severest type, it is believed it is not so good as it ought to be. Cases of laryngeal diphtheria not requiring operation, according to the testimony of consulting intubationists, are seldom heard from a second time, and less often find their way into reports. It was

formerly estimated that about 10 per cent. of cases of laryngeal diphtheria recovered without operation. The present report shows that in 1,036 cases 82.82 per cent. recovered.

CASES OPERATED UPON.—In analyzing this class of cases, it is believed a more exact conclusion as to the value of the antitoxin treatment can be arrived at than in the non-operative.

There will be entire harmony of opinion as to the severity of laryngeal diphtheria which requires operative interference. In the early days of intubation it was customary to speak of the percentage of recoveries, and 25 per cent. and 27 per cent. were considered good results. In the last report the recoveries had crept up so high in the one hundred cases, that it seemed more natural to speak of the percentage of mortality.

In this connection it is interesting to inquire what were the best reliable statistics of intubation, taking cases as they occurred, without selection, in pre-antitoxin days. In 5,546 intubation cases collected by McNaughton and Maddren in 1892, the mortality was 69.5 per cent., or, to bring the facts into line, 30.5 per cent. recovered.

O'Dwyer's personal experience, in private consultation, brings us more nearly face to face with the old-time experience with diphtheria. Note that the following 500 cases came under the observation and care of one practitioner, a skilled operator, extended over a dozen years of time, and therefore included all types of the disease.

Exclusive of the first 100 cases of intubation, which he (O'Dwyer) regards as experimental, the results stand as follows:

2d.....	100 intubations—	recoveries,	27	per cent.
3d.....	100 "	"	30	"
4th.....	100 "	"	26	"
5th....70 on the.....	100 "	"	27	"

Total percentage of recoveries, 27.56 per cent. When he had reached 70 on the fifth hundred something occurred which carried the phraseology up over the divide, so that it was appropriate to speak of percentage of mortality. At this point in history, anti-toxin arrived and interrupted forever the old series. In O'Dwyer's next 59 cases the mortality was 14 deaths, or 23.7 per cent.

In a total of 1,704 laryngeal cases there were 668 cases operated upon. In the 668 there were 182 deaths, or a mortality of 27.24 per cent. In the former report, in 553 intubated cases the mortality was 25.9 per cent. In approximate figures there is a difference between 27.25 per cent. and 26 per cent.

SUMMARY.—Sixty thousand (60,000 circulars were distributed throughout the United States and Canada.

Time allowance, the eleven months ending April 1, 1897.

Whole number of cases in this report, 1,704; mortality, 21.12 per cent. (360 deaths).

The cases occurred in the practice of 422 physicians in the United States and Canada.

Operations employed:

(*a*) Intubation in 637 cases; mortality, 26.05 per cent. (166 deaths).

(*b*) Tracheotomy in 20 cases; mortality, 45 per cent. (9 deaths).

(*c*) Intubation and tracheotomy in 11 cases; mortality, 63.63 per eent. (7 deaths).

Number of States represented, twenty-two, the District of Columbia, and Canada.

Non-operated cases, 1,036, 60.79 per cent. of all cases; mortality, 17.18 per cent. (178 deaths).

Operated cases, 668, or 39.21 per cent. of all cases; mortality, 27.24 per cent. (182 deaths). Two facts may be recalled in connection with this paragraph. First, that before the use of antitoxin it was estimated that 90 per cent. of laryngeal diphtheria cases required operation, whereas now, with the use of antitoxin, 39.21 per cent. require it. Second, that the percentage figures have been reversed, formerly 27 per cent. approximately representing the recoveries, while now, under antitoxin treatment, 27 represents the mortality. To put it in other words, before the use of antitoxin 27 per cent. recovered; now 73 per cent. recover, and this in the severest type of diphtheria.

The present report will strike many members of the society as revealing a mortality a little too large in each of the two classes. The mortality is large, larger than the personal experience in private practice of many would expect.

The reasons for this are (1) that antitoxin is still used too late, either from procrastination on the part of the physician, or objection on the part of the friends; or (2) in a half-hearted way, which shows itself in doses from one-tenth to one-fourth as large as they should be. In truth, both the physicians and the friends of the patient are timid.

This report, it must be admitted, shows too large a mortality. In the opinion of the committee it is a larger mortality than will ever be shown again. Antitoxin is gradually being used earlier in the disease, and it will soon be used in sufficient doses.

To the society, the committee desires to say that it has sought to carry out its wishes in putting antitoxin on trial, to accept no testimony that did not bear the stamp of reliability,

that it has employed the methods approved in the case of the first investigation and report, and that it has confined its work to definitely answering the main questions which the society and profession now have in mind. Points that were settled in the first report, and have since been corroborated by general medical literature, are not again taken up.

If the committee is asked to put forth the three most valuable points established in this eleven months' work, they are:

First. The mortality of laryngeal diphtheria at present rests at 21.12 per cent.

Second. That 60 per cent. approximately have not required intubation.

Third. That the mortality of operated cases is at present 27.24 per cent.

(Signed) W. P. Northrup, M.D.,
Joseph O'Dwyer, M.D.,
L. Emmett Holt, M.D.,
Samuel S. Adams, M.D.,
Committee.

The Committee Recommends: Antitoxin should be given at the earliest possible moment in all cases of suspected diphtheria.

Quality: Of the products on the market some have, by test, been found to contain one-half to one-third the antitoxin units stated on the label. Select the most concentrated strength of an absolutely reliable preparation.

Dosage: All cases of laryngeal diphtheria, the patient being two years of age or over, should receive as follows:

First dose—2,000 units at the earliest possible moment.

Second dose—2,000 units, twelve to eighteen hours after the first dose, if there is no improvement in symptoms.

Third dose—2,000 units, twenty-four hours after the second dose, if there is still no improvement in symptoms.

Patients under two years of age should receive 1,000 to 1,500 units, the doses to be repeated as above.

SURGERY.

IN CHARGE OF

FRANK R. ENGLAND, M.D.,

Prof. of Clinical Surgery University of Bishop's College ; Surgeon Western Hospital,

AND

GEORGE FISK, M.D.,

Instructor in Surgery University of Bishop's College ; Assistant Surgeon Western Hospital.

THE RADICAL CURE OF HERNIA, WITH A REPORT OF THREE HUNDRED AND SIXTY CASES.

By W. B. COLEY, M.D., of New York. (Annals of Surgery, Mar. 97.)

Dr. Coley is a staunch upholder of Bassini's method of operation and gives a very full report of his 360 cases. He began this method in 1891 and has had the perseverance to trace the majority of cases, all except 20, from 6 months to five years. Recurrence has been present in four cases, two in Bassini's method with kangaroo tendon, and two in ligature of the sack and suture of the canal. One death occurred; this was in a child who died from double pneumonia, probably caused by the ether, as it had had measles six weeks previously. In speaking of when to operate he says :—"I believe it a good rule never to advise operation in children until a truss has been tried for a considerable length of time (e. g., one to two years) without benefit. There are important exceptions to this rule. In femoral hernia operation can be advised at once, for the reason that the chances of cure by means of a truss are too slight to be considered. Irreducible or adherent omentum and reducible hydrocele may furnish sufficient reason for early operative interference.

"In regard to adults, operation may be advised in most cases of inguinal and femoral hernia up to the age of fifty, unless some contraindications exist." "Technique of Bassini's operation.—The technique of the operation is now so well known that it is unnecessary for me to go over the several steps. There are a few points, however, to which I would like to call especial attention, as I believe them to be of importance : First, the substitution of kangaroo tendon for silk (used by Bassini), which I have adopted for all buried sutures, I consider a distinct advantage. A year or more ago I published sixteen cases in which I had observed very slow healing and troublesome sinuses, due to non-absorbable sutures, silk, silk-wormgut, and silver wire. Since then I have seen four others. Many of these sinuses developed upwards of a year after the operation, and in wounds that had healed by primary union. More than this, the long-continued

suppuration so weakened the canal that relapse occurred in nearly all the cases. These cases, I think, furnish sufficient reason for abandoning all non-absorbable sutures. In most cases an extra suture should be placed above the cord, the cord passing between the two upper sutures."

The report is completed after some further discussion of technique, by giving in detail the last 160 cases.

AIROL AND OTHER NEW SUBSTITUTES FOR IODOFORM.

By Dr. CARL S. HAEGLER (Basel).

An effort to discuss a new substitute for iodoform is met with scepticism, for there have been many announced which have failed in their purpose. The three chief objections to iodoform have been its toxic action, the fact that it frequently acts as an irritant to the skin and its disagreeable odor. Despite the many articles which have been written, its exact action is unknown. We do know that it is not an antiseptic, and that wounds can be infected by the use of non-sterile iodoform. It undoubtedly acts through its products of decomposition, the principal one of which is iodine. Whether it acts upon the micro-organisms, their toxines, or upon the tissues is unknown. Where putrification is taking place it is readily decomposed. Its antituberculous action is also clearly established, whether by acting upon the bacilli or by modifying the tuberculous tissue is unknown.

What we demand of a substitute for iodoform is: (1) it shall not be as toxic; (2) it shall not have any odor; (3) it shall not irritate the skin; (4) it shall contain a sufficient quantity of iodine or a similar effective antiseptic, which it can part with under the same conditions as iodoform. Iodol and aristol do not fulfil these.

Dermatol has a feeble antiseptic action, and has its principal use in dermatological practice on account of the Bismuth it contains.

Lüdy introduced iodine into the combination of gallic acid and bismuth, of which dermatol is composed, and produced airol. This substance rapidly gives up its iodine, when introduced into wounds, through the action of the temperature of the body.

The author fed guinea-pigs, white mice and cats toxic doses of dermatol and airol and produced ulceration in the colon and perforation of the stomach, so that they are not suitable for internal administration. He tried the action of iodoform, airol, and dermatol on various pathogenic bacteria. Iodoform checked the growth of all except the cholera bacil-

lus, which it killed. Airol acted similarly; its action in pyogenic micro-organisms, like that of iodoform, being less marked than upon others, but the conditions in the test tube are not the same as in wounds, where, as Broatz has shown, both antiseptics cause a complete cessation of growth of staphylococcus aurens. The experiments conducted by the author upon animals gave varying and unsatisfactory results.

In practice we need a powder which, by virtue of its property of liberating iodine in a nascent state, as iodoform does, will act as an antiseptic, and at the same time have desiccant properties, so as to dry up wound secretions. Airol fulfils both the requirements, and, in addition, is free from toxic and irritant properties of iodoform, and above all, its disagreeable odor. The author used airol for two years in polyclinical work and found that it had many advantages over iodoform. It contains bismuth, and thus acts as a dessicant. In the treatment of furuncles and carbuncles it is only used in the form of gauze 10 per cent. impregnated with the powder after opening the same. In erysipelas the liberation of iodine cannot keep pace with the advance of micro-organisms along the lymph vessels, and hence it is of no value. In phlegmonous inflammation caused by streptococci it is of great value. In dressing recent injuries its mild antiseptic action is of great value, for experience has taught us that aseptic dressings are not as satisfactory in these cases as antiseptic. The author believes that airol can be placed side by side with iodoform and that in some respects it excels it. It stimulates granulations and can be used in combination with sterile wet dressings in the form of a powder in the treatment of acute phlegmons. For injecting tubercular joints the author uses a 10 per cent. emulsion, and has noticed an action upon these tissues similar to that of iodoform. He has employed airol in over 2,000 cases, and believes that it can be highly recommended.—(*Annals of Surgery*, March, '97.)

LARYNGOLOGY.

IN CHARGE OF
GEO. T. ROSS, M.D.,
Laryngologist Western Hospital ; Professor of Laryngology University of Bishop's College.

Relation of Adenoids and Deaf Mutism.—Attention has been lately called to the greater frequency of adenoid vegetations in the deaf and dumb than in healthy children. Peisson reports that post nasal growths were found by him in over fifty per cent. of the deaf and dumb ; Aldrich gives a greater percentage, viz. : seventy three. Various authors give the average of the disease in otherwise healthy children as five (5) or six per cent. So that the enormous difference cannot be regarded as a simple coincident. Sendziak says that it is probable some children are born with adenoids, and the cause of deafness is mechanical obstruction of Eustachian tube or an inflammatory process in middle ear. He points out that cases are recorded, though rare, in which deaf mutes have been cured by removal of adenoid vegetations, and cites one case occurring in his own experience where good results followed the operation.

Luzzati (of Turin) records a peculiar reflex effect following the extraction of a portion of the middle turbinated bone. The patient (female), of a quiet and taciturn disposition, having refused any local anesthesia, the piece was removed by the cold snare without difficulty. After a few minutes she gave way to violent excitement and laughter, becoming most loquacious, declaring to the doctor that she was now perfectly cured, and between her speeches laughing immoderately. This state lasted for a day, after which she became rational and acquired her usual character.

Piaget (of Grenoble) publishes the results of his experiments showing how the nasal fossæ are protected against disease germs. His conclusions are :—

(*a.*) The nasal cavities proper are aseptic.

(*b.*) This aseptic state applies to the nasal fossæ of the lower animals.

(*c.*) This is owing to many influences, but mainly to the bactericidal action of the nasal mucous secretion.

(*d.*) As factors to this end he enumerates the formation of the nose and the action of the ciliated epithelium, which dislodges not only the germs and dust, but the desquamated epithelial cells impregnated with innumerable bacteria.

The author proved in his work that healthy nasal secretion can kill most of the pus cocci. Gourc (Paris) in recent experiments fails to confirm this statement.

Diphtheria in the Adult.—Gougenheim (*Annales de l'Oreille, etc.*) in his experience gives his conclusions as follows :—

1. Diphtheria in the adult is more common than is usually supposed.

2. It is disregarded ; because

(*a.*) It is almost constantly free from danger.

(*b.*) A bacteriological examination is often neglected.

(*c.*) Symptoms do not differ in most cases from those of acute angina, lacunar or herpetic.

3. The larynx is rarely invaded ; and the signs of that invasion are never so grave as seen in infants.

4. Paralysis from diphtheria is rare in adults and quickly cured.

5. The Loeffler bacilli may be short, medium or long.

6. Contagion from diphtheria in the adult may attack children, hence the necessity for prophylactic measures.

7. Albuminuria does not seem to affect the prognosis.

8. The cure is often spontaneous, but sometimes serotherapy is indicated. Dose 5 to 20 c. c. In hypertoxic cases the serum is useless.

Ozena Cured by Roux's Serum.—Molinie (Marseilles) reports three cases typical old ozena which had progressed to considerable atrophy of the nasal mucous membrane, spreading to the pharynx, with ear complications, treated by hypodermic injections of Roux's antitoxine exclusively. The results were disappearance of the subjective troubles, fœtid odor, nasal obstruction, and nose blowing ; also a healthier appearance in the mucous membrane. The difficulty of explaining these phenomena is acknowledged. The few cases experimented on also precludes any exact inferences. The fact remains that no previous remedy ever produced such results in ozena, even temporarily. On this account the treatment merits a fair trial, if carefully carried out. Time and experience are required to test and explain the specific action of serum on the pathogenic agent, at present unknown, of atrophic rhinitis. Compaired (Madrid) reports two other cases with successful results under the new treatment. He concludes his remarks by saying:

1. This treatment has so far given the best positive results.

2. After the 2nd or 3rd injection of 5 or 6 c. c. the fœtid odor disappeared, decrease of crusts and dryness in the nasal fossal, and increase of fluid secretion, etc., as described by Molinie. Great care is necessary in making injections antiseptically and gradually increasing doses.

Chiari at a recent meeting of Vienna Laryngological So., discussed the treatment of closure of the Naso-Pharynx by adhesion of Velum Palate to posterior Pharyngeal wall.

After its separation by galvanic cautery, he dilated the cicatrices with the finger. The patient having now acquired nasal respiration there was inserted daily for 5 hours a tampon of iodoform gauze. This was done for 20 days, while massage was daily performed first with right hand and then with the left. In this way the angles between the lateral walls of pharynx and soft palate were enlarged, while any reforming of cicatrice was prevented and infiltrations reabsorbed. Then a hard rubber pelote or dilator was introduced behind the velum, the pelote being attached to a palatine plate with a strong golden clasp. This was inserted several hours daily and massage continued for a permanently good result.

Temporary Amblyopia from Eucaine.—Shastid records an instance of the toxic effect of eucaine. A five per cent. solution was applied for anesthesia to a turbinate. Amblyopia, rapid pulse and incoherent talk resulted and lasted several hours. Such laudatory notice has been given this drug that it is well to remember experience with it thus far has established the possibility of producing vertigo, faintness and distressful tightness across the chest by its local administration. Stimulation with brandy usually restores the functions.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, January 29th, 1897.

GEO. WILKINS, M.D., PRESIDENT, IN THE CHAIR.

EXPERIMENTAL CEREBRAL LOCALIZATION.

Dr. WESLEY MILLS exhibited in a fresh condition the brain of the rabbit shown at his demonstration before the Canadian Medical Association in August last. The animal was exhibited the day after the operation, which consisted in the removal, not only of the cortical centres for the limbs, neck, etc., but, as the specimen showed, so much of the cerebrum that the ventricles were in part exposed. When exhibited the day after the operation the animal sat up in the usual position, walked and leaped so well that it was difficult to distinguish it from an intact rabbit.

In this instance the brain had been reached by cutting down to the dura, slitting the latter open and turning it aside without removing it. The cerebrum was sliced away, to the extent indicated before, with very little hæmorrhage. Antiseptic precautions were employed. The edges of the dura were approximately sutured, and the margin of the skin wound brought into apposition by the same means.

The wound healed rapidly, and the rabbit remained well and active till recently, when it suffered from skin disease and died a few days ago.

Examination showed a scar on the line of the incision in the skin, but nothing of the kind was apparent in the dura. A thin straw-colored fluid was found beneath the dura, but there were no adhesions either of skin and dura, or between the latter or the cerebrum. Dr. Mills said that without experience it would be difficult to believe that a rabbit should survive such an operation and have to all intents and purposes the same functional capacity as an intact animal for a period of about five months. He thought it proved clearly that so far as the cortex of the cerebrum was concerned there were great differences between different animals below the primates, and between the former and the latter.

Two Cases of Perforated Gastric Ulcer.

Dr. Jas. Bell exhibited two patients.

Dr. Geo. E. Armstrong congratulated Dr. Bell on the success of his cases, especially the one in which he had sutured the stomach. He thought that these cases when operated upon early gave good chances of recovery. Three cases of recovery after suture of a perforated stomach from gastric ulcer had now been reported in Montreal. He agreed with Dr. Bell's diagnosis of the case which he had drained.

The pain in peritonitis from perforation was generally central about the umbilicus, but the point of maximum tenderness determined the differential diagnosis. If this point was over the appendix, then the seat of perforation was there, if the stomach was perforated the point would be found over that viscus, and especially so if the case was seen early. In a recent discussion Weir reported that of 74 cases, those operated on before 12 hours had a mortality of 42 per cent; those from 12 to 24 hours, 81 per cent; and after 24 hours, 93 per cent.

Infection from the stomach was not so severe as that from the appendix and intestines lower down, and Treves' idea, that the upper zone was less susceptible, was better explained by this fact.

It was an advantage before introducing the sutures to strip off the fibrin surrounding the perforation and so have a stomach wall of normal strength and thickness to deal with.

He felt that the question of recovery without operation depended on the seat and size of perforation. If it occurred on the posterior wall or lesser curvature, where adhesions were liable to form early, recovery was much more probable than if a large perforation occurred on the anterior wall, and the stomach, falling back empty, had nothing to adhere to. Gas and stomach contents would separate it from the anterior abdominal wall in the same way as gas got in front of the liver and spleen in perforation of the stomach or bowel.

A point made by Weir, with regard to the statement sometimes made that no vomiting followed perforation of the stomach, was that a large opening permitted the stomach to empty itself into the abdominal cavity; but, if the perforation in the stomach wall was small, then the stomach contents would more readily pass upwards and vomiting would occur.

Dr. F. J. Shepherd thought, from the fact of there being air in the abdominal cavity and recovery having taken place, that Dr. Bell's diagnosis of perforated gastric ulcer was the only possible one. He asked what the statistics of the pathologists showed the fre-

quency of recovery without operation to be. He did not agree with Dr. Armstrong's idea of the stomach falling back.

That the upper zone of the abdomen was less liable to infection was due to the fact that the stomach contents were acid and unfavorable to the growth of bacilli, which were thus less virulent.

Dr. A. LAPTHORN SMITH asked if in sewing up the perforation it was the custom to remove the raw edges. He agreed with Dr. Armstrong that if there was a large opening the contents would escape and the organ collapse.

Dr. D. F. GURD asked if the first patient had been anæmic.

Dr. J. G. ADAMI said he could not give the statistics, but it was extremely rare to find evidences of perforation having occurred, although old extensive ulcerations of the stomach were frequently met with.

Dr. BELL, in reply said, in regard to the question raised by Dr. Shepherd and Dr. Adami, that one such case was mentioned by Taylor in the *Medical Record* during 1888. Irrigation and drainage had been carried out, and at the autopsy two months later, an anterior healed perforation had been found.

In reply to Dr. Smith, he said paring the edges had been done in a few cases, but the majority of surgeons did not think it was necessary, as what was really aimed at was closing by a Lembert's suture. The first sutures were only put in to hold the parts together and prevent escape of the contents while the Lembert's sutures were being introduced.

In reply to Dr. Gurd, he stated that the girl showed no symptoms of anæmia.

HÆMORRHAGIC CYSTS OF THE THYROID.

Dr. E. W. ARCHIBALD read a paper on this subject.

Dr. F. J. SHEPHERD said that the investigations of Drs. Bradley and Archibald explained the sudden increase in large thyroids which caused dyspnœa and induced the patient to seek relief. Hæmorrhage seldom occurred in a healthy gland, the history was always that of a slow growth before the rapid increase.

It was rare to meet with a pure cyst ; in many, a large mass of adenomatous material was found at the base and they differed from the colloid cysts which were easily enucleated.

He had recently operated on an enlarged thyroid in a case presenting all the symptoms of Graves' disease with the exception of exophthalmos. Two solid tumours were removed with complete relief of all the symptoms.

Dr. W. I. BRADLEY felt that Dr. Archibald's paper had elucidated some of the obscure points in his own work, so that nothing now was left in doubt.

Dr. ADAMI said that the interest of these cases lay in their being the connection between the cystic and the goitrous forms. The large proportion of Dr. Shepherd's cases were cystic, and the same thing was found in Reverdin's report of cases examined in Switzerland. It was not generally known that Osler had shown that here in the neighbourhood of Montreal we have the most goitrous region in America and the most favourable opportunity for study, and to thus advance the knowledge of this interesting part of the human frame.

In a series of goitres received from Drs. Bell and Shepherd, he

had noted a great tendency to hæmorrhage in some which were not cystic. In adenoma it was quite common to have very thin-walled vessels which ruptured easily.

An Obscure Case of Purpura Hæmorrhagica.

Dr. W. F. Hamilton reported this case.

Dr. J. M. Elder had seen the patient the day he entered the hospital, and had been struck by his anæmic condition. Having been acquainted with his family for a number of years, he could add to the family history as given by Dr. Hamilton. One aunt had died from profound anæmia with frequent vomiting of blood. There was also a distinct history of tuberculosis on both the father's and mother's side.

Dr. R. Tait McKenzie had examined the boy in the fall of 1895 and found him sound in every particular, both under conditions of rest and exercise.

Dr. H. A. Lafleur thought a chemical examination of the blood in such cases might be of value. The case seemed somewhat analogous to snake-bite, in which the poison was chemical and not bacterial.

In purpura of such wide distribution fever was not uncommon, although it was often absent in mild cases. It was quite analogous to the fever found in severe cases of anæmia, leukæmia, and other conditions in which there was a profound alteration of the blood.

Stated Meeting, February 12th, 1897.

George Wilkins, M.D., President, in the Chair.

Comminuted Fracture of the Lower Jaw.

Dr. J. Alex. Hutchison exhibited the case and read the following report:

Ralph B., aged 7 years, entered ward L, Montreal General Hospital, September 26th, 1896.

A short time previously (one hour) he had fallen through an elevator shaft, a distance of about thirty feet. On examination by me on the following day (Sunday), it was decided to endeavour to bring the parts together by sutures. This I did on the 28th, the second day following the accident. After anæsthesia by chloroform, examination showed the following:

A dirty contused wound on the right side under the border of the lower maxilla leading down to the fracture and communicating with the mouth. The bone was shattered and several teeth gone. The canine of lower set was found imbedded in the cheek, passing through a rent in the mucous membrane. On left side, the mucous membrane was torn and the bone fractured opposite the canine tooth.

Owing to the two fractures and the violence of the blow the central portion of bone was very loose, and silk sutures were applied on each side, on the left bringing the bone in good position, but on the right, owing to the loss of bone, there was a considerable space which allowed the bone to fall away. After cleaning the part a leather splint was applied. Suppuration followed, and sutures gave little support.

Dr. J. S. Ibbotson, the dental surgeon to the Hospital, was asked to make an inter-dental splint of rubber, which he did, opposing this by a plaster of paris bandage round the jaw. This successfully held the parts in position till union took place. The patient now has a good jaw, the lower teeth that remain are in fair position. I bring the case before you to show the value of the inter-dental splint, and the good result in so grave an injury.

The notes are from report of my house surgeon, Dr. H. K. McDonald.

REMOVAL OF A FIBROMA OF THE MESENTERY WITH RESECTION OF NEARLY EIGHT FEET OF THE SMALL INTESTINE.

Dr. F. J. SHEPHERD stated that the man from whom the tumour and intestine had been removed was 28 years of age, and had first noticed the enlargement of the abdomen over a year ago. He had never suffered any pain. The operation was performed on January 18th, 1897, and a round smooth tumour was seen attached in front to the abdominal wall by adhesions but apparently free at the sides. On enlarging the incision and delivering the tumour it was found that about 2½ feet of gut was intimately associated with its under surface and that the tumour grew from between the layers of the mesentery. To remove the tumour it was necessary to tie a number of mesenteric vessels and this deprived a large amount of gut of its nutrition. Within an inch or two of eight feet of small bowel had to be removed before living bowel could be reached. The two ends were united by immediate suture. The bowel removed was chiefly ileum, only about six inches of the lower end of the ileum being left. There was an attachment of the tumour also to the transverse colon, but it seemed to grow from between the layers of the mesentery. During the operation there was a great deal of shock and three quarts of saline solution were introduced into the veins of the arm.

The patient got well without a bad symptom, and, with the exception of a tendency to flatulency and slight diarrhœa, he was well and gaining flesh. Dr. Shepherd remarked that as far as he was able to find out this was the greatest length of bowel successfully removed, so far. Kocher, of Berne, had removed 6 ft., 10 in.; Koeberle of Strassburg, 6 ft. 6 in.; and Elliott, of Boston, 4 ft. He said that at some future time he intended writing a paper on the subject, and would deal more fully with the history of intestinal resection.

Dr. JAS. BELL considered this a remarkable surgical triumph. The difficulty of removing an enormous tumour, situated between the folds of the mesentery and displacing such important structures as the aorta and vena cava, was very great; but the removal of so large a portion of the intestine as well, was a remarkable achievement. The removal of the intestine for gangrene could not be compared with this.

Some years previously he had performed experiments on dogs, and demonstrated that considerable portions of their intestines could be removed with success. By this means he had gained considerable experience of the different methods of uniting the ends of the bowel. Of those united with the continuous suture in some cases a constriction was subsequently found at the point of union; of those done by the through and through method the results were good. He, however, had not realized then that the dog was not so

prone as the human being to suffer from peritonitis after such operations.

In man, Dr. Bell stated, he had united the cut ends in almost every way, and in cases of direct union had found the bowels closed off well when fatal results had occurred from other causes. He had been greatly impressed by Maunsell's method, especially by a modification described in the last number of the *Annals of Surgery*.

He had no criticism to offer on Dr. Shepherd's case, but wished to congratulate him on one of the greatest achievements on record in abdominal surgery.

Dr. Wesley Mills felt this was a great surgical triumph, but with regard to the effect of removing such a large portion of intestine the case was one from which we are likely to get physiological light rather than one on which he could throw light. His experiments upon the alimentray tract of dogs had impressed him with the danger of these operations being followed by shock rather than peritonitis.

Of late years the tendency had been rather to exalt the intestines functionally at the expense of the stomach, but both had much reserve power, and if this case succeeded it would be clear evidence of this.

Dr. Lapthorn Smith was pleased to know that such a case had occurred, as it would encourage less daring operators to be a little more bold. He thought that much of so called shock was due to hæmorrhage, the anæsthetic, or sepsis.

Dr. Wm. Gardner thought that a point often overlooked, in considering the shock following long operations, was refrigeration, and cited a case in support of this.

Dr. G. G. Campbell drew attention to a fact which he had demonstrated by examination of the urine, that metabolism was much diminished during anæsthesia, becoming less and less as time passed. Thus, during long operations this might be a cause of refrigeration.

Dr. F. J. Shepherd intended reporting the case in full later on and so had not given the details of the history. It was not known what shock was, but no doubt hæmorrhage was often the source of shock, and this man would have died if he had not had the intravenous injection.

A Respiratory Symptom of Tobacco-poisoning and its Experimental Investigation.

Dr. W. S. Morrow in this paper described a peculiar form of breathing which he had observed in a number of cases of tobacco-poisoning. He read reports of the three most typical cases he had seen. The symptom referred to consisted of audible deep inspirations occurring at intervals, and often accompanied by a feeling of lack of air. He referred to a case reported by Chapman, of Louisville, at the Mississippi Valley Medical Society, in 1891, where similar symptoms were observed. He had been unable to find any explanation of this peculiar form of breathing, and had consequently undertaken a series of experiments in the hope of throwing some light on it.

He had tracings of the breathing showing the effects on it of poisoning with tobacco in rabbits and dogs; other tracings showed the effect of tobacco after first cutting the pneumogastric nerves;

others again, the effects of stimulating these nerves at various stages of poisoning. Still others exhibited the effects of various degrees of ether and chloral for comparison. As a result of these cases and experiments the following conclusions were reached :—

A fairly common symptom of tobacco-poisoning is a deep gasping inspiration, occurring at intervals, and sometimes quite audible. This may be practically the only symptom complained of. It is probably due to a paralyzing action of the drug on the respiratory centre, affecting especially the expiratory division but also diminishing the irritability of the whole centre to afferent impulses. This symptom may persist from a few days to several months after the tobacco is discontinued.

Dr. N. D. GUNN said that clinically the action of tobacco was supposed to be principally upon the heart, and he thought that Dr. Morrow should have investigated this point as well.

Dr. WYATT JOHNSTON asked concerning the occurrence of this sign in poisoning by other drugs ; if this were not the case it might turn out to be a valuable physiological test for nicotine poisoning.

Dr. WESLEY MILLS expressed satisfaction that a paper of this kind had been brought before the Society. It was the first instance in this country of such an application of the graphic method to the solution of a definite clinical problem.

Dr. F. J. SHEPHERD congratulated Dr. Morrow on having been able to verify his diagnosis by this method. Such a paper was most valuable to those outside of laboratory work from a practical standpoint.

Dr. W. F. HAMILTON asked if Dr. Morrow had considered the possibility of this respiratory symptom having been due to the influence of the poison upon the heart.

Dr. MORROW in replying to Dr. Gunn said that experimental evidence went to show that tobacco was a stimulant to the heart. He himself had seen the heart beating vigorously after death from respiratory failure in the rabbits poisoned with tobacco from which his diagrams were obtained.

To Dr. Hamilton he said that even if circulatory changes could cause some change in the respiration, they could not explain the failure of the respiratory centre to respond to stimulation through the pneumogastric nerves. He did not think the peculiar breathing he had observed could be explained through any change in the circulation.

He could not answer Dr. Johnston's questions as he was not sufficiently acquainted with the literature of other poisons.

THE
CANADA MEDICAL RECORD

PUBLISHED MONTHLY.

Subscription Price, $1.00 *per annum in advance. Single Copies*, 10 *cents.*

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All communications for the Journal, books for review, and exchanges, should be addressed to the Editor, Box 2174, Post Office, Montreal.

Editorial.

THE SECOND REPORT ON THE USE OF DIPHTHERIA ANTITOXINS IN LARYNGEAL DIPHTHERIA BY THE AMERICAN PÆDIATRIC SOCIETY.

We give this report in full. It presents some very interesting and instructive conclusions which are of the greatest importance to physicians as pointing to methods which will secure a lower mortality. The necessity of the earliest use possible of antitoxin is pointed out, and a fact not hitherto generally known that too small doses are used in severe cases, and two to five hundred antitoxin units are given where five times that quantity is required.

The fact that some of the samples of antitoxin were found to contain less units than what they are labeled for should lead to more carefulness in selecting supplies, and points strongly to the necessity in regard to all remedies of this kind which require the greatest care and skill in their manufacture,—for some authoritative supervision in all countries where it is produced. It is gratifying to learn that while formerly 90 per cent. of cases of laryngeal diphtheria required operation, since the use of antitoxin only 39 per cent. indicate surgical aid, and that the mortality has been reduced from 73 to 27 per cent. The committee has exercised the greatest care in arriving at these results, and has given us statis-

tical evidence of the value of this new remedy in the only way that it could be done, and has definitely established its utility beyond all subsequent cavil, and is deserving of our warmest appreciation of their arduous efforts.

BRITISH MEDICAL ASSOCIATION MONTREAL MEETING.

Substantial progress can be reported of the various sub-committees who have in hand the arrangements for the somewhat formidable undertaking of entertaining the greatest Medical Association in the world, and conducting its annual meeting to a successful issue under very unusual conditions.

The list of discussions and those who are to take part in them, the papers and their readers is being gradually completed, and we will soon be able to announce the complete programme for each section. Each section will be in session only twelve hours, and fifteen minutes is allowed for each paper, so that it is only possible, by allowing about two-thirds of the time for papers, to get through with more than twenty-five papers. It will be necessary, therefore, to make a choice, leaving the balance to be read by title. It is announced that Dr. Herman Biggs of New York will give the address on Public Medicine, and his will doubtless be among the interesting communications to the meeting.

The Provincial Government has granted two thousand dollars, making in all, with the grant from the Dominion and City of Montreal, ten thousand dollars.

This is about ten times as much as was spent at last year's meeting at Carlisle. Although necessarily costing more here than it would in Britain, doubtless with this snug amount, together with the moneys obtained from privileges in the museum, there will be funds sufficient to make a thoroughly interesting and attractive list of entertainment for the guests. We will also have to deal with the presence here of hundreds of our professional brethren from over the border, as well as with the members of the Canadian Medical Association, whom we hope to see here in full force.

The excursions committee have issued an outline programme of what they have decided upon, which we give in full.

The following is a brief outline of some of the excursions which have been arranged for the members of the British Medical Association. The rates given are single first-class one way fare. All the Canadian railways will give to members of the British Medical Association and their families single tickets for half one fare, or return ticket for one single first-class fare. The railroads in the New England States, including those coming from Boston and New York to Montreal, have granted return tickets for their lines for one fare and a third good for three days before the meeting, and three days after the meeting. The rates on the Canadian railways are good from the 1st of July to the 30th September.

The following are points which are worth visiting:

The old city of Quebec, is one hundred and seventy-two miles from Montreal; fare, $3.50. A very pleasant day can be spent in this old city visiting the different points of interest. From Quebec one can go down the St. Lawrence and up the Saguenay, thence to Lake St. John. Here there is a very comfortable hostlery known as the Hotel Roberval, and good Ouananiche fishing can be obtained in Lake St. John. Boats and guides are always to be had. From Lake St. John to Quebec, one can go by rail; distance, one hundred and ninety miles.

Montreal to Halifax, Nova Scotia, distance, seven hundred and fifty-six miles; single first-class fare, $16.50. From Halifax one can visit the Annapolis Valley, and the Bras d'Or Lakes. There are two main lines of railroad leading from Montreal to Halifax passing through picturesque and fertile country.

Montreal to St. John, New Brunswick; distance, four hundred and eighty-one miles; cost, $14.15, single fare first-class.

Montreal to Ottawa; distance, one hundred and twenty miles; single first-class fare, $3.50. The Parliament buildings in Ottawa are very handsome, and well worth seeing.

A very pleasant trip would be from Montreal to Kingston by rail and down the St. Lawrence through the Thousand Islands by steamer. Montreal to Kingston, one hundred and seventy-five miles; first class single fare, $5.65.

Montreal to Toronto, three hundred and thirty-three miles; single first-class fare, $10.40. Toronto is a very convenient point from which to visit the Falls of Niagara; distance, sixty miles from Toronto. A very pleasant trip would be from Montreal to Toronto by rail, from Toronto to Niagara and back to Montreal through the Thousand Islands and the different Rapids of the St. Lawrence by steamer.

Western trip, Montreal to Vancouver, distance, two thousand nine hundred and ninety miles; time, five and a half

days. The cost of a return ticket to members of the British Medical Association; first-class, $70.45, instead of the usual rate of $135.10. The sleeping cars cost each way about $20.00 for double berth. Meals in dining cars and at restaurants, 75 cents each. This is a trip which we would advise all members who can afford the time to take, as it will give them an impression of the vastness and resources of British North America that can be obtained in no other way. The trip is not tedious and every day is thoroughly enjoyable. The cars are comfortable, the scenery constantly changing, and of very great interest. Stop-over privileges are allowed at all points, from some of which interesting side trips can be made. From Rat Portage, the new gold fields of the Lake of the Woods, Rainy Lake and Seine River can be reached by steamer. The Canadian Pacific Railway have kindly offered to give to each member going to Vancouver over their line, free passes over all their branch railway and steamboat lines in Manitoba, the Canadian Northwest Territories, and British Columbia, thus enabling those who desire to visit Rossland and other points of interest an opportunity to do so. Those who intend to take this trip are asked to apply early so that date and accommodation may be provided. By the payment of an extra $5.00 members may return by the Great Northern or Northern Pacific. In this way the Yellowstone Park may be visited. The Yellowstone Park is a National United States reservation and requires five days to see it all. The expenses of the trip through the Park are not included in the Railway fares. Members desiring to visit the Yellowstone disembark at Livingston on the Northern Pacific Railway. The trips from Livingston through the Yellowstone and return are as follows: Livingston to Mammoth Hot Springs and return, including transportation only, $5.00; second, Livingston to Cinabar by rail, thence by stage to the Mammoth Hot Springs, Norris, Lower and Upper Geyser Basins, Yellowstone Lake, Grand Canon, and Falls of the Yellowstone, returning by the same route, including transportation and five and a half days' board at the Park Association Hotels, $49.50. The date for closing the Park is October 1st. No charge will be made to passengers returning via Portal and the Soo Pacific route to St. Paul, thence to Sault St. Marie, where the Canadian Pacific is again reached.

Those who can, are advised to take this Western trip before the meeting. It can be accomplished very comfortably in three weeks.

For those members who prefer to go from Owen Sound to Fort William through lakes Huron and Superior by the Canadian Pacific steamers instead of north of Lake Superior

by rail, an extra charge of $4.25 each way is made, which includes berths and meals. These steamers are large steel boats with all the comforts of ocean steamships. Members are recommended to go one way by these steamers.

This trip across the great prairies and the Canadian wheat fields will be at the time when the wheat is about ripe and harvesting will be in progress. The scenery through the great lakes and the Rockies outrivals that of Switzerland. Banff Hotel and the Banff Hot Springs, four thousand five hundred feet high, are in the National Park. The great Glacier is said to contain more ice than all the Swiss Glaciers put together. The scenery along the Fraser River is of the wildest and most fascinating character.

The hotels at Banff, at Glacier, and, at several other points, where members might care to stop, are thoroughly comfortable in every respect.

Those who wish to visit Alaska should leave England so that they may arrive in Montreal about the 27th or 28th of July. They can then go by the Canadian Pacific to Vancouver and get the steamer "Queen," which leaves Victoria on the 5th August for Alaska. The time occupied from Victoria to Alaska and return is twelve days; fare, including everything, $80.00, for the round trip from Victoria.

In one month one can go from England to Canada, attend the meeting of the British Medical Association and visit Quebec and Lake St. John, or Ottawa, or Kingston and the Thousand Islands, or Toronto and Niagara, and then back to England. In five weeks all the above places could be visited.

A six weeks' trip will permit one to attend the meeting in Montreal, go across the Continent to Vancouver, and back by Yellowstone.

In two months one can, in addition to attending the meeting in Montreal, go across the Continent to Vancouver and back and visit the chief cities in Canada and the Eastern cities in the United States.

For detailed information regarding transatlantic transportation see *British Medical Journal*, April 17th, 1897, pp. 997, and succeeding numbers.

Very full descriptive information concerning places of interest in the Dominion of Canada will appear in the *Journal*, 5th June.

A preliminary guide is being sent to each member, and a full local guide will be obtainable at the meeting.

The Canadian Pacific Railway Company, in conjunction with other Canadian companies, have placed at the service of the members of the Association, a clerk who will afford all information which may be desired. He may be addressed at the office of the *Journal*, 429 Strand, London.

AMERICAN PUBLIC HEALTH ASSOCIATION.

OFFICERS, 1896-1897.

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[Preliminary Circular.]

The Twenty-fifth Annual Meeting of the American Public Health Association will be held at Philadelphia, Pa., October 26, 27, 28, 29, 1897.

The Executive Committee have selected the following topics for consideration:

I. The Pollution of Water Supplies.
II. The Disposal of Garbage and Refuse.
III. Animal Diseases and Animal Food.
IV. Car Sanitation.
V. Steamship and Steamboat Sanitation.
VI. The Prevention of the Spread of Yellow Fever.
VII. The Transportation and Disposal of the Dead.
VIII. The Relation of Forestry to Public Health.
IX. Nomenclature of Diseases and Forms of Statistics.
X. Cause and Prevention of Infectious Diseases.
XI. Public Health Legislation.
XII. Cause and Prevention of Infant Mortality.
XIII. Transportation of Diseased Tissues by Mail.
XIV. River Conservancy Boards of Supervision.
XV. The Period during which each Contagious Disease is Transmissible, and the Length of Time for which each Patient is Dangerous to the Community.
XVI. Sanitation, with special reference to Drainage, Plumbing, and Ventilation of Public and Private Buildings.
XVII. Some Method of International Arrangement for Protection against the Transmission of Infectious Diseases.
XVIII. Disinfectants.
XIX. Existing Sanitary Municipal Organizations of the Countries belonging to the Association, with a view to a Report upon those Most Successful in Practical Results.

Upon all the above subjects, special committees have been appointed. Papers will be received upon other sanitary and hygienic subjects also.

REGULATIONS RELATING TO PAPERS.

Special attention is called to the new regulation in regard to papers. Papers presented later than the time specified (on or before nine o'clock, a.m., of Monday preceding the meeting) will not be placed in the programme, for, contrary to the usage of previous meetings, the entire programme for the week will be printed on Monday preceding the first day of the session.

EXTRACT FROM BY-LAWS.

4. All papers presented to the Association must be either printed, typewritten, or in plain handwriting, and in order to secure a place in the programme, must positively be in the hands of the Secretary by nine o'clock, a.m., on Monday preceding the first day of the meeting, in order that they may be submitted to the Executive Committee, and placed in the hands of the sub committee charged with the preparation of the daily programme of the session.

5. If any paper is too late for critical examination, said paper may be so far passed upon by the Executive Committee as to allow its reading, but such paper shall be subject to publication or non-publication, as the Executive Commitee deem expedient.

6. All papers accepted by the Association, whether read in full, by abstract, by title, or filed, shall be delivered to the Secretary, as soon as thus disposed of, as the exclusive property of the Association. Any paper presented to this Association and accepted by it shall be refused publication in the transactions of the Association, if it be published, in whole or in part, by permission or assent of its author, in any manner prior to the publication of the volume of transactions, unless written consent is obtained from the Publication Committee.

7. All papers on subjects within the province of special committees shall be referred to the chairmen of the several committees, who shall report the same to the Association, incorporated with their annual reports, or refer them to the Executive Committee for consideration.

8. No paper shall hereafter be considered, of which a condensed abstract shall not have been placed in the hands of the Secretary at least twenty days before the date of the annual meeting.

9. Chairmen of committees, in making reports, shall be absolutely limited to thirty minutes, reading of papers to

twenty minutes, and participants in discussion to five minutes.

10. Papers presented to the Association shall be confined strictly to sanitary, climatologic, and preventive questions, all clinical, pathological, therapeutic, or other strictly medical statements being excluded; nor shall any paper tending to the advertisement of special or local interests or establishments be accepted.

11. The Secretary shall have no discretion in the matter of the enforcement of the regulations of the Executive Committee as to the acceptance of papers.

It is expected that the Philadelphia meeting will be largely attended. Its location is central, and the local Committee of Arrangements are already hard at work for its success.

An announcement will be made in ample time before the meeting, giving full particulars regarding reduced fares on railroads, hotel rates and accommodations, special entertainments to be arranged by the local committee, et cetera.

All communications relating to local matters should be addressed to Dr. Benjamin Lee, Chairman Local Committee of Arrangements, No. 1532 Pine St., Philadelphia, Pa. Per order.

IRVING A. WATSON,
Secretary.

A SPECIAL TOUR TO EUROPE.

Including the International Medical Congress at Moscow, August, 1897. Under the patronage of the Russian Government. To leave New York on Saturday, July 3, 1897, by the North German Lloyd steamship "Werra." Under the arrangements of Thos. Cook & Son, managers of tours and excursions, 261 and 1225 Broadway, New York.

SYNOPSIS.

Section No. 1.—New York, Gibraltar, Naples, Rome, Florence, Venice, Milan, Como, Menaggio, Lugano, Lucerne, Zurich, Munich, Linz, the Danube, Vienna, Warsaw, Moscow, St. Petersburg, Helsingfors, Abo, Stockholm, Christiania, Gothenburg, Copenhagen, Hamburg, Bremen, New York. Tour of 84 days, $560.00.

Section No 2.—Travel from New York with Section No. 1 round to Hamburg, thence as follows: Berlin, Dresden, Leipsic, Frankfort, Mayence, the Rhine, Cologne, Paris, Havre, New York, Tour of 93 days, $655.00.

Optional route via Athens and Constantinople.—Travel with Section No. 1 to Rome, thence independently to Brindisi, Patras, Constantinople, Buda-Pesth, Vienna, where the party will be rejoined. Tour of 84 days, $595.00.

Book Reviews.

The Practice of Medicine. By HORATIO C. WOOD. A.M., M.D., LL.D. (Yale), Professor of Therapeutics and Clinical Professor of Nervous Diseases in the University of Pennsylvania : member of the National Academy of Science : and Reginald H. Fitz, A.M., M.D., Hersey Professor of the Theory and Practice of Physic in Harvard University, Visiting Physician to the Massachusetts' General Hospital, formerly Shattucks Professor of Pathological Anatomy in Harvard University. J. B. Lippincott Company, publishers, Philadelphia, 1897; cloth $6.50, sheep $7.50, half-russia $8.00. Charles Roberts, Dominion agent, 503a Cadieux st., Montreal.

At first thought one is inclined to the opinion, that in view of the large number of text-books on the practice of medicine already available any new venture in this line would be regarded generally as superfluous and unnecessary labor. In any case not the faintest hope of success could be entertained by any thoughtful writer unless a volume is produced equal or better than any of its predecessors. It must be remembered on the other hand that the rapid advances that are being made in pathology diagnosis and therapeutics calls for new works or frequent editions of old ones, and there is a strong desire on the part of all progressive physicians to possess the latest work bearing on his field of labor. With these considerations and the knowledge that a book is being issued which represents fully the progress made up to the time of its publication, a reasonable hope may be entertained that success awaits the enterprise.

The name of H. C. Wood is one of the best known on this continent, and any effort of his pen would be generally considered to be meritorious and worthy of perusal. That of Dr. Fitz is not so familiar, but holding the position of Professor of the Practice of Medicine in Harvard, and having formerly filled the chair of pathological anatomy, would entitle him to be considered an authority on any subject he should write upon.

The book is the result of their joint efforts. Dr. Wood is best known from his work on pharmacology and therapeutics, and all this portion of the book is written by him as well as the articles on nervous diseases, diseases of the muscles, acute and chronic poisoning, and most of the infectious diseases. There are one thousand and eighty-eight pages, and all the subjects usually considered in a work on practice of medicine are treated in six sections, each consisting of a number of chapters.

Most of the articles we have read gave us the impression of being very thorough, and while representing in detail everything relating to the subject, expresses it in terse, pointed language; hence the articles

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Radnor Spring—Located at RADNOR FORGES, QUE., lies right at the base of the Laurentian—the most ancient mountain range in the world. Its waters flow pure, cold, and sparkling from a bed of close gneiss rock, through a strata of potsdam, hundreds of feet to the surface, is bottled at the Spring under the personal supervision of MR. J. R. COCHRANE, M.P.S.I., late of BELFAST, IRELAND, and supplied to the market just as Nature gives it.

ANALYSIS OF RADNOR SPRING WATER

By J. T. DONALD, M.A., Professor of Chemistry, Medical Faculty, Bishop's College, and Analytical and Consulting Chemist and Assayer.

MONTREAL, June 14, 1894.

I hereby certify that I have analyzed the sample of Radnor Water received from the Canada Iron Furnace Company, Limited, and find the following results in 10,000 parts of water :—

Chloride of Sodium	14 354	Carbonate of Lime	2.940
Chloride of Potassium	.211	Carbonate of Iron	Traces.
Sulphate of Sodium	.210	Silica	.145
Sulphate of Magnesia	1.262		
Bromide of Sodium	.080	In 10,000 parts of water	20.899
Bicarbonate of Sodium	1.697		

"This analysis shows that Radnor Water is of the same class as Apollinaris and German Seltzer, and that it contains the valuable ingredients in such proportions that its use as a table water overcomes constipation and acidity of the stomach in a gentle and pleasant manner. That Sodium Chloride is naturally present, instead of being artificially added, is most important. And it must not be forgotten that the valuable Sodium Bromide, which is entirely wanting in the German Waters named, exists in appreciable quantity in the RADNOR WATER, making it a most desirable tonic" (Sgd) J. T. DONALD

THIS ANALYSIS ENDORSED BY American Government Chemists, Washington and New York.
The *Lancet*, London, 18th January, 1896.
Messrs. H. & A. Allan, Royal Mail Steamship Company.

"RADNOR" WATER is highly recommended by the Dean and Faculty of Bishop's College for its purity and adaptability for use in the sick room.

TO BE HAD FROM ALL LEADING DRUGGISTS, GROCERS, HOTELS AND CLUBS .

Radnor Water Co.

MONTREAL and RADNOR, Que

are not too lengthy. Questionable subjects and disputed points are not allowed to take up space, so that we have only condensed descriptions representing the cream of the subject. As a rule we find the subject brought right up to date; thus we have the latest in regard to hæmorrhagic rickets; the use of the thyroid gland in myxœdema; the methods of examining the blood by the Ehrlich Biondi method and Daland's hacmatokrit; the antitoxine treatment of diphtheria. The subject of appendicitis is very ably considered and the detailed rules for its treatment medically, and when surgical intervention is indicated are in accordance with the most recent views founded on the accumulated experience of late years. The modern methods of examining the stomach and its contents are fully given.

The section on diseases of the nervous system is admirable. This difficult subject is simply classified and each affection clearly described in a brief, clear manner, as only a master of the subject is capable of doing, and this vast subject is made quite comprehensible and easy to grasp in the well written articles in this book. While the subject of treatment is very full and contains only what the author endorses and what is actually of use, we were somewhat surprised to find in the treatment of septicæmia no mention of the use of antistreptococcus serum or even protonuclein, and in tuberculosis no mention is made of any serum or allied methods of treatment later than Koch's tuberculine. This conservatism may be justified by the unsettled state of our knowledge on these subjects. While typhoid fever receives adequate treatment at the hands of the authors, we think the progress of the blood serum method of diagnosis has sufficiently advanced to have been noted in a work issued in 1897. We consider this work an admirable one for the medical student as well as the busy practitioner, containing as it does in a readable, condensed form all the essentials of medicine in its most modern aspects.

Genito-Urinary Surgery and Venereal Diseases. By J. Wm. White, M.D., and Edward Martin, M.D., of Philadelphia. A book of 1042 pages, 243 engravings, and 7 colored plates; price from $6.50 to $8.00, according to binding. (Montreal agent, Chas. Roberts, 593a Cadieux st.)

This work is in every way up to date, the printing is clear, the illustrations well chosen and the colored plates of skin rashes are excellent. The practical way in which the symptoms, diagnosis and *treatment* are discussed shows that the authors are practitioners who are striving to cure and mitigate "the ills that flesh is heir to," and are not merely medical connoisseurs who are satisfied after making a correct diagnosis and consider treatment a minor detail.

The subject of syphilis is dealt with exhaustively, and the illustration of cutaneous lesions are very helpful. Syphilitic conjunctivitis is touched on—an affection ignored by most authors.

The discussion of the treatment in chronic gonorrhœa is very helpful to the puzzled practitioner.

Although somewhat extensive for the student, it is not so profuse in varying theories as some smaller books, and it is well worthy of a position in the library of the busy practitioner.

New York, May 1, 1897.

REMOVAL ANNOUNCEMENT.

After having been located at or near Broadway, and Eighth Street for more than a quarter of a century, we have, in harmony with the trend of the times, fallen in line with the uptown movement: and further to meet our expanding business we have been compelled to seek enlarged and more commodious quarters.

We can now be found in the new building, Nos. 241 and 243 W. Twenty-Third Street, near Seventh Avenue.

On and after this date my sons, William H. and Edwin C., who have been associated with me in business several years, are admitted to partnership interests under the firm name of

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We are pleased to mention "in press" several new publications for early issue, as additions to our growing catalogue of medical, theological and s bscription books.

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NEW BOOKS IN PREPARATION FOR EARLY PUBLICATION.

W. B. Saunders of Philadelphia announces that the following works will be issued by him during the early autumn and winter.

An American Text-Book of Genito-Urinary and Skin Diseases. Edited by L. Bolton Bangs, M.D., Late Professor of Genito-Urinary and Venereal Diseases, New York Post-Graduate Medical School and Hospital, and William A. Hardaway, M.D., Professor of Diseases of the Skin, Missouri Medical College.

An American Text-Book of Diseases of the Eye, Ear, Nose, and Throat.—Edited by G. E. de Schweinitz, M.D., Professor of Ophthalmology in the Jefferson Medical College, and B. Alexander Randall. M.D., Professor of Diseases of the Ear in the University of Pennsylvania and in the Philadelphia Polyclinic.

Macdonald's Surgical Diagnosis and Treatment.—Surgical Diagnosis and Treatment. By J. W. MacDonald, M.D., Graduate of Medicine of the University of Edinburgh; Licentiate of the Royal College of Surgeons, Edinburgh; Professor of the Practice of Surgery and of Clinical Surgery, Minneapolis College of Physicians and Surgeons.

Anders' Theory and Practice of Medicine.—A Text-Book of the Theory and Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico Chirurgical College, Philadelphia.

Senn's Genito-Urinary Tuberculosis.—Tuberculosis of the Genito-Urinary Apparatus, Male and Female. By Nicholas Senn, M.D., Ph.D, LL.D., Professor of the Practice of Surgery and of Clinical Surgery, Rush Medical College, Chicago.

Penrose's Gynecology.—A Text-Book of Gynecology. By Charles B. Penrose, M.D., Professor of Gynecology, University of Pennsylvania.

Hirst's Obstetrics.—A Text-Book of Obstetrics. By Barton Cooke Hirst, M.D., Professor of Obstetrics, University of Pennsylvania.

Moore's Orthopedic Surgery.—A Manual of Orthopedic Surgery. By James E. Moore, M.D., Professor of Orthopedics and Adjunct Professor of Clinical Surgery, University of Minnesota College of Medicine and Surgery.

Heisler's Embryology.—A Text-Book of Embryology. By John C. Heisler, M.D., Prosector to the Professor of Anatomy, Medical Department of the University of Pennsylvania.

Mallory and Wright's Pathological Technique.—Pathological Technique. By Frank B. Mallory, A.M., M.D., Assistant Professor of Pathology, Harvard Medical School; Assistant Pathologist to the Boston City Hospital; and James H. Wright, A.M., M.D., Instructor in Pathology, Harvard Medical School; Pathologist to the Massachusetts General Hospital.

NEW VOLUME IN SAUNDERS' AID SERIES.

Sutton and Giles' Diseases of Women.—Diseases of Women. By J. Bland Sutton, F. R. C. S., Asst. Surgeon to Middlesex Hospital, and Surgeon to Chelsea Hospital, London; and Arthur E. Giles, M.D., B.Sc. Lond., F. R. C. S. Edin., Asst. Surgeon, Chelsea Hospital, London.

PUBLISHERS' DEPARTMENT.

PREMATURE LABOR WITH HEMORRHAGE.

I had a most excellent case on which to try Sanmetto. It was that of a woman about forty years of age, who had a premature labor, followed by a terrible hemorrhage. She bled about two hours before I was called, and when getting there I found a pale looking form of a woman, which had fainted away twice from loss of blood. I gave her two teaspoonfuls of Sanmetto, and the hemorrhage ceased in about five minutes. She rested quietly for about one half hour, when she took to coughing, then the hemorrhage commenced again. I gave her another large dose of Sanmetto and it stopped again. I stayed with patient about three hours, and no more hemorrhage occurred, and so I went home, leaving no medicine except the part of the bottle of Sanmetto, advising the attendants to give it as directed if hemorrhage should occur again, but it did not occur again, and the woman is improving nicely now, whereas at first I thought it a hopeless case. I do believe that it was the Sanmetto that saved her. I have also used Sanmetto a couple of times previous to this case, in combination with ergot, and the effect was all right then also.

WM. B. STOKER, M.D.

LANCASTER, Iowa.

APPLETONS' POPULAR SCIENCE MONTHLY FOR JUNE, 1897.

APPLETONS' POPULAR SCIENCE MONTHLY for June contains several especially timely articles. THE EVOLUTION OF THE MODERN HEAVY GUN, by Prof. W. Le Conte Stevens, describes the wonderful advance made in this department during the last fifty years. THE SILENT CITY OF THE MUIR GLACIER is a sharp little article by President David S. Jordan, giving another illustration of the ready gullibility of the average citizen. David A. Wells's series is represented this month by a chapter on the FORMS AND NOMENCLATURE OF TAXATION, in which he deals at some length with the relative value of the direct and indirect forms. SUICIDE AND THE ENVIRONMENT, by Robert N. Reeves, is a discussion of the causes for the increase of suicide during the last decade. In the June installment of Prof. W. Z. Ripley's important series on RACIAL GEOGRAPHY, he shows that the notion of a single European or white race is untenable, and that there are evidences of three original and distinct types. GLOBE LIGHTNING, by M. Hagenau, gives a number of instances where this curious electrical form has been witnessed, and some speculations as to its probable cause. W. H. Ballou contributes a timely paper on the coming congress of the WORLD'S GEOLOGISTS AT ST. PETERSBURG. Mrs. Helen Kendrick Johnson discusses the important question of WOMAN SUFFRAGE AND EDUCATION, and shows the stupidity of the clamor for the general admission of women into men's colleges, as if women could obtain education in no other way. Some interesting data regarding the early use of alcoholic drinks are given by Dr. C. E. Pellew in a paper on THE HISTORY OF ALCOHOL. THE PUBLIC AND ITS PUBLIC LIBRARIES, by John Cotton Dana, deals with the best methods and ideals for the modern public library. The important place which science holds in modern education is called attention to by M. P. E. Berthelot. The subject of the SKETCH this month is Richard Owen, of New Harmony, geologist. PERNICIOUS LEGISLATIVE ACTIVITY and THE POSTAL UNION CONGRESS are the titles in the Editor's Table.

New York: D. Appleton and Company. Fifty cents a number; $5 a year.

QUEEN VICTORIA'S DIAMOND JUBILEE.

In its June number *The Ladies' Home Journal* will celebrate the Diamond Jubilee in a way distinctly its own. In an article by William George Jordan, entitled "What Victoria Has Seen," the reader will be taken on the British throne, and the marvelous panorama of the world's history for sixty years will pass before him. He will at a glance see the progress in art, science, invention, music, education; the great social reforms, the growth of nations and the advace of civilization. The whole story of the world's progress of the longest reign in English history will be vividly presented.

CANADA
MEDICAL RECORD

JUNE, 1897.

Original Communications.

NEUROSES OF NASO-PHARYNX.

Clinical Lecture delivered at the Western General Hospital, Throat and Nose Department.

By GEO. T. ROSS, M.D.
Fellow American Laryngological Association, Laryngologist to the Hospital, etc.

The various neuroses are simply expressions of perverted nerve function of different areas of the cerebro-spinal and sympathetic systems dependent on many different causes. Irritation of any sensory nerve can produce these neuroses. If the peripheral irritation is located in the nose we get nasal reflex neuroses. The irritation is transmitted by the sensory filaments of the trigeminus affected, to its respective ganglia, where if healthy action and normal nerve control exists no neurotic signs appear. But continued irritation may disturb a healthy ganglion resulting in reflex vaso motor impulse in the area whose vessels are controlled by that ganglion. The afferent sensory impression is changed into vaso-motor phenomenon. The rôle of the sympathetic ganglion is control of vaso-motion, and any interference with it causes changes in the circulation, which in turn brings about perversion in function of part so affected. When a function is physiologically altered we have a pathological condition in which disease is more or less pronounced. For instance, notice how in the strongest man the effect of a mental impression on the vaso-motor centres controlling the heart's action and general arterial supply causes loss of nerve control, and produces in some cases immediate syncope. Again, any alteration in blood supply to the nerves being brought about, their nutrition is impaired and their physiological function

perverted. Any part of the respiratory tract may be primarily or secondarily the starting point of peripheral irritation, but the nasal spaces, especially the region of the middle turbinate, the posterior part of the inferior turbinate and the septum opposite are the areas oftenest involved in nasal reflex neuroses.

For perfect action of the sense of smell we must have normal olfactory bulbs, healthy mucous membrane and free access of air with odorous particles to excite the nerve filaments. This healthy mucous membrane must cover the superior turbinated bone, the upper half of the middle turbinated, and the upper three-quarters of the posterior part of the septum as clearly shown by the plates now handed you. Perversion of smell may arise from any change in these necessary conditions. Again, one may be afflicted by imaginary odors, although the special sense remains perfect for all odors, due probably to some pathological condition of the nerve or bulb or brain lesion? Hyperesthesia of smell may follow exhausting diseases which impair nerve force and exaggerate all nervous impressions. If time permitted, cases might be related illustrating this state. Abnormal function of the olfactory nerve may be reflexly excited by troubles of the sexual organs, and a recent case is related in a medical journal where inveterate priapismus was unwittingly cured by extraction of a piece of hypertrophied inferior turbinal. McKenzie has related instances of the connection which exists by way of the sympathetic nerve between the sexual organs and the nasal mucosa. Loss of smell (anosmia) may be caused by cold in the head, acute catarrhal inflammation of nasal passages, or any change preventing access of air. Polypi, tumors of pharynx or naso pharynx or paralysis of alæ nasi may cause it. Repeated irritation as inhaling tobacco smoke of cigarettes impairs the sense of smell. Some persons with a dry mucous membrane can only smell in moist air. There are numerous phenomena of nasal reflex neuroses which time prevents us alluding to, but that of nasal cough or reflex nervous cough produced by nasal disturbances must be mentioned. I. N. Mackenzie showed that this trouble had not received the attention it merited. Much has been written about hysterical, nervous or convulsive cough, arising from reflex irritation in different parts of the body, but the most frequent cause of

this cough is some pathological change in the naso-bronchial mucosa. McKenzie first showed that cough was frequently dependent on this condition, and that it could be produced by artificial irritation even when no evident disease existed, and that there existed specially sensitive areas (cough areas) in the nose. These parts are where nerve filaments from the spheno-palatine ganglion are distributed, the reflex taking place through the vaso-dilator nerves from the superior cervical ganglion of the sympathetic.

The causes of nasal cough are simple coryza, hypertrophic rhinitis, spurs and deflection of septum, polyps, hypertrophy of the cavernous tissue over the vomer, adenoids of naso-pharynx, etc. Almost every pathological condition causing local irritation in nasal mucosa may produce cough, but hypertrophy of the middle turbinate seems the most constant cause. The importance of locating this cause of cough will appeal to you when you remember that cough is constant in the beginning of lung disease and is the advance sign of phthisis when as yet the usual physical signs are absent. Many persons have been sent to Florida, Colorado, etc., because of cough when the trouble was a simple reflex one. My case book shows records of this kind where by correcting existing local trouble in the upper portion of the respiratory tract the cough disappeared. Treatment should be directed, however, not only to the local trouble when it exists but also to improvement of the general nervous system, as without some functional alterations of the nerve centres, whether of the sympathetic or of the basal ganglia, there could be no manifestation of reflex phenomena. Sometimes a cough of years' standing has been cured in a few days or weeks by appropriate treatment of the nasal disease. Burnett refers to a case of cough of three years' standing, causing great anxiety to the patient and her friends. This was cured in one week by nasal treatment.

A case is related by Bobone where a patient suffered, periodically from spasmodic attacks of sneezing of a very violent nature. On two occasions the attacks followed so rapidly that cyanosis and collapse occurred, the patient almost dying. The trouble was permanently cured by treating existing nasal disease. Cases of epilepsy are said to have been

cured by relief of co-existent nasal affection, but probably in these instances some antecedent epileptic proclivities were aggravated by nasal irritation which acted as a prominent exciting cause. Megrim, supra-orbital neuralgia, diffuse headache, œdematous conditions of nose and conjunctiva are said by Hack to be almost invariably nasal in origin, and can be cured by galvano-caustic applications to the turbinated bodies. These views are supported by many other authorities. Stammering and stuttering frequently result reflexly from irritation in the nose and naso-pharynx. Neuroses of the pharynx are divided into impairment of the sensory and of the motor functions. As regards sensation, we get conditions of anæsthesia, hyperæsthesia, paræsthesia and neuralgia. Pharyngeal anæsthesia is a sign of progressive bulbar disease. It is often caused by diphtheritic paralysis, and is sometimes found in insane patients who have no paralysis elsewhere. Loss of sensation here generally means the same condition in larynx, velum, and surrounding structures. Galvanism to throat and nerve tonics are about all you can expect benefit from.

Hyperæsthesia of pharynx is a common neurosis in this region. The points of greatest sensitiveness are arch of palate and vault of pharynx. Cocaine and resorcin spray will probably overcome what would otherwise prevent laryngoscopic examination. Any existing chronic inflammation or diathesis calls for treatment according to indications. Paræsthesia of pharynx most frequently results from hysteria, and often follows removal of foreign body. The sensations are those of a hair, fishbone or grape-seed tickling the throat. It is also a common sign of subacute and follicular pharyngitis. If caused by a foreign body the sensation disappears usually in a few days after its removal. It is a common occurrence to have people tell you after removal of an offending substance that it is still there owing to the peripheral nerves continuing to convey the sensation. On subsidence of inflammation the paræsthesia disappears, but this does not always happen at once, so to produce a good moral effect exhibit the offending article if possible. Remember that in some cases this disordered sensation will remain for months or years, or recur at intervals, when the cure will be difficult. Treatment consists in allay-

ing inflammations giving bromides and soothing anodynes with zinc, arsenic and quinine.

Neuralgia, myalgia or rheumatism of the throat has been described, but difficulty is often found in locating the exact spot from which pain emanates. The removal of an enlarged follicle will sometimes cause pain to disappear, but in hysterical or nervous women there may be no apparent cause, and then we must regard it as a local sign of a general condition. Where no local cause calls for treatment you must direct your energies to the constitutional state.

Neurosis of motion is divided into paralyses and spasms. Paralysis may be due to bulbar disease, diphtheria, or may complicate facial paralysis. The central lesions causing this neurosis are bulbar myelitis, hemorrhage, embolism, tumors and meningitis of base. The result is usually a fatal ending. The treatment would be local blood letting, ice bags to nape of neck; salines and other antiphlogistic measures in the acute form. In the chronic form there is no treatment of any avail. Many things are advised, but no good results have been got. That paralysis following diphtheria and membranous sore throat usually follows fourteen days after convalesence has begun. Must use Galvanism and Faradism every other day until improvement. Strychnine is useful. May have to feed by stomach tube.

The more severe spasms of the pharynx occur in acute uvulitis, œdema of glottis, hydrophobia, and as reflex signs of central tumors. Remove all possible sources of irritation, as intranasal or other growths, disorders, etc. If a simple neurotic state is the cause, hypophosphites, iron and arsenic are indicated. Diet, exercise and freedom from all excitement are essential.

Selected Article.

THE NEW TUBERCULIN OF DR. KOCH.

The following translation and epitome of Dr. Koch's recent article in *Deutsche Medicinische, Wochenschrift*, April 1, 1897, in the *Medical Review*, conveys the essential portion of this interesting communication.

Prof. Robert Koch has always thought that there existed two kinds of immunities. The one is the immunity against chemical toxins: the animal, as in tetanus for example, is vaccinated with a serum antagonistic to the tetanic toxins; there remains during a more or less lengthy period of time a resistance against the action of these toxins. After such an immunization large quantities of the toxins can be introduced into the circulation with impunity. On the contrary, the serum has no action against the bacilli of tetanus themselves, which can proliferate and prosper in an immunized organism.

The other immunity, of which the type is seen in the typhoid fever and cholera serums, is an anti-bacterial immunity with opposite properties to the antitoxic serum: the animal immunized with the virulent cultures destroys very rapidly the specific microbic organisms which are introduced after the immunization. On the contrary, the animals remain sensitive to the toxins which, in large doses, cause death.

In tuberculosis it is necessary to determine which kind of immunity is proper and best. Dr. Koch has determined in acute miliary tuberculosis of men, as well as in experimental tuberculosis, that the bacilli, which are present in enormous quantities in the organism, suddenly entirely disappear at various intervals. For a variable length of time no bacilli can be detected. He has explained this disappearance of the tubercle bacilli during the evolution of miliary tuberculosis by supposing a natural immunizing process.

This fact, which proves the existence of a tubercular immunity, brings out at the same time one of the essential conditions. The immunity manifests itself when the organization is most thoroughly saturated with bacilli; when all the organs and tissues are filled with bacilli and their products. It seems that immunity only begins after the tissues have absorbed and digested innumerable bacilli.

If one wishes to realize experimental immunity, that is, if one wishes to immunize against tuberculosis, it is necessary to find a process which permits of an introduction in the

organism of a considerable number of bacilli which can be easily absorbed and digested by the tissues.

The researches made in this direction have encountered many difficulties. All experiments made with living bacilli are with cultures treated with chloroform, heat, mineral acids, have given negative results until Dr. Koch conceived the idea of treating the cultures with glycerine. This is indeed the original tuberculin of Dr. Koch.

The facts found in connection with the original tuberculin, clinically as well as in experiments on animals, demonstrated that this tuberculin only immunized against the toxins, that is to say, it conferred an immunity against the substances formed by the tubercle bacilli. It did not fortify the organism against the continuous growth of the bacilli. Now as the two immunities are necessary at the same time (the antitoxic immunity, as in tetanus, and the anti-bacterial immunity, as in typhoid fever and cholera), it remained to discover a second process capable to immunize against the bacilli themselves.

Always guided by the clinical facts of acute miliary tuberculosis, Dr. Koch believed that this second substance (the antibacterial part) is present, along with the first in the ordinary tubercle cultures. Then it only remained to find a process which permitted a common isolation of these two immunizing factors. The new tuberculin which Dr. Koch has finally obtained after ten years of research, fulfills his double indication, that is to say, it confers an antibacterial immunity and, at the same time, immunizes against the toxins.

The process employed by Dr. Koch which permits a realization of the essential conditions of immunization (the ability of the organism to absorb and destroy a large number of bacilli) is very simple, purely mechanical. It consists in a trituration of dried tubercle cultures in a mortar and a separation, by centrifigugation, of an aqueous suspension of the same.

The following are the reasons which induced Dr. Koch to have recourse to mechanical processes :

In the course of his researches to find a method to render bacilli soluble and consequently more assimilable, he formed an opinion that that which opposed this transformation is a substance intimately incorporated in the bacilli and which is composed of two fatty acids. It is to disengage this substance that Dr. Koch had recourse to trituration.

If a desiccated culture of tubercle bacilli is ground in a mortar most of the organisms will be disintegrated and pulverized. Only a few will remain intact. In order to entirely separate the whole, unpulverized bacilli from the powder the

mass is mixed with sterilized water and placed in a centrifugal precipitator revolving at the rate of 4000 times per minute. The mixture will be divided into two layers; the upper, supernatent layer being lightly opalescent, but perfectly transparent; and a viscid precipitate will be found clinging to the bottom of the tube. The sediment is again desiccated, triturated and precipitated in the centrifuge. The process is repeated many times until all the bacilli are pulverized and no more sediment forms.

Chemical, microscopical and experimental examinations of the liquids after each precipitation show that the transparent liquid obtained from the first centrifugation is entirely different from the liquids yielded by the final triturations and precipitations. The first liquid does not seem to differ much from the original tuberculin. The liquid obtained from the last centrifugations has all the properties of natural immunization. It is the liquid resulting from the last triturations that constitutes the new tuberculin.

In order to obtain an active tuberculin it is necessary to employ cultures which are as young as possible and as virulent as possible. They must be desiccated in a vacuum and kept, as far as possible, from the light during the processes of sedimentation. The addition of even a minute amount of any antiseptic alters the immunizing properties of the new tuberculin. Hence, absolute cleanliness must be manifested throughout all the manipulations. The last liquid separated by the centrifugal sediments is preserved in glycerine and is ready for use.

Researches upon animals has led Dr. Koch to believe that his new tuberculin possesses both immunizing and curative properties if the treatment is not commenced too late. Contrary to the old tuberculin, the new does not give any general or local reaction in moderate doses. The new is administered as is the old subcutaneously.

In order to immunize a guinea pig it is necessary to use a massive dose at the beginning, which is absorbed without provoking any general symptoms. The guinea pigs become progressively and completely immunized, supporting without infection repeated injections of virulent tubercle cultures. The points of inoculation quickly disappear without leaving any traces; the adjacent lymphatic glands do not infiltrate, as ordinarily, nor do they undergo caseous degeneration. If the animal is subsequently killed no tubercle bacilli will be found.

If the injections of the virulent cultures are made before immunity is thoroughly established, one will observe a simple caseous degeneration of the lymphatic glands in the immediate neighborhood, without any symptoms of a general

infection. The partial immunity will limit the infection to a small region about the site of injection of the virulent cultures.

The animals which are already tubercular, the use of the new tuberculin is to be begun with small doses; the doses are rapidly augmented in subsequent injections. If the treat- is begun at a good hour the guinea pig will recover in from five days to three weeks.

The initial dose of Dr. Koch's new preparation is $\frac{1}{500}$ of a milligramme. The commercial preparation contains 10 milligrammes of tuberculin in each cubic centimeter; it is necessary, then, to dilute the tuberculin with proper quantities of sterile physiological salt solution.

The dose of $\frac{1}{500}$ milligramme does not as a rule produce any febrile reaction; and if a reaction takes place the size of the dose must be diminished. In this character the new tuberculin is directly opposite from the old. In the original the reaction was the sign of the proper action of the serum. The injections of the new serum are given every other day. The dose is augmented so slowly that the febrile reaction will never exceed one-half of one degree (C.). If the reactive temperature goes higher the injections must be reduced. By this minute increase in the size of the dose 20 milligrammes may finally be borne without a reaction. Often the curative effect will be obtained when the size of the dose reaches 0.5 to 0.10 milligramme.

The treatment of tuberculosis with Prof. Koch's new tuberculin will only benefit when it is begun at an early and timely hour. When the symptoms of secondary infection are present the tuberculin is found to be impotent, and the streptococci will continue their work of destruction. To recognize this secondary pyogenic infection the temperature must be studied. When the fever rises above 38° (C) favorable results from the use of the remedy are exceptions.

Dr. Koch has used the tuberculin in a large number of cases of tuberculosis. The treatment brought about a certain amelioration in all cases, and in some a cure resulted. In cases of lupus, as well as in tuberculosis, the tuberculin did not produce any local reaction. In pulmonary tuberculosis a great increase of moist râles was generally noticed, while the expectoration, however, became less and less. The bacilli progressively disappeared from the sputum. Very soon after beginning the treatment the weight of the patients increased, the fever fell, the difference between the morning and the evening temperature became less and less, finally remaining normal during the twenty-four hours.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

Associate Professor of Medicine and Neurology, and Professor of Clinical Medicine University of Bishop's College; Physician Western Hospital.

ON MOTOR-INSUFFICIENCE OF THE STOMACH.

(*Berl. klin. Woch.*, No. 11, 1897. *International Medical Magazine.*) By Rosenheim.

The motor power of the stomach is often the most important point to determine, and this is by no means always dependent upon the capacity of the organ. Splashing under the umbilicus five hours after ingestion of fluid, visible peristaltic and antiperistaltic waves and vomiting of long retained food are aids in diagnosis, but the latter is only assured by the discovery that the stomach is not empty seven hours after a test dinner or three hours after a test breakfast, or even more positively after a night's fast. The motor weakness may occur suddenly in neurasthenic individuals and after errors in diet when it usually disappears soon with proper handling. But a sudden onset is apt to occur after injury, even when this does not directly affect the stomach, and is then due to a paralytic condition of the viscus which may become permanent and resist treatment strongly. The gastric crises of tabes may cause motor weakness by overstrain in vomiting, and the condition is frequently present in connection with the epigastric herniæ of which Witzel, Linden, Bohland, and others have written. The prognosis is usually, but not always dependent upon the grade of the insufficience. In patients of nervous dispositions, especially, one often finds mild grade which is very persistent, and a prognosis can never be except after watching the results of treatment for a time. Treatment should be (1) dietetic—a dry diet when the stomach cannot empty itself of moderate quantities of liquids, and when the patient cannot rest after meals. When these two conditions can be fulfilled fluid may be allowed in small quantities frequently taken. (2) Local—contrary to Boas he considers local treatment always indicated—in severe forms to remove food remnants and prevent fermentation, in less severe cases for its tonic effect, and one should always use the douche as recommended by the author, fluids of low temperature (22°–

25° C.) and containing one of the numerous stomachics. Massage, electricity and particularly hydrotherapy are of use for their constitutional effects. When this treatment has no good results gastroenterostomy is in place. He warns strongly against the milder procedure of only breaking up adhesions, as such cases usually relapse and are often worse subsequently.

THE TREATMENT OF MIGRAINE.

In a paper read before the New York Neurological Society, Dr. C. E. Herter (*Journal of Nerv. and Ment. Dis.*, New York, January, 1897, p. 112) stated that he regards migraine as a toxæmic condition, the toxines (probably albumoses) being absorbed from the gastro-intestinal canal. In seven patients he had examined the contents of the stomach during the paroxysm, and in these there was evidence of complete arrest of gastric digestion.

He therefore recommends, as an initial step in its treatment, the washing out of the stomach with water at a temperature of not less than 105 deg. F. The sooner that this is done after the beginning of the attack the better are the results. The patient should therefore be taught to do it for himself. Herter claims that this relieves the pain and occasionally aborts the attack.

The lavage should be employed in every case whether food be present in the stomach or not, but the results are better in the former case.

After the washing out he gives a rapidly acting aperient, such as a teaspoonful or dessert-spoonful of Carlsbad salts. The action of this should be aided by a soap and water enema.

Should the headache not be removed by these means, or should it return, it is much more easily treated after these initial steps.

He does not recommend antipyrin, but speaks in favor of phenacetin (gr. x.); of antifebrin (gr. v.); and especially of ammonol. Black coffee without sugar, or citrate of caffeine he had also found efficacious. Where the face was much flushed ergot sometimes did good, provided that it could be retained by the stomach.

Rest and quiet are of great importance. In the intervals between the attacks milk should constitute the proteid food of at least one meal a day, and red meat should not be allowed more than once a day. Many sufferers from migraine cannot tolerate fruits.

A change from a sedentary to an out-door life is of benefit to many, and bicycle or horseback riding are the best forms of exercise.

There are some difficulties in the way of accepting these views, the most formidable of these being, perhaps, the unilateral character of the headache, which is contrary to what is usually found in toxic conditions. The strong association existing between epilepsy and hemicrania should also be borne in mind, with the undoubtedly hereditary character of these diseases. Should it be decided to give this method of treatment a trial (and Dr. Herter's very brilliant results certainly justify this), it would be well to approach the subject of washing out the stomach during an interval between the attacks, and not to startle a nervous patient during a paroxysm by suddenly suggesting what, to the lay mind, might appear to be a somewhat formidable and highly unpleasant operation."—*Treatment.*

DIABETES A DISEASE OF HIGH CIVILIZATION.

Thoughtful men long ago reached the conclusion that the conditions of life afforded by what is termed "high civilization" are not conducive to health, but, on the contrary, tend to physical deterioration. The class statistics of death from diabetes mellitus show this very clearly; for example, according to Saundby, the rate of mortality from diabetes has risen, in Paris, within the last ten years, from an average of eight in each 100,000 population to an average of thirteen; while in Copenhagen it has risen from five to eight; and in England and Wales it has increased in fourteen years seventy per cent., after allowing for the increased population.

Bertillion, a leading physician of Paris, has shown that, while this is true of all classes of persons, the increase is much more pronounced among the wealthy classes than among the poor, the average in the poorer parts of the city being only seven to nine in 100,000, while in the wealthy quarters the average is sixteen to twenty.

Recent investigations by Marie and others show that the old idea that the liver is usually healthy in diabetes is an error, and that, on the contrary, it is generally the seat of interstitial hepatitis. Accumulating facts point more and more directly to the idea that diabetes is, like most other chronic disorders, the result of vicious habits of life, and probably chiefly dependent upon errors in diet. The liver is a long-suffering organ, and seldom undergoes derangement of any sort except from abuses heaped upon it through dietetic errors, its relations with the digestive tract being such that it is compelled to perform an immense amount of unnecessary labor as the result of any disturbance of digestion which impairs the integrity of the digestive process.

The cheapness of sugar and its various products, and the consequent increase of the use of sweets of various sorts, including confections, jellies, syrups, etc., must be held largely accountable for the enormous increase in frequency of this disorder within the last two decades.

Especially to be deprecated is the custom of adding syrups sugar, and other sweets to farinaceous articles of foods, such as oatmeal, breakfast cakes, etc. The absurdity of such a practise is apparent when one recalls the fact that farinaceous foods are fully one-half starch, and that this starch is all converted into sugar in the process of digestion; hence to add syrup or sugar to oatmeal is simply adding sugar to sugar, or sweetening syrup with honey. It should be remembered also that cane-sugar is not an alimentary principle which is naturally adapted to the human digestive apparatus.

Considered from a zoological stand-point, man is unquestionably dietetically related to the gorilla, the chimpanzee, and the orang-outang, his nearest relatives in the animal kingdom. These animals subsist, when in their natural state, exclusively upon fruits and nuts, the chief saccharine element of which is levulose, a sugar which is much sweeter than cane sugar, and which is closely allied to, if not identical with, the final product of starch digestion in the alimentary canal.

Starch, when cooked, begins to undergo digestion as soon as it is received into the mouth. The conversion of this element continues for half to three quarters of an hour after the food enters the stomach, and may extend so far as to convert almost the entire amount of starch taken, when conditions are favorable. The writer has found as high as fourteen per cent. of sugar after a test meal consisting of water and one and one-half ounces of dried bread which contained no sugar. Cane-sugar is not acted upon by the saliva, and undergoes no change until the intestines are reached, when, coming in contact with the intestinal fluid, it is transformed into a sugar which is capable of assimilation. Cane-sugar is, however, capable of fermentation while remaining in the stomach, on account of the presence of microbes, which first transform it into a more highly hydrated form of sugar than when converted into alcohol, and later, into acetic and other fatty acids.

It is thus apparent that cane-sugar, while not itself readily digested, also interferes with the digestion of other foods. When taken in large quantities, it must impose an enormous amount of extra labor upon the liver by leading to the absorption of large quantities of imperfectly converted starch and an excess of saccharine material. In addition to this, the products of fermentation resulting from the presence of sugar must exercise a most damaging influence upon the

liver, and may be the cause of the interstitial hepatitis which commonly accompanies diabetes. Loeb has recently expressed the opinion that in many cases sugar is present in the urine in small quantities for many years before its discovery, the quantity of urine finally increasing to such an extent as to lead the patient to consult a physician.

In the writer's opinion, cane-sugar is an unwholesome article of food, and should be discarded from our tables. If used at all, it should be only in moderate quantities, as a means of rendering palatable excessively acid fruits. Its use, in such cases even, is decidedly doubtful, since the acidity of sour fruits may be equally well neutralized by the addition of sweet fruits. It should be remembered also that sugar, from a chemical standpoint, is an acid, and hence, when added to sour fruit, does not in the slightest degree neutralize or antidote the free acids present, but only hides them, or prevents their recognition by the nerves of taste.

The love for sweets is doubtless a natural instinct. Sweet foods are, as a rule, wholesome, and the taste for them may be safely indulged without stint; but this rule applies only to those possessed of the sweet flavors found in nature. If a natural sugar, like that contained in Trommer's Malt, were substituted for the cane-sugar of commerce, a great gain would be made so far as the digestion is concerned, as this is a perfectly natural sugar, produced by the diastetic digestion of starch, and is precisely the same as that resulting from the action of saliva upon starch.—*Modern Medicine.*

A CONTRIBUTION TO THE PHYSIOLOGY OF SLEEP, BASED UPON PLETHYSMOGRAPHIC EXPERIMENTS.

W. H. Howell contributes a lengthy article on this subject in the May, 1897, number of *The Journal of Experimental Medicine.* The object of the numerous experiments was to determine the variation in volume of the arm during the entire period of sleep. The experiments were made upon himself. The plethysmograph is described in detail and the method of using it, and plates of two of the successful experiments are given. The curves began to fall from the moment the sleeper closed his eyes, which meant that the arm in the water plethysmograph increased in volume, and continues to do so for from an hour to one and a half hours after sleep appears. It remains the same for an hour or two, when the curves begin to rise slowly at first, more rapidly just before awaking, after which the arm has returned to the volume which existed previous to going to sleep, some 4 to 4½ hours previously. Secondary variations in the curve occurred at more or less regular intervals of about an hour, other

oscillations occurred irregularly, due to noises or other external stimuli and movements of the sleeper. Mosso's experiments are referred to by which it was conclusively proved that the limbs enlarged during sleep, due to vascular dilatation; he showed also that the volume of the brain diminished during sleep, and that any unusual mental activity increased the brain volume and lessened that of the limbs, and other observers have found a definite relationship existing between the circulation in the brain and general arterial pressure. There being no vaso-motor fibres in the brain vessels, the circulation there is regulated passively by variations in arterial pressure on the remainder of the body. The skin is flushed, and of a higher temperature during sleep, and there is a general fall of blood pressure.

Assuming that the volume of the brain circulation stands in reciprocal relationship to the volume of the arm, the changes in the amount of blood circulating through the brain during sleep may be stated as follows: At the commencment of the period preparatory to sleep the blood flow through the brain begins to diminish in quantity, owing to the fall in arterial pressure, and for a period of an hour or more after sleep has appeared the blood flow grows less and less, following the continued diminution in arterial pressure. After reaching its minimum, the volume of the brain circulation remains practically constant, with the exception of the temporary variations which have been referred to previously, for one or two hours, or possibly longer, if the period of sleep lasts for a greater time than was obtained in these experiments. The blood flow through the brain begins then to increase gradually, following the rise in blood pressure produced by the slow constriction of the skin vessels, and this increase becomes much more rapid for the short period of one-half to three quarters of an hour preceding spontaneous awaking. At the time of awaking, therefore, the volume of the blood flowing through the brain is approximately the same as at the time sleep appeared.

It is considered probable that the internal organs do not share in this dilatation in the skin, but that the blood diminishes in them as it does in the brain. The rhythmic oscillations in the curve referred to are supposed to be due to a rhythmic increase and relaxation of tone in that part of the vaso constrictor centre controlling the vessels of the skin changes which are characteristic of the vaso-motor centre.

In regard to the cause of sleep the writer does not yet endorse the recent views of Cajal that the neuroglia cells expand between the communicating processes of the cell units acting as insulators or Duval's theory that conductivity is broken by the withdrawal of the cell processes from each

other by Amœbiform contraction; conductivity being re-established upon awaking, but rather supports the view that it is, owing primarily to a fatigue of the elements of the central nervous system. Obersteiner and Preyer suppose the production of an acid which accumulating produces fatigue probably lactic. Pflüger supposes the exhaustion of molecular oxygen as the cause. Others have supposed the diminished cerebral circulation to be the cause of sleep rather than the result.

The explanation which the author has been led to give to the plethysmographic curves, described in this paper, has suggested to him a theory of sleep that, in some of its features at least, is new. This theory may be stated briefly as follows: The immediate cause of normal sleep lies in a vascular dilatation (of the skin) that causes a fall of blood pressure in the arteries at the base of the brain, and thereby produces an anæmic condition in the cortex cerebri. This condition of anæmia, in connection with the withdrawal of external stimuli, causes a depression of the psychical processes in the brain cells below the threshold of consciousness. The fall of blood pressure is due, in the first place, to a relaxation of tone in that portion of the vaso-motor centre controlling the skin vessels. The immediate cause of normal awaking, on the contrary, is found in the augmented flow of blood to the brain that follows upon the gradual constriction of the skin vessels as the vaso-motor centre recovers its tone. The periodicity of sleep is, therefore, directly connected with a rhythmic loss and resumption of tone in the vaso-motor centre. Throughout the waking period the vaso-motor centre is under continual stimulation, and is, therefore, in continual activity. Sensory impulses, especially from the skin and the cutaneous sense organs, are at all times falling into the central nervous system in greater or less quantities, and through a reflex pressor action on the vaso-motor centre, these sensory impulses keep up a constant activity of the centre, particularly of that part controlling the skin vessels, as is indicated by the striking effect of such stimuli upon the volume of a limb when measured plethsmographically. Mental activity in all its forms is accompanied by a similar pressor effect upon the vaso-motor centre, which is likewise known to effect the skin circulation. During the waking hours, therefore, the vaso-motor centre is in uninterrupted activity, and the result must be the production of a condition of fatigue in this centre proportionate to the amount of stimulation. If the fatigue is sufficiently pronounced, the centre will relax and sleep ensue in spite of even strong sensory or mental stimuli. If the fatigue is less marked, as is normally the case at the end of a waking period, adequate relaxation takes place only after the

withdrawal of sensory and mental stimuli, and our voluntary preparations for sleep consist essentially in devices to minimize these stimuli. That the vaso-motor centre is susceptible to fatigue, the author has shown to his own satistion by experiments consisting in the continuous stimulation of sensory nerves (sciatic), in curarized and narcotized animals. The great rise of blood pressure that results from such stimulation soon passes off more or less completely, and that this result is owing to fatigue of the centre rather than to fatigue of the muscles in the walls of the blood-vessels is indicated by the fact that the blood-vessels in the ear of a rabbit may be kept in a condition of strong contraction for a long period (over an hour at least) by constant tetanic stimulation of the peripheral end of the cervical sympathetic nerve.

In addition to the effect of the cerebral anæmia, an accessory favoring condition to the production of sleep may be found in a certain degree of fatigue of the parts of the brain mediating psychical processes. Portions of the sensory and the association areas of the cortex, using Flechsig's nomenclature, must be active during the greater part of the waking period, and probably, therefore, lose their irritability to a greater or less extent. Upon the withdrawal of the normal blood supply, their irritability will tend to fall more quickly below the threshold of consciousness in consequence of this fatigue. We might, therefore, say that three factors combine to produce normal sleep: 1. A diminution of irritability, caused by fatigue, of large portions of the cortical area. 2. Voluntary withdrawal of sensory and mental stimuli involved in the preparations for sleep. 3. A diminished blood supply to the brain, owing to a relaxation of tone in the vaso-motor centre and the fall of general arterial pressure thereby produced. The last factor is the immediate cause of sleep, and explains its comparatively sudden and nearly simultaneous occurrence over the entire cortex. The relative importance of these three factors will vary, naturally, with attending circumstances. It would seem that the third condition must always precede sleep, and that, under normal relations, it is the determining element in the production of the unconsciousness of sleep. A combination of the 2nd and 3rd factors is probably adequate to cause sleep without preceding fatigue of the central nervous system. This probability is indicated by many facts in ordinary experience, such, for example, as the sleepiness felt when quietly resting after a heavy meal—the fall of blood pressure in this case following upon a dilatation in the splanchnic area. Perhaps a better instance is the often-quoted case of Strümpell's. In this case a boy whose only avenues of sensory communication with the outside world were the right eye and the left ear could be sent to sleep

at any time by bandaging the eye and stopping up the ear. On the contrary, the normal condition of sleepiness that makes itself distinctly felt to the individual and that follows upon healthy active exertion of body and mind is most probably connected with a genuine fatigue of the vaso-motor centre, particularly, I believe, of the part controlling the skin vessels. When in this condition, only strong sensory or mental stimuli are adequate to keep the centre in tone and prevent a fall of blood pressure, and, if the fatigue is excessive, even such means fail and sleep ensues quite against the will.

The probability of a relationship between the supply of blood to the brain and the condition of sleep is indicated also by the phenomena preceding normal awaking. For some time before awaking the arm undergoes a gradual constriction, and in the half-hour or so just preceding awaking this constriction becomes comparatively rapid, bringing the arm at the time of awaking nearly or completely to its normal volume. Upon the explanation of the plethysmographic curve that has been adopted in this paper, these changes would mean that after a certain period of relaxation the vaso-motor centre gradually regains its tone, resumption being more rapid shortly before awaking. The result of this process is to force a greater and greater supply of blood through the rested brain until finally the threshold of consciousness is overstepped, and spontaneous awaking occurs. It is probable that under ordinary conditions awaking is almost always accelerated by the effect of some accidental external or internal stimulus. At the same time it must be admitted that if such stimuli were removed spontaneous wakening would eventually follow the gradually increasing vascular tone. It is an interesting fact that, in the plethsmographic curves taken by the author, there was always a marked constriction of the arm at the moment of final awaking. As the subject awoke, he could see the pen rising rapidly upon the kymograph. The effect in this case seemed to be analogous to that caused by mental activity. The sudden increase in mental processes coincident with the access of full consciousness acted as a stimulus to the vaso-motor centre, and the constriction produced was sudden and marked. Subsequently the pen again sank a certain distance, remaining finally at a level approximately the same as that shown at the time of going to sleep.

The normal periodicity of sleep, which is its most characteristic phenomena and the one most difficult of explanation upon previous theories, is to be referred finally to the characteristic of the vaso-motor centre. The latter part of the paper refers to theopinions of others who have arrived at somewhat similar conclusions, more especially that of Hill, who advocates the theory that sleep depends on an anaemia of

the brain, brought about by relaxation in tone of the splanchnic area. Some objections to his theory are then mentioned. Mere increase of blood does not alone excite functional activity in the skeletal muscles or glands, although in the kidney the secretions are much influenced by the blood supply.

The brain is more complex, but the evidence shows that the irritability of its cells is directly influenced by the amount of blood supply, but the relation of the blood supply to functional activity is still an unsolved problem.

A NEW TEST FOR SEMINAL FLUID.

The recognition of spermatozoa in medico-legal researches is often a matter of considerable difficulty, especially if the material under examination is of old date. Great interest consequently attaches to the test for semen devised by Florence, of Lyons, which has recently been reproduced in the *Boston Medical and Surgical Journal*, in conjunction with a confirmatory test due to the ingenuity of Dr. W. F. Whitney. Florence's test comprises the use of a reagent often made use of in testing alkaloids, and is known as the tri-iodide of potassium. The test solution contains 1.65 parts of iodide of potassium, 2.54 parts of pure iodine, 30 parts of distilled water. A drop of this solution placed side by side on a slide with a drop of fluid obtained by moistening the seminal stain results in the formation of a number of characteristic brownish-red, pointed crystals, rhomboidal in shape, and presenting a certain resemblance to haemin crystals. Dr. Wyatt Johnson, who has carried out some investigations with this test, reports that he has been enabled to obtain the reaction with stains upwards of twelve months old, and not only is the reaction not obtained with other organic secretions, but even the semen of animals gives a much less marked reaction. In the same journal Dr. W. F. Whitney confirms the value of the test, which, however, gives a precipitate with alkaloids, and he suggests another test, which may be used in conjunction with the foregoing. A drop of fluid obtained from the moistened stain is evaporated on a slide and fixed by heat in the usual way. The resulting film is then stained with eosin and methyl green, when it will be seen that the head of the spermatozoon is stained at the base of a deep green colour, while the anterior part and the tail stain red. This staining reaction is well marked only in human semen, so that a possible source of error is obviated.—*Medical Press, June* 2, 1897.

SUSCEPTIBILITY OF INFANTS TO HOSPITALISM

Dr. Henry Dwight Chapin has a paper in the *Archives of Pediatrics* on the Babies' wards of the New York Postgrad-

uate Hospital, in which the above subject is referred to as follows:

As there appears to be a tendency toward a multiplication of hospitals for infants, it seems proper to consider the effects that such temporary housing and treatment are liable to have upon sick babies. In making a few observations upon this subject, the writer speaks only for himself. An experience of twelve years in studying the subject in the hospital, summer as well as winter, may serve to justify any conclusions. During this time, the observance of certain very constant phenomena lead me to believe that infants should be placed in an hospital only under exceptional circumstances. The principal reason should be an entire inability to secure proper care and attendance at home. Entrance to an hospital should be limited to acute cases of illness, and discharge should take place immediately upon recovery, even if the latter is only partial. A speedy or satisfactory convalescence is impossible for an infant in an hospital. The earlier the age the greater is the susceptibility to hospitalism, and the quicker it ensues. One of the first conditions to be noted is a progressive loss of weight that is not dependent upon the original disease, as it often takes place after recovery when the infant is not sent out soon enough. This ensuing atrophy bears an inverse ratio to the age, and is especially marked under six months. Older infants are less susceptible, but if kept long enough they will surely show stationary and then losing weight. This often takes place while the infant is apparently digesting its food, which may be the best that can be artificially produced. Beginning atrophy, not depending upon a lesion, should be an indication for immediate discharge from the hospital. If it gets beyond a certain point, no change of environment or food will save the infant. Accompanying this condition, there is marked hydræmia, dryness of the skin, and wearing off of the hair from the occiput. As a general rule, young infants should not be kept in hospital longer than a fortnight, unless for exceptional reasons. Another condition liable to develop in hospital infants is latent pneumonia usually of the hypostatic variety. It is very insidious, usually accompanied by little or no rise in temperature, and is often detected for the first time at the autopsy. I have very rarely made a post-mortem upon an infant dying from any cause in hospital that has not shown this lesion.

Female children that are kept too long in hospital frequently get up a more or less severe form of vaginitis. This does not necessarily point to any want of cleanliness or attention, but I regard it frequently as due to lack of tone and vulnerability of all the mucous membranes that accompany hospitalism. I have recently seen this exemplified at the Willard

Parker Hospital. In the diphtheria wards there are no cases of vaginitis, but in the scarlatina wards where the children are necessarily kept much longer, there are many cases. The same good care and cleanliness are observed in both divisions of the hospital, and the affection ensues from the necessary detention in the hospital. Children suffering from any form of tuberculosis occasionally get up a rather virulent form of vaginitis in hospital.

Outbreaks of contagious diseases are constant dangers in hospitals for infants and children, and can only be guarded against by the greatest care. Diphtheria, measles and pertussis are, from the nature of these diseases, most liable to creep in. Diphtheria sometimes appears to originate without hetero-infection, doubtless from Klebs-Leoffler bacilli that have long been latent in the throat. I have seen cases thus develop that have been for weeks in the hospital, without being visited by friends or in any possible contact with a case of the disease. This is especially liable to happen is scrofulous infants with enlarged glands, nasal catarrh and adenoids. Visitors, however, are often responsible for the bringing of contagion, and all possible safeguards should be thrown around this source of danger. It is impossible to entirely exclude parents, but all others, especially children, should be refused admittance for fear of contagion. In view of the risks to which infants are subjected in collecting masses of them together, it seems proper that extreme care should be exercised when considering the subject of an hospital. Those who are responsible for the latter are not justified in simply supplying average care and condition. The hygienic surrounding must be of the best, the nursing of a very high grade, and a most scrupulous and painstaking oversight exercised. One good nurse should be supplied to not more than four or five sick infants, and in some cases one nurse may by required for only two patients. Finally, the infants should be particularly watched for the first signs of hospitalism, and promptly discharged before the malady has time to gain any hold on them. Many years ago Dr. A. Jacobi called attention to the susceptibility of infants to hospitalism, and his warning does not seem to have attracted the attention that it warranted.

DIGITALIS IN PNEUMONIA AND INFLUENZA.

In the *Revue de Medecine* for March 10, *New York Medical Journal*, M. Gingeot and M. Deguy publish a detailed account of twelve cases in which they employed digitalis with excellent results, especially in influenza. From a clinicial point of view the authors take into account only the differ-

ent forms of the infection of influenza, which are so variable that the diagnosis is often extremely difficult. Influenza may simulate tuberculoses during the cavitary period, or dilatation of the bronchi; it may simulate typhoid fever and miliary tuberculosis. It is extremely polymorphous in its manifestations, a disease of surprises, and it is necessary to become acquainted anew with its pathology and its therapeutics in each instance.

The authors think that digitalis is useful from two points of view: First, as an element of diagnosis in acute granular tuberculosis or in typhoid fever, for in these two affections they have employed digitalin without ever obtaining defervescence; second, as a curative agent.

The authors give an account of their mode of treatment and the advantages derived therefrom. In pneumonia no deaths occurred in 10 cases, and in 2 cases of double pneumonia the favorable results were striking. On the day after the administration of the digitalin the patient experienced a sensation of well-being which was quite peculiar; if delirium existed it ceased, and the albuminuria diminished and finally disappeared. The antithermic action was remarkable; ventricular systole occurred with more energy, and the heart's action became slower; the arterial tension increased, and the pulse became stronger.

According to M. Huchard, diuresis is established promptly, and, during four or five days, it contributes to the elimination of all the toxins produced by the infectious disease. This fact was ascertained by the authors in some cases, for they were able to verify it in parallel charts of the urine and the temperature; when one fell, the other rose. This, however, was not always constant.

Congestion seems to disappear more rapidly and the exudation is more rapidly absorbed. On the whole, digitalin accelerates the normal evolution of pneumonia, and is the best adjuvant to spontaneous recovery, for it must be borne in mind that this medication is not antipneumonic, but is a compensatory one, which makes use of the healthy organs in order to act on the diseased organs. It is not the pneumonia that is dangerous; it is the exhaustion of the organism, and it is this which is combated or prevented by the digitalin treatment. According to Huchard, although the disease is in the lungs, the danger is to the heart and nervous system, and with this treatment the disease follows its normal envolution, but the organism is strengthened. Concerning influenza, all that has been said of pneumonia is applicable in every respect regarding the broncho pulmonary tendency of this affection. These forms, however, are not dwelt upon by the authors; they call attention simply to the success obtained

with digitalin in gastro-intestinal influenza simulating primary gastric derangement, typhoid fever, or acute tuberculosis.

The drug has particularly favorable action when the pulse is weak, small and rapid. Brachycardia, which is sometimes observed during the course of influenza, does not seem to be a contraindication to the employment of digitalin, although the effects are less certain. Several causes, besides, seem to attenuate or to retard the action of the drug; these are obstinate constipation or alternating attacks of fetid diarrhoea. It is in this case necessary to combat these two symptoms before giving digitalin.

Under the influence of this drug the urine increases, with an abundant precipitate of urates; the temperature falls and becomes regular; the pulse becomes normal, and the digestive functions return to their normal condition owing to the influence alone of the restoration of the cardio-vascular system. Delirium, sweating, and the condition of stupor cease; the general condition is wonderfully ameliorated, and recovery takes place in a short time.

Digitalis arrests epistaxis, but it does not prevent a return of the influenza when the patient is no longer under the influence of the drug. On the whole, it seems to attain its maximum effect in the broncho pulmonary form of influenza, although it is also useful in the gastro-intestinal form, and in the grave or complicated forms in which the cardio-vascular system is involved and weakened.

SURGERY.

IN CHARGE OF

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RADIOGRAPHIC TEST AFTER OSTEOTOMY.

(*Journal American Medical Association*, April 24.)

At the New York Post-graduate Hospital, Dr. Samuel Lloyd recently gave an interesting demonstration of the surgical utility of the ray work. One case was that of a young girl whose thigh bones were crossed, thus preventing her from the use of her limbs. She was taken into the hospital nine weeks ago, when the surgeon performed the operation of osteotomy. Both thigh bones were broken and placed in position for a normal reunion. The bones

were subject to a ten minutes' exposure of the ray, and by use of the fluoroscope, Dr. Lloyd was able to announce a perfect union of the bones, so that the girl would be able to walk. The successful application of the X rays to this part of the body was more difficult than to any other part, a representative of Mr. Edison explained, but the healing bones could be readily seen by placing the Crookes tube under the operating table and holding the fluoroscope over the thighs. Other experiments, equally successful, were made with fractured bones of the knee and elbow and with diseased bones of the hands.

CATGUT LIGATURES.

Stone (*Journal American Medical Association*, April 24th, '97), recommends catgut prepared as follows:—

Cut the gut (Nos. 0 and 1) into pieces eighteen to twenty-four inches in length, loosely coil and place in water at ordinary temperature of room for twelve hours to "swell it." Then place it in a 5 per cent. solution of formaline for 24 to 36 hours and then place in a jar of absolute alcohol until needed. This gut may be boiled for ten minutes before use if desired but it is unnecessary. He states that in the skin the smaller size will become soft in ten days or two weeks, while in the cervix and vagina the material thus prepared will be found eminently satisfactory.

OBSERVATIONS UPON THE RENAL CIRCULATION.

By M. DESTOT (Lyons).

The venous and arterial circulation of the kidneys have been studied recently by M. Destot, and the results reported. Thin mercurial ointment was the injecting mass used, and after the vessels had been well distended, the resulting semi-metallic lines were studied by means of radiographs. There are no anastomoses between the arterial channels, but the veins communicate freely.

It was found that the renal artery divides into an anterior and a posterior branch, supplying corresponding segments of the kidney separated by a plane midway between the dorsal and ventral faces. There appears to be no anastomosis between these two portions, and in the operation of nephrotomy, therefore, the line of incision should follow the convexity of the organ parallel with the liver and between the two vascular segments, thus avoiding any serious hemorrhage.

Sections were also made and studied of single lobes which had been injected. These sections could be made of considerable thickness, and so gave a much clearer idea of

the relation of the vessels than could be obtained from microphotographs. When the cut was at right angles to the long axis of the principal vessel the branches were seen to radiate from the main trunk. If parallel with the vessel, the vessels passed out at the sides very much like the arrangements of the branches in a fir-tree; the glomeruli are usually used by the shortest possible route. There is no arterial connection between the adjoining lobules and the arteries and the minute capillaries. With the veins the condition is quite different, the anastomoses are numerous, and through a single vein the entire organ can be injected.—*Lyons Medical*, 96, Nos. 49 & 50. *Annals of Surgery*, May, '96.

CAVERNOUS ANGIOMA OF THE NECK.

By Dr. PAUL KACZANCWSKY.

The author reports the case of a child who, when four months old, was first seen by a physician on account of a swelling on the left side of the neck, which had existed at the time of birth, but which had increased rapidly in size during the preceding two weeks. Examination showed the tumor to be composed of two distinct masses; the upper one was rounded, and the size of the closed fist lying on the left side of the neck above the clavicle and scapula; the other was quite angular, somewhat smaller in size, and extended from the axilla to the lower border of the pectoralis major over the pectoral muscles to the clavicle, at which place a narrow but deep depression separated it from the tumor mass above. Palpation showed that this lower tumor followed closely along the course of the subclavian vessels. The consistence of both tumors was so firm that fluctuation could scarcely be made out. The skin over the upper tumor was in a condition of extreme tension, and the subcutaneous veins were markedly distended. During expiration, and particularly during crying, both tumors were notably increased in size. Manual pressure caused no diminution in either mass. Exploratory puncture with hypodermic syringe showed that the tumor was filled with pure venous blood, and the hemorrhage from the small wound was checked with considerable difficulty.

After two weeks of observation it was plainly seen that the tumor was steadily increasing in size. The danger of spontaneous rupture of the sac was great, but the dangers of a removal by operation of one or both masses were evidently so great that such an attempt did not seem justifiable. Instead of such a proceeding, therefore, the plan of methodical pressure of the tumor was adopted, and was accomplished by means of a roller bandage of flannel and a padding of cotton. The result was surprisingly good; after two weeks the size

was noticeably decreased; after six weeks it had been reduced one-half, and after four months no trace of the tumor remained. When the child was one and one-half years old no trace remained of the lower tumor, and of the upper one only a series of loose folds of skin showed its former location. The child is now six years old, and even these folds have quite disappeared.

Whether the tumor first developed in embryonal tissue below in the axillary region and extended progressively beneath the clavicle, or whether numerous cysts developed simultaneously along the course of the subclavian vein, is still a question. A case has been reported by C. Beyer, in which the growth arose from the lymphatics; in the present instance it appears more likely that it took its origin from the subclavian vein.—*Deutsche Zeitschrift fur Chirurgie, Bond* XLIV, Heft 4, 1896. *Annals of Surgery*, May, 1897.

SYPHILIS TREATED EARLY AND ENERGETICALLY.

Manino reports (*Bull. Méd.*; ref. in *Charlotte Med. Jour.*; *American Medico-Surgical Bulletin*, May 10, 1897) the highly successful results of eight years' experience of this treatment. Instead of waiting for the usual symptoms to appear, the initial chancre is excised, or thermo-cauterized, and calomel injected every fortnight for from ten to twelve months (10 ctg. to 1 gme. glycerine and 1 drop water). After this, the injections are made every twenty days for three or four months; then one in sixty days for two months more, when potassium iodide is administered for 2 months; then two months more of mercury injections—this time the sublimate. The patient then rests for two months, when the iodide is recommended for a while, followed by a protoiodide, which is kept up till the end of the second year. The initial chancre soon subsides, and no secondary or tertiary phenomena have appeared in any of the cases treated during eight years. The inconveniences of this treatment, the painful injections, the temporary loss of appetite and weight, are far more than compensated by the victory over the disease, which is arrested before it becomes constitutional.

SURGICAL AFFECTIONS OF THE KIDNEYS.

Drs. J. Wm. White and Alfred C. Wood (*Annals of Surgery*, Jan. 1897; *American Medico-Surgical Bulletin*, May 10, 1897) believe that, despite the number of operations upon the kidney recorded within the past fifteen years, there is still manifest an undue conservatism in dealing with renal surgical conditions. Chronic painful affections of the kidney

belong properly to the surgeon. Even nephralgia is most successfully relieved by surgical measures in many cases.

An obstacle to the more rapid advancement of renal surgery is the difficulty in arriving at a positive diagnosis.

The occurrence of abscess in connection with spinal caries sometimes gives rise to renal symptoms. The authors quote Mr. Jacobson as calling attention to the great difficulty which may arise in distinguishing between certain cases of spinal caries and renal calculus. Again, Ereclisen is cited as describing a case in which an abscess dependent upon caries of the vertebræ not only assumed the perinephritic form, but opened into the pelvis of the kidney, thus simulating chronic pyelitis. The diagnosis was made by observing molecular fragments of carious bone in the pus.

A subphrenic abscess or an appendicular abscess may, in some cases, become perirenal by extension, and the condition then simulates a renal affection. Hydronephrosis, pyonephrosis and tumors of the kidney may be confounded with such diffuse suppuration.

The diagnosis of the common renal affection is to be made upon a careful study of the history, attention to all the symptoms, and frequently repeated examination of the urine.

Stone in the kidney, if smooth and embedded in the parenchyma, may give rise to no inconvenience whatever. Usually, however, the patient will have some of the following symptoms: Lumbar pain, fixed or radiating toward the genitalia or the upper portion of the thigh of the affected side; irritability of the bladder, gravel, hematuria, acid pyuria, and renal colic. Ransohoff, say the writers, lays particular stress on the presence of red blood-corpuscles at every examination of the urine.

Palpation is at best of but occasional value. Morris has called attention to the uncertainty of detecting calculi by direct palpation of the kidney. At the present time the use of the Rontgen ray might prove an invaluable aid in diagnosis. It cannot be doubted that most kidney stones cause more or less irritation, which in time would lead to permanent and progressive organic change in the organ.

Some degree of fever is apt to accompany abscess of kidney. This is especially true of the acute form.

The symptoms of hydronephrosis and pyonephrosis most commonly observed are a constant, dull pain in the loin corresponding with the affected kidney; this may last over a long period. Sooner or later a fullness or a distinct tumor can usually be felt. In pyonephrosis, the urine commonly contains pus; this, however, is also found in cystitis, prostatitis, urethritis, etc. It must be also borne in mind that in case of renal suppuration the urine is usually acid, while in

long-standing cystitis it is alkaline. Moreover, the microscope will detect the presence of elements characteristic of a particular locality.

In speaking of movable kidneys, the writers give Tuffier's clinical classification, namely: (1) painful, (2) dyspeptic, (3) neurasthenic. Referring to the cause of movable kidney, they say it has not been determined, but it is probable that different factors are responsible in different cases. Among the causes mentioned are the loss of the fatty capsule, pregnancy, pendulous abdomens, enteroptosis, heredity, the presence of a mesonephron, etc.

The prognosis after operation for the above condition depends upon the stage of the disease and upon the integrity of the opposite kidney.

The authors go on to consider anuria, and give various reports of different observers as to operation on the kidney, nephrectomy, nephrolithotomy, etc.

OBSTETRICS.

IN CHARGE OF

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MENSTRUATION IN AN INFANT.

MONTARIS of Mitylene (*Indépendance Méd.*, 1896, No. 35) reports the case of an infant who was born on August 21st, 1892, and menstruated on February 21st, 1893. Her body was unusually developed, the hair of the head strong and long, the breasts large. The features were regular, and, as is not usual in such cases, the expression of the features was intelligent.

VOMITING OF PREGNANCY.

Parvin says that for years he has not failed to cure immediately and permanently every case of the vomiting of pregnancy by applying a sharp blister over the fourth and fifth dorsal vertebræ.

THE ACTION OF ERGOT.

(1) When administered previous to the termination of pregnancy in the case of women in whom a tendency to post-partum hemorrhage is known to exist, it tends in a marked

manner to prevent the occurrence of hemorrhage. (2) When so administered in ordinary doses, it does not produce any injurious effect on either mother or child, and it seems to delay the beginning of labor in such cases. (3) It tends to make the involution of the uterus more perfect, and lessens the chance of the occurrence of subsequent uterine troubles, many of which depend for their cause on imperfect involution of that organ. (4) It will not bring on premature labor or induce abortion unless uterine action has previously been set going. (5) In cases of threatened abortion its administration frequently seems to act as a uterine tonic, and in some cases tends to avert the danger of a miscarriage, provided the ovum is not blighted. (6) If the ovum is blighted, and especially if it is detached, ergot usually hastens its expulsion. —Dr. Lombe Atthill, *Brit. Med. Journ.*

ACETONE IN ECLAMPSIA.

The almost universally accepted theory of the causation of eclampsia is renal insufficiency. But the kidneys cannot be blamed in all cases; the other organs of the body, especially the liver, must be investigated. Strumpf found acetone in the urine of all eclamptic patients whose breath smelt of it; and the authors relate the details of a similar case, and claim that the presence of acetone is the index of the true condition present. Acetone (C_3H_6O) results from katabolism of organized tissues, not of ingested proteids. The liver deals more rapidly with the nitrogenous products of metabolism than with the non-nitrogenous moiety; and the authors suggest that in pregnancy the increased work thrown on to the liver may result in hepatic inadequacy, and that there may be a "liver of pregnancy" just as there is a kidney of pregnancy. The products of metabolism in both fœtus and mother are carried to the maternal liver, where they normally undergo katabolic changes to urea and bile salts; but in cases of hepatic inadequacy these products accumulate and eclampsia results. The nephritis which co-exists with eclampsia is mainly secondary, and is analogous to the nephritis of scarlatina. The relation of acetone to metabolism is so important that the urine of pregnant women should be systematically examined for it.—*Amer. Journ. Obstet.*

GUAIACOL IN PUERPERAL ECLAMPSIA.

J. F. R. Appleby (*Boston Med. and Surg Journ.*, March 18th, 1897) prefers guaiacol in the treatment of puerperal eclampsia. He has used it in two cases with "surprising and happy" results. Forty or fifty drops were poured upon the

abdomen and gently rubbed in. In a few minutes the pulse became soft, free diaphoresis set in, and the convulsions died away. In both instances, there was albuminuria and œdema, and in both the recovery was good. Guaiacol possesses the advantages of ease of application, certainty of action and speedy relief of urgent symptoms. Its physiological effect is to cause rapid and marked lessening of arterial blood pressure, lowering of temperature and free diaphoresis.

PURULENT OPHTHALMIA NEONATORUM.

CHARTRES (*Arch. Clin. de Bordeaux*, No. 12, December 12th, 1896) has made bacteriological examinations of the pus from 26 cases of ophthalmia neonatorum, and has found very numerous pathogenic microbes. In 36 per cent. of the patients there were gonococci alone ; in other instances there were Loeffler's bacilli (12 per cent.), micrococci (12 per cent.), streptococci (8 per cent.), gonococci with streptococci (8 per cent.), and in yet other cases there were mixed germs. The worst instances were those in which there were streptococci either alone or associated with gonococci or the bacilli of Loeffler. Such cases ended in loss of vision, or were complicated by a fatally terminating broncho-pneumonia. When the gonococcus alone was found in the pus the prognosis was generally good, treatment resulting in cure. It is easy, therefore, to see that from the point of view of prognosis the bacteriological examination of the discharge at an early stage of the disease is of great importance. The treatment must be energetic from the first, and it ought to be mixed. The author does not deal in this paper with the prevention of the disease, but he remarks parenthetically that, while Credé's method is good, care during labour is better still. When the disease is present the first step must be the thorough washing of the eye with a solution of permanganate of potash, so as to reveal the state of the cornea. Chartres then cauterises with nitrate of silver on two or three successive days with frequent eye washings with a solution of boracic acid in the intervals.

DISTURBANCE OF LACTATION.

ANGEL MONEY (*Australasian Med. Gaz.*, January 20th) maintains that the custom of weaning newly-born children is too prevalent, and too few attempts are made to correct the milk when at fault. A thorough investigation of mother and milk should be made, and the quantity and quality of the latter determined, and the percentage of fat and proteid which are the only variable factors ascertained. Bad milk

contains toxic matters, albumoses, and leucomaines, albumen being plentiful but of the wrong kind, while the percentage of fat is defective; colostrum corpuscles are present and may be numerous. The most successful milk is that of mothers desirous and confident of ability to nurse. Exercise can diminish percentage of proteids, and a moderate amount of beef or mutton can increase percentage of fats; these facts are seldom acted upon. A poor milk may be enriched by improving the maternal dietary, giving more meat and more milk, diminishing exercise, shortening intervals of nursing, and diminishing amount of liquids imbibed. Rich milk may be diluted by lengthening the intervals of nursing, decreasing the amount of meat eaten, increasing exercise, augmenting fluid drunk, drinking rain or distilled water. Helidon or Vichy water midway between the nurslings is an excellent practice. Colostrum corpuscles present after the first fortnight signify defective formation of milk. It is unjustifiable to diminish the water in poor milk by purgation, which may stop milk flow or may even cause the milk to contain toxic substances. The breast pump is not sufficiently used to improve the function of lactation; it should replace the baby while attempts are being made to improve the milk. The more perfectly formed the milk is the more caseinogen and less albumen it contains; however great the percentage of caseinogen it never in the stomach forms dense clots as formed by cow's milk. It is a mistake to suppose that stout or porter improves milk. Another error is the belief that beef-tea and chicken broth are good for nursing mothers. Excitement, fatigue and overfeeding should be avoided, also highly-spiced, rich or stimulating foods. The bowels should be regulated by proper dieting and massage or exercise rather than by laxatives, and it is highly desirable that there should be at night uninterrupted sleep for six hours for mother and child.

PREGNANCY LASTING ELEVEN MONTHS.

WIGODSKY (*Medicinsk. Obosrenie*, No. 2, 1896) observed protracted gestation in a 3-para, aged 28. The last period was on September 7th, the fœtal movements were first felt at the end of January, and labour occurred on August 13th. Pregnancy otherwise ran a natural course. Delivery was delayed by the great breadth of the shoulders, and the forceps was applied. The fœtus was a living anencephalus.

CAMPHOR AS AN ANTIGALACTOGOGUE.

HERGOTT (*Rev. Méd. de l'Est*, February 1st, 1897) being dissatisfied with the effect produced by the usual antigalactogogues, including antipyrin, has tried camphor, and finds

that 9¼ grains a day divided into three doses, and given for three days, nearly always produce a remarkable diminution of the secretion. He has used it in 30 cases, having been first led to try it by the good results obtained by Kiener in animals, especially milch cows.

PUERPERAL HERPES.

Dr. Lutand describes five cases of acute pyrexia occurring between the second and fifth days after confinement, or abortion, in each of which the febrile attack terminated by an eruption of facial (usually labial) herpes. In each case the attack was ushered in by rigors, the pyrexia was severe, rising to 103 to 104 F., and in each case after the appearance of the herpes the patients rapidly recovered.

Lutand calls attention to the disquieting nature of these symptoms, and their liability to be confounded with those of grave septic infection, and suggests, that when strict antiseptic precautions have been taken in the conduct of labour or abortion, that no local condition can be found to account for subsequent rigor or pyrexia, it may be well to remember that the explanation of these phenomena may sometimes be found in the occurrence of the herpetic disorder described. —*Un. Med. Mag.*, April, 1897.

THE CURETTE IN LABOUR.

Rudin and Charpentier differ in their opinion of the post-partum use of the curette. A "*giant curette*" was exhibited recently at a French Society by Nitot, designed especially for the uterus during the puerperium when the small sharp instruments useful for the nonparens uterus are dangerous. Budin declared in the discussion that he no longer uses the curette after labour. The simple practice of clearing off all adherent fragments with the finger and then mopping the uterine walls has given excellent results in his hands. Charpentier strongly supports the early use of the curette under the same circumstances. He believes that suitable cases for curettage are kept too long waiting; the instrument must be used before the infective process has become generalized. When the uterine tissue has undergone changes from that process the curette increases the danger. Charpentier has never had bad results even indirectly after the use of the curette in the puerperium.—*Un. Med. Mag.*, May, 1897.

TREATMENT OF OVARIAN TUMORS DURING PREGNANCY, LABOR AND THE PUERPERIUM.

Hohl reports five cases in which pregnancy was complicated by ovarian tumors. From a study of these he draws the following conclusions:—

(1) During pregnancy ovariotomy should if possible be performed in the early months. Premature labor should be favorably considered only in intraligamentous tumors when the operation is presumably difficult or in tumors which are fixed by adhesions. Puncture of the cyst as a therapeutic measure is out of the question.

(2) During labor the reposition of the tumor under anæsthesia should if possible be done. Failing in this, cystic tumors should be aspirated or they may be opened after vaginal incision. Cæsarean section is indicated in solid tumors when the child is alive, ovariotomy at the primary operation or after the puerperium. The performance of ovariotomy and the termination of labor *per vaginam* is not permissible.

(3) After a woman has been delivered while having an ovarian tumor, the extirpation of the tumor should be performed at the earliest time possible, certainly not later than the second week of the puerperium.—*Un. Med. Mag.*, May, 1897.

WASHING OUT BLOOD IN A CASE OF STREPTOCOCCIC INFECTION.

DR. DALCHE. A woman, 27 years of age, who was admitted into the hospital with alarming symptoms of pyemia, presented several abscesses and a lymphangitic area in the lower limbs. The appearance during the following days of first a mitral, then an aortic murmur, suggested the possibility of the existence of endocarditis, as either the cause or the effect of an infection which bacteriological examination showed to be due to the streptococcus. An intravenous injection of 1 litre of Hayem's artificial serum was administered daily for five days in succession. Each injection was followed by a very intense rigor and by rise of the temperature to almost 42°, the latter becoming normal again toward evening. The general condition rapidly improved, and the patient ultimately recovered.—*Brooklyn Med. Jour.*, June, 1897.

GYNÆCOLOGY.

IN CHARGE OF

A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. England.

Fellow of the American Gynæcological Society, and of the London Obstetrical Society; Gynæcologist to the Montreal Dispensary, and to the Western Hospital; Surgeon in Chief of the Samaritan Hospital for Women; Professor of Clinical Gynæcology in Bishop's University, Montreal.

Abstract of Paper on

THE RESULTS OF ONE HUNDRED AND FORTY-SEVEN OPERATIONS FOR RETROVERSION OF THE UTERUS.

By DR. A. L SMITH.

Read before the American Gynæcological Society at Washington, May 6th, 1897.

His paper was based upon ninety-four ventrofixations and fifty-three Alexander's operations. He held that ventrofixation was the only operation that should be entertained in cases of retroversion with adhesions; but it should not be done when the uterus was moveable and when there was no disease of the appendages requiring abdominal section, in which cases Alexander's operation had given excellent results. There should be no death rate to either operation, neither should there ever be hernia, either ventral or inguinal, if the following directions were followed. The two operations were equally easy, although a few years ago the author was opposed to Alexander's operation on account of its difficulty. Now he could invariably find the ligaments, and generally in from half a minute to a minute and a half. He warned his hearers not to do Alexander's operation if there were any adhesions, even if they were loose enough to permit the uterus to be lifted up; because they would be put upon the stretch and would drag so much upon the ligaments as to finally pull them out of their anchorage. In laying down the technique of Alexander's operation he placed great stress upon the importance of putting aside all cutting instruments as soon as the skin, superficial and deep fascia, had been cut through. Instead of laying open the inguinal canal as advocated by some writers, he advised his hearers not to cut a single fibre of the intercolumnar fascia which was the principal support of the pillars. Moreover, he said, the slightest nick of the fascis of the internal oblique would lead to a false passage and failure to find the ligament. If no cutting instruments were used, but only a Poeans forceps to draw out the ligament, there would be no difficulty in finding it, because there was nothing else in the canal but the ligament. In fact, with the eyes bandaged it could be found and drawn out,

simply by introducing the closed forceps and then opening them, when the round ligament will fall into them and can be drawn out. He advocated the use of fine silk-worm gut, which could be thoroughly sterilized and left in permanently. Occasionally he had been obliged to remove a buried stitch. In case any fibres of the intercolumnar or internal oblique should be accidentally cut, great care should be exercised in sewing them up to avoid hernia. He had only had one relapse after ventrofixation and one after Alexander, which were both subsequently repaired. Several of the cases of ventrofixation had since become pregnant and had had normal confinements. Also several cases of Alexander had had children. Many of the patients had been bedridden invalids for years before and were now enjoying excellent health. Both operations, each in its proper sphere, had given the greatest possible satisfaction.

INVERSION OF THE UTERUS.

By D. W. LYNCH, M.D, West Bend, Wis.

Cases of complete inversion of the uterus, following closely upon labor, are of such rare occurrence that the history of every case should have a claim on space in medical literature. The lessons learned by practitioners, and the experiences in those trials, must be interesting to relate and of advantage to the members of the medical profession. According to recent statistics this accident occurs only once in about one hundred and forty thousand confinements, consequently very few obstetricians have an opportunity to witness a case, even after a life-long practice in midwifery. The great majority who have escaped the trials of such cases may consider themselves fortunate, for it is admitted by all to be one of the most formidable complications of parturition, leading to symptoms of the greatest urgency and requiring prompt and skillful treatment.

In my research through most of the annual reports of this society since 1877, I have not found a single case reported.

A case is recorded in the *American Journal of the Medical Sciences*, 1878, page 291, giving the experience of Dr. Samuel Hall, of Reedsburg, Sauk County, Wisconsin, which is well worthy of consideration, and is the only case I can find reported, in all the literature at my command, from our State. This goes to show the rarity of the accident, though it is liable to happen at a time least expected and in the practice of any one.

My first and only case occurred October 28th, 1895. I was called to see Mrs. B. in her first labor. She was 26 years of age, robust, healthy and of good physique. About 3

o'clock a.m. pains began, and kept gradually increasing in the natural course till I saw her at 11 o'clock of the same morning. She had had strong and frequent pains during two hours before my visit. I found her ready to begin the second stage; membranes intact; vertex presenting L. O. A.; strong pains with intervals of two or three minutes. She immediately begged for chloroform, which I gave her at once, and had it continued during pains until the child was born. I ruptured the membranes as soon as they began to press on the perineum. The child was born at noon, being a robust girl of average size.

The uterus contracted well, and as soon as I passed the child to the nurse I sat beside the mother watching the condition of the uterus with my hand upon the abdomen. It behaved well all the time, and in about fifteen minutes I proceeded to remove the placenta by expression and slight traction on the cord.

The placenta, entire with all the membranes, was expelled within one minute.

The woman was not conscious of the birth of her child until the placenta was delivered, owing to the effects of the chloroform. I sat beside her for fifteen minutes after placental delivery. There was then no hemorrhage and the uterus was of normal size and firmly contracted, when I left her to go in the next room to attend the dressing of the cord on the baby. The woman felt well and happy then that her labor was over. A minute later she cried: "Oh, doctor, I am bleeding terribly." I was with her in a moment and found her face the expression of agony and shock; there was no uterus in the abdomen; I found it between her thighs wrong side out, completely inverted. Realizing the situation I instantly grasped and pressed the uterus in my hand, then with the tips of my finger and thumb in contact, I made forcible pressure upwards upon the vertex of the inverted uterus, my other hand making counter pressure above the pubes, and amid the agonizing cries of the patient: "You are killing me, doctor," I had the satisfaction of reverting the uterus. It returned with an audible snap, in much less time than it takes me now to describe the operation. The patient soon recovered from the shock, not having lost much blood after all. I gave a vaginal douche of hot 5 p.c. creoline solution. She was dressed in clean cloths, the binder applied, and the bed made confortable. When I left her, an hour after the accident, she did not know that anything unusual had happened in her case.

I saw her again the next day, she was feeling well and appeared in normal condition in every respect. I did not see her again as she was ten miles away from my home, but I had

frequent reports of her condition for two weeks after. She wrote me the other day in reply to inquiries concerning her history since her confinement, stating that she was sitting up on the sixth day, began the care of her baby on the tenth day and then commenced her usual housework. She menstruated at five months and continued regular till August, 1896; she is now near term in her second pregnancy.

As to the causes of inversion of the uterus it is maintained that two conditions must necessarily exist in order to make the accident possible, viz: increase of the cavity and relaxation, either general or limited, of the walls. These conditions are presented by the uterus in pregnancy and labor, and then traction on the cord of an adherent placenta by the attendant is likely to produce it.

Traction on the placenta is frequently caused by the actual shortness of the cord, or by its winding about the body of the child making relative shortening, and then at the moment of the delivery of the child the uterus is inverted. Forceps delivery, in similar conditions of the cord, have produced inversion. Extra-uterine pressure misapplied by the attendant or the patient is liable to cause it. Other causes are related by authors in their endeavors to give us all the information in their possession; but that it does occur spontaneously is admitted, and my case substantiates the fact. There was no mechanical cause whatever acting as a factor in the case which I have here related. In all the cases which I find reported, the uterus was inverted with the placenta firmly attached partly or wholly. In my case there was no placenta, membrane or even a clot of blood within the uterus when I left her and a minute later there was complete inversion.

If any one doubts that this case was not spontaneous let him consider whether the effects of chloroform is a probable cause. I have thought of it, and suspected it, but I find no writer of recent times to entertain that position as worthy of consideration.—*The Chicago Medical Review*, June.

SIMULTANEOUS EXTRA AND INTRA-UTERINE GESTATION WITH SUCCESSFUL RESULT TO MOTHER AND BOTH CHILDREN.

This rare and exceedingly interesting case is recorded by H. Ludwig (*Wien. Klin. Woch.*, July 2, 1896, Medicine), who claims that it is the first in which such results have been obtained. The patient, a Gallician woman, 35 years of age, sextipara, was delivered at home after a normal labor of six hours of a living female child at full term. A midwife in attendance discovered what was unmistakably a second child waiting for delivery and called a physician, who extracted

the placenta, but could not reach the presenting part of the second child. A consultation was had, and it was decided that laparotomy should either be performed at once or after the death of the fetus. The patient would not consent to immediate operation, but on the fifth day of the puerperium she made a journey of seventeen hours to Vienna and entered the clinic of Professor Chrobak. The fetal movements could be plainly made out and its position so well ascertained through the thin abdominal wall that a diagnosis of pregnancy of the left appendage with a living child was easily made.

Forty-five minutes after admission the laparotomy was performed. The operation presented no particular difficulties, but it was found necessary to remove the uterus and the right appendages on account of the extremely vascular connection between the fetal sac and the uterus rendering it impossible to secure a pedicle. A vigorous male infant, 49.5 centimeters long, weighing 3570 grammes, was delivered.

All the classical indications of true ovarian gestation—of which but eighteen recorded cases can be found—were fulfilled in this instance. According to Spiegelberg the diagnosis of ovarian pregnancy can be made out with certainty from these conditions: The absence of the ovary on one side; ovarian elements in the wall of the sac; communication of the fetal sac with the uterus by the ovarian ligament; non-participation of the oviduct in the formation of the fetal envelope.

A CASE OF PRECOCIOUS MENSTRUATION.

J. W. Irion (*New York Medical Journal*, Aug. 15, 1896, Medicine) reports the following case of a healthy female child born October 10, 1895: On the seventh day a bloody vaginal discharge was observed which lasted without other symptoms for four days. In December the flow did not occur, but the child suffered from the usual adult symptoms of suppression, and eczema broke out over the entire body. The suppression was attributed by the mother to a cold bath. Since December the flow has been regular and the child's health excellent. The mons veneris and breasts are considerably developed, the latter enlarging and becoming somewhat sensitive during the flow. The mother is a healthy German woman with one previous child, a vigorous boy. She herself began to menstruate at the age of thirteen years.

REGARDING ENDOMETRITIS FUNGOSA IN THE VIRGIN.

LATOUR (*Revue internationale de Médecine et Chirurgie pratique*, No. 18, 1896, *University Medical Magazine*, June).

According to this writer, endometritis fungosa may sometimes be found in virgins. The clinical symptoms do not differ from those seen during the sexual life of women,—fungoid growth of the endometrium and profuse menstrual hemorrhage. The first characteristic symptoms appear with the first menstruation. Infection with micro-organism, masturbation, and traumatisms, are, he believes, etiological factors. The treatment should be ergot, hydrastis canadensis, and hot-water douching. Ordinarily no operation is required, but one should not wait too long before resorting to dilatation, curettement, and the application of chloride of zinc.

A CASE OF SEPARATION OF THE CELIOTOMY WOUND A WEEK AFTER OPERATION.

SWITALSKI (*Monatsschrift für Geburtshülfe und Gynäkologie*, Band v, Heft 4, 1897, *University Medical Magazine*, June), at the meeting of the Krakau Gynecological Society on March 16, 1897, reported the following interesting case: The patient was 33 years of age, operated upon for pelvic inflammatory disease on January 20, 1897. The patient had had a cough before operation, which became much more severe and very persistent after operation. Narcotics were freely given, but without benefit. The convalescence, nevertheless, during the first week was perfectly normal. On January 28 the dressing was found saturated with a bloody fluid, and on removing the dressing intestines were seen covering the abdomen and the incision separated throughout its entire length. An anesthetic was administered at once, the intestines washed with warm Walthard-Tavel solution (normal salt solution), replaced in the abdominal wound, and the abdomen again closed with five interrupted silk sutures. The convalescence now proceeded without interruption, and the patient left the hospital well. Switalski calls attention to the perfectly normal convalescence following the accident, there being no subjective symptoms, the pulse and temperature ever remaining about normal. He believes the cause of separation in this instance was undoubtedly mechanical,—the severe and persistent coughing. The suture material employed in the primary operation was catgut, three separate layers being introduced. He had employed this method and material in twenty-two other cases without accident, and feels confident the method and suture material are not fault. This accident is not very rare for Rosner has been able to collect thirty-one cases which have been reported in the literature during the last three years.

ABDOMINAL ENUCLEATION OF FIBROID TUMORS OF THE UTERINE BODY; A. MARTIN'S MYOMOTOMY.

ENGSTROM (*Monatsschrift für Geburtshülfe und Gynäkologie*, Band v, Heft 4, *University Medical Magazine*, June), in a very complete paper, considers the *pros* and *cons* of the operative methods and other treatment which has been employed up to the present time for fibroid tumors of the uterine body, and strongly recommends Martin's myomotomy. He has performed this operation in 100 cases, where the tumor varied from the size of a hazel-nut to that of an adult head, with but five deaths. He believes, with all modern observers, that although these growths may in a few instances remain stationary in the uterine wall without causing symptoms, symptoms are apt to develop at any time during life, and usually they do cause symptoms, and should be removed. They may cause severe hemorrhage and resulting anemia, no matter what the size of the growth may be; pain from pressure of the nerves in the uterine tissue (Winckel), from uterine contraction, or from pressure on pelvic nerves; edema from pressure on pelvic veins; kidney-disease from pressure on the uterus; not rarely fatty degeneration or brown atrophy of the heart-muscle, necrosis and suppuration, sarcoma, and other degenerations or accidents which may indirectly result in death. The patient is frequently sterile because of the growth, and if impregnation occurs abortion follows. The tumor, it is true, may disappear with the degeneration of the puerperium, be spontaneously expelled, or atrophy at the menopause. The menopause is usually postponed to 50, 55, or 56 years of age (Schorler), and even then they may cause symptoms, particularly where calcareous infiltration occurs, by pressure on blood-vessels and nerves; they may continue to grow, suppurate, or necrose, as the writer has himself observed. Experience has definitely shown that medical and electrical treatment is of no value; that the only method of treatment is operative, either removal of the uterus and tumor per abdomen or vagina, bilateral oöphorectomy, or myomotomy. The best mortality in all operations which remove the tumor is about the same,—5 per cent. Engström, however, believes the ideal operation is the one which removes the isolated fibroid or fibroids and allows the uterus, ovaries, and tubes to remain. The 100 cases which he briefly describes, the tumors, as said, varied in size from a hazel-nut to an adult head. Sixty-three times there was but one tumor, and thirty-seven times multiple tumors; from two to five, and once twenty-two were enucleated. Tumors which extruded into the uterine cavity, intramural, subperitoneal, intraligamentous, and one which

distorted and thinned out the cervix uteri were removed ; also those with marked development of the blood and lymph-vessels, more or less necrotic or calcareous change ; those with intestinal and omental adhesions and sometimes extensive pathological changes in the ovaries and tubes.

The greater number of cases gave the indications for hysterectomy if enucleation had not been possible. One patient died after fifty-seven hours with intestinal paralysis, frequent pulse without fever, no peritonitis or other signs of sepsis. One died ten days after operation from iodoform poisoning. One died with uremia resulting from carbolic-acid poisoning before operation. Another seven days after operation with intestinal paralysis, frequent pulse, and respiratory failure ; no signs of sepsis. Another began to have diarrhea the day following operation, and died on the seventh day. Ulceration was found in the colon and ileum and a fatty heart and liver. In three cases small tumors have since developed. In 113 cases reported by Martin tumors have since been found in three. This he believes is not a contra-indication to the operation for good reasons given. Four patients have become pregnant since operation. One aborted at six months during an attack of typhoid fever ; another in the fourth month ; one went to term and was delivered of a living and healthy child ; and one is now in the third month of pregnancy. Twenty-two of the patients were married and under 40 years of age. Of Martin's 113 cases two became pregnant. One aborted and the other was delivered of a living child. Twenty-seven per cent. of Martin's cases were married and under 40 years of age.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Feb. 26th, 1897.

J. GEORGE ADAMI, M.D., VICE-PRESIDENT, IN THE CHAIR.

POST-TYPHOID OSTEO-MYELITIS.

Dr. G.E. ARMSTRONG exhibited this case, and related the following history :

This lad was admitted to the Montreal General Hospital in Dec., 1896, suffering from acute suppurative osteo-myelitis of the tibia. As you can see by the cicatrix the greater part of the shaft of the tibia separated. I have brought these large pieces of bone which I pass around. He is said to have suffered from typhoid in July and August, 1896. The tibia first showed signs of being affected during convalescence. At the time of admission to the hospital there was an acute suppuration process going on in the tibia, and his tempera-

ture as you can see from the chart was decidedly septic. In fact, notwithstanding active surgical interference, it seemed at one time as if the boy would succumb to septicæmia. We have had during the past few months several cases of bone lesion with suppuration following typhoid. One case that I expected to have been here to-night was a man who had a large abscess form over the left temporal and parietal bones, the pus containing a pure culture of typhoid bacilli. The occurrence of bone lesions after typhoid has been noticed for several years.

Murchison reported several cases. Keen, in 1876, reported upwards of forty cases, Sir James Paget twenty cases, and other writers have reported cases. In 1887, Ebermaier obtained a pure culture of the typhoid bacillus from two cases of post typhoid periostitis. Erlgi fractured a long bone in one of the lower animals, and at some distance from that point injected subcutaneously a pure culture of the typhoid bacillus. Suppuration occurred at the point of fracture, and the pus contained a pure culture of typhoid bacillus.

Orloff also produced suppuration in the lower animals by subcutaneous injection of pure culture of typhoid bacilli.

In many of these cases of post-typhoid bone lesion, the pus contained mixed culture. The typhoid bacillus has been found with the common colon bacillus, the pneumococcus and other pyogenic organisms.

No bone seems to be exempt, but the hands and feet are seldom affected. The tibia suffers, perhaps, more frequently than any other bone.

A marked characteristic of these post typhoid bone lesions is their chronicity. Pain is often complained of during convalescence, but it may be several months before suppuration is evident.

This condition requires radical treatment. Simple incision and drainage is followed by prolonged suppuration. Free incision, thorough scraping and irrigation with antiseptic solutions give good and satisfactory results.

Dr. F. J. SHEPHERD recalled a similar case which had been under the care of the late Dr. George Ross and himself fifteen years ago. It was then called a periostitis and treated by incision, but the bone had not come away until last year.

REMOVAL OF A FIBROMA OF THE MESENTERY WITH RESECTION OF NEARLY EIGHT FEET OF SMALL INTESTINE.

Dr. F. J. SHEPHERD exhibited the patient from whom the tumour shown at the last meeting had been removed. With regard to the question of interference with nutrition raised at the time, he stated that the man had gained a pound a day.

SPECIMENS ILLUSTRATING NECROSIS OF SEROUS MEMBRANES.

Dr. WYATT JOHNSTON exhibited the specimens.

RUPTURED TUBAL PREGNANCY.

Dr. A. LAPTHORN SMITH exhibited the specimens, and gave the following account of the case:

The patient had been married six years and had had no children. An attack of pelvic peritonitis occurred shortly after marriage re-

sulting in more or less pain ever since, for which he had been consulted. Examination showed the uterus to be retroverted and fixed, and both tubes, especially the right, to be enlarged. After a course of local treatment she missed a period, and he, suspecting tubal pregnancy, thought it important she should know what was going to happen, and her husband was told that, if she should fall in a faint he would know that the tube had ruptured, and to send for the doctor at once. Another attack of pelvic peritonitis supervened, and while preparing her mind for the operation, one night he was sent for in a hurry and found her collapsed. After removal to hospital, laparotomy was performed, and on opening the abdomen two quarts of black clotted blood were removed. There was free hæmorrhage which was quickly controlled by ligature of the ovarian arteries. The fœtus was found free in the abdomen, and was alive. The abdominal cavity was washed out with warm salt solution, and left full, and a quart enema of the same solution administered. The patient had made an uninterrupted recovery, and her pulse, 120 previous to operation, gradually fell to 80 afterwards.

Surgical Shock and how to prevent it.

Dr. A. Lapthorn Smith, in a paper on this subject, said that we often heard it stated that no one knew what shock really was. He thought that this statement was not correct, as we did know that shock was a vivid impression or powerful irritation of the great sympathetic nerve leading to a forcible contraction of the arterioles of the surface and throughout the body, and a corresponding rush of blood into the great venous trunks, especially in the abdomen, which latter he said were capable of holding all the blood in the body.

According to the above definition, a horrible sight, or a blow upon the abdomen, or concussion of the nerve centres might all cause true shock. But he did not wish to deal with these forms of shock, but with shock during surgical operation, and especially during operations in the abdominal cavity. He maintained that genuine shock in these cases was rare; principally because, the patient being under anæthesia, the great sympathetic was less sensible to powerful irritation. He thought that many cases, which were supposed to be suffering from shock after operations, were really suffering from something else, and he endeavoured to show that the low temperature, weak and rapid pulse, and pallor of the face and the depressing of the mental and physical powers were due to one or other of the following causes: hæmorrhage out of the blood vessels, or hæmorrhage into the large veins, cooling of the body surface and prolonged anæsthesia, prolonged handling of the intestines, and prolonged stay in the bad air of a crowded operating room. He laid stress upon the importance of the Trendelenburg posture so as to prevent anæmia of the brain; and to the necessity of keeping up the pressure in the coronary artery by which alone the heart is fed, by keeping the whole arterial system fairly full either by transfusion of salt solution during the operation, or by warm salt enemata before and after the operation, or by leaving the abdomen well filled with warm salt solution before closing it up. He also pointed out that much of the hæmorrhage could be prevented by finding

the principal arteries and tying them before cutting them, as was done in abdominal hysterectomy which was now almost a bloodless operation. It should be remembered that a sudden hæmorrhage had much more serious results than a gradual one, as was seen in women with menorrhagia, who lost quantities of blood in a week, which would surely prove fatal if lost during an hour. He made a strong plea for speed in operating; this, however, did not mean carelessness or neglecting the minutest detail of asepsis. What he meant was absolute silence in the operating-room, so that the attention of nurses and assistants should not be distracted for a moment, and also to have a large number of well-trained assistants to hand the various instruments and ligatures, etc., without being asked for them. He believed that metabolism or combustion was much lessened during anæthesia as the patient got no good air to breathe, and only a very limited amount of bad air, causing a depression of the vital functions from which the patient sometimes never recovered. He suggested a mixture of ether and oxygen, so that vital combustion would not be interfered with at all. He had always observed that the most successful operators kept their patients the shortest time under anæsthesia. He also pointed out the importance of having the intestines thoroughly emptied of gas and liquid before the operation, as the less they were handled the less danger was there of shock. The Trendelenburg posture was also of great assistance in keeping the intestines out of sight. Strychnine was valuable, not only because it kept the bowels contracted and empty, but because it stimulated the heart. He also advised the use of flat zinc pans under the patient on the operating table, filled with hot water, which was renewed from time to time in order to keep up the patient's temperature; this would enable the air of the operating room to be changed instead of keeping it close and stifling. Great care should be exercised in keeping the patient dry throughout the operation. The requirements of asepsis necessitated the use of much water, and if the patient's clothing were wetted the patient might be chilled, thus contributing to shock. He had found enemata of hot salt solution introduced gently of great value in rallying patients who were apparently in a condition of shock.

Dr. Jas. Bell said that the condition known as surgical shock covered a much wider range of conditions than those described by Dr. Smith. The real surgical shock was that due to accident, so-called surgical shock post-operative was generally due to prolonged anæsthesia, loss of blood, or chilling. He fully agreed in the need of rapid, well-planned surgical operations, as an unnecessarily prolonged anæsthesia might be of serious moment to the patient.

Dr. C. J. Edgar, of Sherbrooke, had charge of five hundred miners, and the picture conveyed to his mind by the word "shock" was that of a strong robust man pale as death, and pulseless, as the result of a severe injury. Dr. Smith had told how to prevent shock, but in these cases one did not have time to do anything but treat it. He had found a large warm enema of salt solution valuable.

THE
CANADA MEDICAL RECORD

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All communications for the Journal, books for review, and exchanges, should be addressed to the Editor, Box 2174, Post Office, Montreal.

Editorial.

BRITISH MEDICAL ASSOCIATION.

MONTREAL MEETING, 1897.

Since our last notice of what is being done in regard to the approaching Meeting, considerable progress had been made towards the completion of the arrangements, more especially in the work of the Excursion, Printing & Publishing, Museum, and Local Entertainment Sub-Committees. The Preliminary programme has been printed and distributed, some 16,000 copies having been sent to members of the Association. It appears in the shape of a pamphlet of some 50 pages, neatly printed on heavy paper with an artistic cover in colors. It is plentifully illustrated with lithographs and woodcuts, representing some of the chief points of interest in Montreal, Toronto and Quebec—more especially the University and Hospital Buildings. Several pages are devoted to a description of how to reach Montreal from Europe, referring to some of the advantages of the St. Lawrence Route as compared with that to New York on the magnificent Liners landing there from Liverpool and Southampton. Quebec and the picturesque St. Lawrence Route are referred to in glowing descriptive language, woven so as to give at the same time a bird's-eye glimpse of the early history and characteristics of this Province.

Reference is made to the hotels and lodging accommodation in Montreal, and some useful hints to travellers are given in regard to securing berths, luggage, clothing, United States and Canadian money, etc. The excursions arranged for are described, and their attractions set forth in a way which must arouse the liveliest anticipation among those whose privilege it will be to take advantage of the low fare and enjoy the grand scenery of the St. Lawrence, the Saguenay, Lake St. John, or the grandeur of the Rockies. At the end is a note on the game laws, and a table indicating the open season for hunting the various kinds of game. The whole pamphlet is exceedingly well and tastefully gotten up, reflecting credit on the printers and engravers, and those whose good judgment is displayed in the appropriate selection of the text. The distribution of the programme at this early date throughout Britain will doubtless exert a favorable influence in the way of giving necessary information to those contemplating the trip, and may in some instances constrain the undecided to avail themselves of the treat that is in store for those who attend the 65th Annual Meeting. The Local Guide, which is in active preparation, will be on a more elaborate scale and form a volume of over 200 pages,' and will be distributed at the Meeting.

Prof. Adami, who has been indefatigable in the preparations for the Meeting, left on the 22nd of May for England, and will be absent some six weeks. He has been delegated by the Executive Committee to visit the various Branches of the Association in England, Scotland, Dublin and Belfast, advising with them and giving all instructions required to facilitate arrangements for the journey, and at the same time endeavor to secure as large a contingent from across the Atlantic as possible. He will also confer with and assist the English Secretaries in regard to securing papers for the Meeting, and members to take part in the discussions. At the same time his presence in England will be of the greatest service to the General Secretary, Mr. Francis Fowke, and Dr. Saundby, the President of the Council, as he will be able to advise with them on all matters pertaining to the various details connected with the arrangements for the Meeting on this side. The President-Elect, Dr. T. G. Roddick, M.P.,

has left to visit Ottawa, Toronto, and London with a view of furthering matters connected with the Branches of the Association there. In the latter city, the attempt to form a branch has not been very successful, and we hope Dr. Roddick's visit will result in organising in this field of abundant material an active and live addition to those already existing in the Dominion.

The Montreal Branch has made remarkable strides in its membership during the past year, the number having increased from 70 to 243. Dr. Roddick will also, while at Toronto, confer with the Local Executive Committee of the British Association for the Advancement of Science, and endeavor to secure their co-operation in regard to Excursions.

The transportation difficulties which at one time threatened to prevent a number from coming are being gradually overcome. The Steamship Lake Ontario, which leaves Liverpool on the 21st of August, is a large and commodious vessel, having accommodation for 150 passengers, most of which is taken up by members. The Allan Line ships which sail on the 5th, 12th and 19th of August will bring over a number, and it is expected that the Peterson Line will despatch a vessel on the 20th of August, which would meet all requirements. It will be part of Prof. Adami's mission to see that ample transportation facilities are afforded to all who desire to come, and he will make any special arrangements that may be considered necessary.

The Local Entertaiment Sub-Committee, of which Dr. Girdwood is Chairman, will have a full and attractive list of entertainments provided for the guests, details of which we will give later. A Committee of Ladies is being organized to assist the Sub-Committee. The Golf Club has arranged for a series of matches to be held at their magnificent new Grounds at Dixie, to take place on Thursday, Sept. 2nd, and a cricket match is being arranged for among the Montreal Clubs. Dr. Roddick has written to all the Branches of the Association, both English and Colonial, requesting them to send delagates; answers have already been received from a number, most of them stating that the matter will be placed before the next meeting of their Councils.

STUDY OF THE AMERICAN MEDICINAL FLORA.

The Sub-Commission of the Pan-American Medical Congress, appointed to study the medicinal plants of the United States, has entered into an association with the Smithsonian Institution for that purpose. The attention of our readers is called to the respective circulars issued by these organizations, which we print below.

SMITHSONIAN INSTITUTION, WASHINGTON, D. C.

May 28, 1897.

DEAR SIR,

The Smithsonian Institution has undertaken to bring together all possible material bearing on the medicinal uses of plants in the United States. Arrangements have been made with a body representing the Pan-American Medical Congress, the Sub-Commission on Medicinal Flora of the United States, to elaborate a report on this subject, and the material when received will be turned over to them for investigation.

The accompanying detailed instructions relative to specimens and notes have been prepared by the Sub-Commission.

All packages and correspondence should be addressed to the SMITHSONIAN INSTITUTION, WASHINGTON, D. C., and marked on the outside *Medicinal Plants for the U. S. National Museum.*

Franks which will carry specimens, when of suitable size, together with descriptions and notes, free of postage through the mails, will be forwarded upon application. Should an object be too large for transmission by mail the sender is requested, before shipping it, to notify the Institution, in order that a proper authorization for its shipment may be made out.

Respectfully,

(Signed) S. P. LANGLEY,

Secretary.

Instructions Relative to Medicinal Plants.

The Pan-American Medical Congress, at its meeting held in the City of Mexico in November, 1896, took steps to institute a systematic study of the American Medicinal Flora, through the medium of a General Commission and of special Sub-Commissions, the latter to be organized in the several countries. The Sub-Commission for the United States has been formed, and consists of Dr. Valery Havard, U. S. A., Chairman; Mr. Frederick V. Coville, Botanist of the U. S. Department of Agriculture; Dr. C. F. Millspaugh, Curator of the Botanical Department of the Field Columbian Museum, Chicago; Dr. Charles Mohr, State Botanist of Alabama; Dr. W. P. Wilson, Director of the Philadelphia Commercial Museums; and Prof. H. H. Rusby, of the New York College of Pharmacy. This Sub-Commission solicits information concerning the medicinal plants of the United States from every one in a position to accord it. The principal points of study are as follows:

1. Local names.
2. Local uses, together with historical facts.
3. Geographical distribution and degree of abundance in the wild state.
4. Is the plant collected for market and if so,
   (*a*) At what season of the year?
   (*b*) To how great an extent?
   (*c*) How prepared for market?
   (*d*) What is the effect of such collection upon the wild supply?
   (*e*) What price does it bring?
   (*f*) Is the industry profitable?
5. Is the plant, or has it ever been, cultivated, and, if so, give all information on the subject, particularly as to whether such supplies are of superior quality, and whether the industry has proved profitable.
6. If not cultivated, present facts concerning the life history of the plant, which might aid in determining methods of cultivation.
7. Is the drug subjected to substitution or adulteration? and, if so, give information as to the plants used for this purpose.

While it is not expected that many persons will be able to contribute information on all these points concerning any plant, it is hoped that a large number of persons will be willing to communicate such partial knowledge as they possess.

It is not the important or standard drugs alone concerning which information is sought. The Sub-Commission desires to compile a complete list of the plants which have been used medicinally, however trivial such use may be. It also desires to collect all obtainable information, historical, scientific and economic, concerning our native and naturalized plants of this class, and, to that end, invites the co-operation of all persons interested. Poisonous plants of all kinds come within the scope of our inquiry, whether producing dangerous symptoms in man, or simply skin inflammation, or, as "loco-weeds," deleterious to horses, cattle and sheep. In this respect, the general reputation of a plant is not so much desired as the particulars of cases of poisoning actually seen or heard from reliable observers. It is believed that much interesting knowledge can be obtained from Indians, Mexicans and half-breeds, and that, consequently, Indian agencies and reservations are particularly favorable fields for our investigation. Such knowledge will be most acceptable when based upon known facts or experiments.

In order to assist in the study of the habits, properties and uses of medicinal plants, the Sub-Commission undertakes to furnish the name of any plant-specimen received, together with any desired information available.

Owing to the diversity in the common names of many plants, it will be necessary for reports, when not furnished by otanists or others qualified to state the botanical names with certainty, to accompany the same with some specimen of the plant sufficient for its identification. While the Sub-Commission will endeavor to determine the plant from any portion of it which may be sent, it should be appreciated that the labor of identification is very greatly decreased, and its usefulness increased, by the possession of complete material, that is, leaf, flower and fruit, and, in the case of small plants, the underground portion also. It is best to dry such specimens thoroughly in a flat condition under pressure, before mailing. While any convenient means for accomplishing this result may

be employed, the following precedure is recommended. Select a flowering or fruiting branch, as the case may be, which when pressed shall not exceed 16 inches in length by 10 inches in width. If the plant be a herb 2 or 3 feet high, it may be doubled to bring it within these measurements. If it possess root leaves, some of these should be included. Lay the specimen flat in a fold of newspaper, and place this in a pile of newspapers, carpet felting, or some other form of paper which readily absorbs moisture, and place the pile in a dry place under a pressure of about 20 to 30 pounds, sufficient to keep the leaves from wrinkling as they dry. If a number of specimens are pressed at the same time, each is to be separated from the others by three or four folded newspapers, or an equivalent in other kinds of paper. In 12 to 24 hours these papers will be found saturated with the absorbed moisture, and the fold containing the specimen should be transferred to dry ones. This change should be repeated for from 2 to 5 days according to the state of the weather, the place where the drying is done, the fleshiness of the specimens, etc. The best way to secure the required pressure is by means of a pair of strong straps, though weights will do. The best place for drying is beside a hot kitchen range. When dry the specimens should be mailed between cardboards or some other light but stiff materials which will not bend in transit.

It is a most important matter that the name and address of the sender should be attached to the package, and that the specimens, if more than one, should be numbered, the sender retaining also specimens bearing the same number, to facilitate any correspondence which may follow. The Sub-Commission requests that, so far as practicable, all plants sent be represented by at least four specimens.

(Signed),

H. H. RUSBY, M.D.,
Chairman of the General Commission,
New York College of Pharmacy.

VALERY HAVARD, M.D.,
Chairman of the Sub-Commission,
Fort Slocum, David's Island,
New York.

RECIPROCITY IN MEDICAL LICENSURE.

ABSTRACT.

Dr. William Warren Potter, of Buffalo, president of the National Confederation of State Medical Examining and Licensing Boards, chose this for the subject of his annual address at the seventh annual meeting of that body, held at Philadelphia, May 31, 1897. He first paid tribute to the memory of Dr. Perry H. Millard, of St. Paul, then in an introduction reviewed some of the essential points of progress that had been made in state control of medical practice, and finally considered his subject.

The Problem.—The most important question now to be discussed pertains to the interstate exchange of licenses, and every friend of state control is interested in establishing this principle. It is one of the objects this confederation is laboring to accomplish, but a most difficult problem for solution. A national registration bureau is desirable where legally qualified and reputable physicians may be recorded—physicians whose names appear on this register to be allowed to pass from state to state in the enjoyment of all privileges pertaining to the practice of medicine. Those chiefly agitating the question of reciprocity, however, are specialists who desire to spend profitable vacations at summer resorts, and do not relish the idea of taking state examinations in the localities chosen for their holiday practice. Another class of men, compelled by circumstances to change residence, is more deserving of sympathy; they take the examination uncomplainingly. Shall a state require of its own citizens a compliance with its practice laws while granting to thrifty summer specialists exemption from their operation? As the state laws forbid discrimination against the inhabitants of each, there is both a legal and a moral bar to such exemptions.

Obstacles to Reciprocity.—Equality of standards for admission to the study and practice of medicine is the only enduring basis on which reciprocity can be established. When the several States adopt a uniform level of preliminaries, a uniform period of collegiate training including uniformity of methods of teaching; and finally, an absolute similarity in the methods of conducting state examinations and granting licenses, then reciprocity will be equitably and permanently

established. It is important for the state medical examiners to come to an agreement on these several points that they may act with intelligence on a common platform. The state imposes a post-graduate examination, and none should be admitted to it who are not holders of diplomas legally obtained from registered and recognized colleges. It is understood, of course, that there must be established a uniform system of recognizing and registering medical schools in the several States.

The Solution—Legislative Enactments.—The remedies lie in legislative enactments. Those who most loudly and persistently demand interstate indorsements aim their criticisms at examining boards; whereas, these have nothing to do with the question. The statutes in States that have established licensure prohibit interstate exchange except between such as have equality of standards. The demands of the restless and migratory doctors must be taken to the state legislative halls. Meanwhile, the members of this confederation may assist in bringing the matter to a more speed conclusion by acquainting their legislatures with the difficulties to be overcome, and by urgently recommending the adoption of such amendments to existing laws as will meet and remove the present defects. Great care must be exercised, however, in the preparation of amendments; the state laws are for the public weal; reciprocity is only for the few. Amendments to existing statutes should be proposed only through state medical examining boards of state medical societies; they are familiar with defects and best know the remedies needed. When legislature can be persuaded to turn a deaf ear to all amendments that are proposed outside of official sources, it will be a happy day for the friends of state license. The object of this discussion is to divert further criticism of the delay of reciprocity into the proper channel. If legislators could be made to appreciate the fact that public health interests are involved in the question of state license, that every attempt to weaken the principle is a blow at public sanitation, and that higher standards of medical education mean better health for the people, then perhaps it would be easier to obtain and maintain the necessary laws to protect the commonwealths against that kind of ignorance, superstition, or super-refinements that always lurk in the environment of quackery.

PROVISIONAL PROGRAMME.

CANADIAN MEDICAL ASSOCIATION.

Monday, August 30th, 1897.

1 p.m.—Meeting at one of the Hospitals ;

Address by Chairman of Committee of Arrangements ; Clinical Demonstration.

3 p.m.—General Session ; Reception of Visitors ; Election of Members ; President's Address ; Addresses by Prominent Englishmen ; Appointing of Committees.

8 p.m.—No General Session ; Meetings of Committees,

Tuesday, August 31st, 1897.

9.30.—General Session ; Report of Committee on Inter-Provincial Registration ; Report of Nominating Committee ; Reports of other Committees ; General Business.

N.B. The Railways will grant a return trip on the certificate plan for *single fare* from points east of Fort William.

For further particulars, address,

F. G. STARR,
General Secretary,
471 College Street, Toronto.

Pamphlets Received.

Remarks on the Treatment of Diabetes. Read before the Section of Practice of Medicine, at the Forty-fourth Annual Meeting of the American Medical Association. By N. S. Davis, jr., A.M., M.D., professor of Principles and Practice of Medicine and of Clinical Medicine, Northwestern University Medical School. Reprinted from *The Journal of the American Medical Association.*

Animal Extracts. By N. S. Davis, jr., A.M., M.D., professor Principles and Practice of Medicine and Clinical Medicine, Northwestern University Medical School, Chicago, etc. Reprinted from the *Chicago Medical Recorder*, December, 1894.

Remarks on the Causes of Glaucoma. Read in the Section on Ophthalmology, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896. By Leartus Connor, A.M., M.D., Detroit, Mich. Reprinted from the *Journal of the American Medical Association*, November 14, 1896.

A Plea for Conservative Oral Surgery, with Practical Illustrations. By G. Lenox Curtis, M.D., New York City. Read before the Atlanta Meeting of the American Medical Association. Reprint from the *N. Y. Medical Journal.*

Presidential Address on the Treatment of some Forms of Albuminuria by Reni-Puncture. Delivered before the Medical Society of London, Oct. 12, 1896. By Reginald Harrison, F.R.C.S. Reprinted from the *British Medical Journal*, Oct. 17, 1896.

The Treatment of Tuberculosis and other Infectious Diseases with Oxytoxines. A Provisional Report. By J. O. Hirschfelder, M.D., Professor of Clinical Medicine, Cooper Medical College, San Francisco, Cal.

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A Contribution to the Natural History of Scarlet Fever. By John T. Wilson, M.D., D.P.H. (Aberd.), Medical Officer of Health, Lanarkshire.

Ulcers of the Cornea—Implantation of a Glass Ball for the Better Support of an Artificial Eye. By L. Webster Fox, M.D., professor of Ophthalmology in the Medico-Chirurgical College, Philadelphia, Pa. A Clinical Lecture delivered at the Medico-Chirurgical College, October 30, 1896. Report from the *Medical Bulletin*.

Report on the Sanitary State of the City of Montreal, also an account of the Operations of the Board of Health and the Vital Statistics for the Year 1895. By Louis Laberge, Medical Health Officer.

Vingt Cas de Fractures de Clavicule Traites par le Massage. Par le Dr. Dagron, ancien interne des hôpitaux de Paris, chargé du service des massages des fractures à l'Hôpital Beaujon. Extrait du *Journal de Médecine et de Chirurgie Pratiques*, 25 août 1896.

Le Role de la Graisse dans les Hernies. Applications thérapeutiques. Préventions des Hernies. Préparation des sujets à opérer. Traitement palliatif des sujets inopérables. Par le Dr. Just Lucas-Championnière, chirurgien de l'Hopital Beaujon, membre de l'Académie de Médecine. Extrait du *Journal de Médecine et de Chirurgie Pratiques*, 10 septembre 1896.

PUBLISHERS' DEPARTMENT.

IT HAS NO RIVAL.

At the meeting of the American Medical Association, held at Washington, D. C., Dr. John H. McIntyre reported "Ten Selected Cases of Laparatomy, with Remarks." From this paper, published in the *Journal of the American Medical Association*, we quote as follows:

"I use but little opium or morphia, for the reason that these drugs, by locking up the secretions, limit the power of elimination, and therefore favor septicæmia. For over a year past, in cases of laparotomy where pain and rise of temperature were present, I have used antikamnia in ten-grain doses, with the happiest effects."

A further objection to opium and its derivatives is referred to in an article by Dr. Herman D. Marcus, resident physician, Philadelphia Hospital (Blockley), published in *Gaillard's Medical Journal*, from which we quote: "There is probably no group of diseases in which pain is such a prominent and persistent symptom as uterine or ovarian disorders, and in no class of cases have I been more convinced of the value of antikamnia than in the treatment of such affections. An obstacle in the use of morphia is the reluctance with which some patients take this drug, fearing subsequent habit. Antikamnia causes no habit, and I have never found a patient refuse to take it."

CANADA
MEDICAL RECORD

JULY, 1897.

Original Communications.

THE OPERATIVE TREATMENT OF PUERPERAL FEVER, WITH REPORT OF A CASE.

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S., ENG.

Clinical Professor of Gynæcology in Bishop's University; Surgeon-in-Chief of the Samaritan Hospital; Gynæcologist to the Western Hospital and to the Montreal Dispensary.

Having now had considerable experience in the treatment of puerperal fever by measures medical and surgical, varying all the way from quinine and saline purgatives to washing out the uterus, curetting, packing, draining, opening abscesses of the cellular tissue and removal of purulent tubes and ovaries from the pelvic peritoneal cavity, and even to removal of the septic uterus, I feel more in favor than ever of resorting to measures sufficiently vigorous to suit the case, rather than to return to the almost helpless and hopeless methods formerly practised. Since my inaugural thesis prepared for the American Gynæcological Society, and appearing in its Transactions for 1892, on Puerperal Septicæmia, I have had a few cases in my own practice, and quite a large number which have been referred to me by the kindness of my colleagues. In the majority of these cases it must be said only the milder surgical measures had to be resorted to, for if nothing abnormal could be felt in the pelvis, and the temperature did not come down quickly under saline purgatives and quinine, the uterus was promptly washed out with permanganate or perchloride solution, and drained, *not packed*, with a wick of iodoform cotton, and generally with the result that within twenty-four or forty-eight hours the temperature and pulse had returned to the normal and a load of anxiety had been lifted from the attending physician's mind. As several such instances occurred among the wives of physicians who appeared to be in great danger, the latter became strong advocates of this method of treating high temperature after confinement.

In other cases, however, this simple treatment did not bring down the temperature and then curetting was generally resorted to, being always followed by the application of strong carbolic and Churchill's iodine to the interior of the uterus. In others, however, even this failed. In other cases the pelvic cellular tissue was found to be hardened and the uterus fixed, and in some of these cases a puncture was made into the mass and its purulent contents evacuated and drained by a rubber tube in the form of a cross, the transverse portion retaining the vertical portion in the cavity. It has been maintained by some that there is no such thing as pelvic cellulitis, but in this view I beg to differ from them, because in five cases at least I have opened the abdomen and found that while the tubes and ovaries were inflamed and adherent to the intestine or to the back of the broad ligament, yet they did not contain pus, while the broad ligament in these cases did contain pus. With Bernutz and Goupil I admit that the great majority of the cases which were formerly considered to be pelvic cellulitis were in reality cases of pelvic peritonitis due to diseased tubes and ovaries. From my own experience I should judge that, given 100 cases of a thick hard mass being felt in the pelvis surrounding the uterus, that 95 or 98 of them were due to diseased tubes and ovaries, while the remainder were genuine cases of pelvic cellulitis. I am not able to give any certain means of diagnosing the one from the other. If the ovaries and tubes remain perfectly healthy and the woman was thin, we might perhaps feel these organs floating free above the indurated mass; but in most of the cases of cellulitis the tubes and ovaries are bound down either by extension of infection through the wall of the broad ligament or by direct continuity to the uterus and tubes. In one case indeed both conditions were present, the sequence of events having been as follows: A lady whom I was engaged to confine with her first child, who was in excellent condition, of cleanly habits, and married to a virtuous husband, had such an easy and rapid confinement that the baby was born before I could be found. She was not examined either by myself or by the nurse, and she made an uneventful recovery with the exception of a temperature of 102° for 1 or 2 days, which disappeared under quinine and salines. She got up at the usual time and appeared perfectly well for three or four months,

when she was laid up with pain, fever and swelling in the right inguinal region. Her pulse was very rapid and he knees were drawn up, and I felt satisfied that she had a pyosalpinx. I made arrangements to operate on her as soon as I returned from a consultation to which I had been called in the country. But during my absence she became so ill that the physician who was in charge of her became alarmed and called in another gynæcologist, who opened the swelling in the vagina and evacuated a pint or more of fetid pus. This gave her great relief, but although she carried a drainage tube for several months there was no appearance of the foul-smelling discharge from it ceasing. She became a burthen to herself and to her husband, who could not remain in the house owing to the odor, so that she begged me to perform the original operation which I had intended to do. This was done, and the large hard mass felt in the pelvis was found after opening the abdomen to be an enormous pus tube which had ulcerated into the broad ligament and set up a genuine but secondary pelvic cellulitis. After one of the most difficult operations I have ever performed this pus tube and ovary or tubo-ovarian abscess was extracted, and the patient made a perfect recovery.

Last autumn, at the Samaritan Hospital, a patient was sent in six weeks after her confinement, from which she had never gotten up, and a similar hard mass was found filling the right side of the pelvis. Her pulse was exceedingly rapid, her temperature high ; there was profuse discharge ; she was very emaciated, and was altogether in a very precarious condition, the pain being so great that she had to be constantly kept under the influence of morphine. The abdomen was opened and a diseased tube and ovary were taken out ; but in doing so a large abscess in the broad ligament was opened into. This was thoroughly cleaned out and scraped with the fingers, and disinfected with bichloride solution. I intended in this case to have put a gauze drain through into the vagina, but the anæsthetist warned me that she could not hold out another minute, so I hastily closed the incision and got her back to bed. She made a slow and anxious recovery, but finally became quite well, and is now well on in another pregnancy.

I call to mind two other cases of genuine pelvic cellulitis, one of which, a physician's wife, the healthy ovaries could be

made out, and which was treated by the vaginal drainage tube with satisfactory results. The other was a young and healthy woman who, while in her seventh month, fell off a street car on to her abdomen, and as I was absent at the time sent for one of my assistants, who was so alarmed at her condition that he felt called upon to perform an *accouchement forcé*, with the result that she had a pretty severe lacerated cervix up into the cellular tissue between the folds of the broad ligament, resulting in the infection of the latter and a genuine pelvic cellulitis. This was opened and a large quantity of exceedingly fetid pus evacuated, and a cruciform drainage tube was introduced and kept in for several weeks, at the end of which time everything had returned to the normal and it was removed.

This I believe is the most frequent manner in which genuine pelvic cellulitis takes place, namely, from laceration of the cervix and direct infection of the exposed cellular tissue between the vagina and the peritoneum. Exceptionally this cellular tissue is infected by other accidents, such for instance as a case I had under my care in the Western Hospital this April of a lady from New York State, who, while endeavoring to bring an abortion on herself, perforated the posterior wall of the cervix between the peritoneum and the vagina with a male catheter containing a stiff steel wire, which was probably dirty, and which probably slipped through the eye of the catheter. In this case the mass surrounding the uterus disappeared after two months' treatment with tampons, iodine and iodide of potash internally; the right ovary, however, could be felt adherent and somewhat large at the back of the uterus, having possibly become slightly infected by contact with the broad ligament.

I have at present in the Samaritan Hospital a little woman from Old France who never left her bed since the birth of her first child six months ago. She was rapidly becoming exhausted under morphine injections when she came under my care. She was brought to the hospital in the ambulance, and had such a high temperature and rapid pulse that I was compelled to wait another two weeks before I ventured to operate. The pelvis was full of exudation, and although the large mass could be seen and felt through her thin abdominal wall, the ovaries or tubes could not be outlined; I presumed

that this was also a case of pus tubes, and opened the abdomen to remove them. I found the omentum adherent to the brim of the pelvis and to the abdominal wall, the coils of intestine adhered everywhere to the broad ligament and to each other, the vermiform appendix was adherent to the right tube, the right tube and ovary were situated in Douglas's cul-de-sac with many layers of fibrinous lymph surrounding them and binding them to the back of the broad ligament. They were dug out with great difficulty, and were found not to contain any pus, although diseased pus welled up from a hole in the back of the broad ligament as in the case previously mentioned, and was dealt with in the same manner and for the same reason, namely, that the patient's life was hanging by a thread. The utmost haste was made, although time was taken to carefully tie off the vermiform appendix and cover the stump with peritoneum. This patient has not made a good recovery, she is still in the hospital with the same hard mass that she had before the operation, and is still suffering a great deal of pain, although the prospects are that she will eventually recover. Of course, all these cases mentioned are exceptional ones, for on the other hand much more than one hundred times I have found the pelvis filled with material of plaster of Paris-like consistency completely fixing the uterus, and I diagnosed the case pus tubes, and opened the abdomen and found pus tubes only, and after the operation the uterus was perfectly movable and the pelvic roof soft and free from exudation. Two weeks ago, I operated on a patient at the Western Hospital in presence of the gentlemen attending the post-graduate course, who was sent to me by my friend Dr. Caisse. She was confined about two months ago with her first child and had a normal confinement. A few days after delivery her temperature went up, when her physician very promptly and very properly gave her vaginal douches, and they failing to bring down the temperature, he followed them with intra-uterine douches of permanganate. This also being ineffectual he sent for me to curette, which I did after dilating and washing out the uterus, and following it by the application of Churchill's solution to the whole of the inside of the uterus and the introduction of a gauze drain. I discovered a small tear in the perineum which I sewed up. Even this proved ineffectual, and as some eight weeks had elapsed with

a temperature of 102° or 103° nearly always present, I was called in again, when on examination I found two masses the size of lemons on either side of the uterus. I diagnosed tubo-ovarian abscesses, and had her removed with the doctor's consent to the Western Hospital, when, on opening the abdomen, every one present could see the flakes of fresh lymph binding the intestines, appendix and omentum to the tubes and ovaries. The patient was in fine condition, and I, therefore, had time to carefully remove the appendix, free the adhesions of the bowel, lift out the large ovaries from their bed of fresh lymph, a much easier task than it was in the case of six months' duration, and fortunately got the ovarian abscesses out through the opening without bursting them, as their contents are considered to be very virulent. I had forestalled the possibility of their rupturing and infecting the peritoneum by covering the bowels with a sterilized towel on which the pus would have fallen. The second ovary, however, ruptured just as I had succeeded in extracting it through the incision, and its contents spurted over many of the bystanders. The oozing from the back of the uterus was stopped by a fine purse string ligature run around the margin of the raw surface. The abdomen was washed out very thoroughly with salt solution, and a fresh lot of the latter was poured in and left there. This patient has made a rapid recovery, and has expressed herself completely free from pain 3 days after the operation; her temperature and pulse are normal, she is eating well, and would be out of bed on the twenty-first day.

I could mention many other cases of pus tubes following confinement, but perhaps one of the most interesting was that of a young married lady with her first child who had a normal labor, but whose husband went astray at the end of a week's enforced abstinence, and who, as I afterwards discovered, had infected his wife with gonorrhœa on the ninth day. In this case I felt the tube filling up day by day, but when it had reached the size of a large orange it suddenly emptied itself through the uterus into the vagina and the mass quickly disappeared. This patient made a good recovery without any other treatment but antiseptic douches.

I thought that these cases must be numerous in the practice of others, and it would, therefore, be useful to have their attention called to the value of active interference rather than allow the patient to become exhausted by long continued suffering and recurring attacks of pelvic peritonitis due to puerperal infection of the tubes and ovaries.

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Selected Article.

APPENDICITIS; WHEN TO OPERATE AND HOW TO OPERATE.

By PARKER SYMS, M.D.

Appendicitis may be defined as a disease more or less widespread, which has its origin in an inflammation of the appendix vermiformis.

It may be limited strictly to the appendix, or it may involve the neighboring peritonæum.

It may result in a general peritonitis, or in general peritoneal sepsis, or in general septic poisoning by infection through the neighboring veins.

It is not within the scope of this paper to go fully into the pathology of appendicitis. I shall merely outline the various conditions which obtain in the different forms of the disease, and then set forth what my experience has taught me as to the best plan of treatment in a given case.

All cases of appendicitis I classify under two heads: First, benign; second, malignant. These may be subdivided thus:

BENIGN.

Acute, primary.

1. Simple catarrhal, with or without concretion.
2. Parietal, involving all the coats.
3. Parietal, with local adhesive peritonitis.

Chronic.

1. Recurrent.
2. Relapsing, with concretion, stenosis, or foreign body.

MALIGNANT.

1. Acute suppurative, with local fibrino-purulent peritonitis, by extension or perforation.
2. Acute suppurative, with progressive fibrino-purulent peritonitis, by extension or perforation.
3. Subacute gangrenous, with localized fibrino-purulent peritonitis.
4. Suppurative, with retro-cæcal cellulitis.
5. Gangrenous, with retro-cæcal cellulitis.

Fulminating: 1. Acute purulent, with perforation and general peritonitis or peritoneal sepsis. 2. Acute gangrenous, with perforation, general peritonitis, or peritoneal sepsis.

Any benign appendicitis may become a case of any of the forms of malignant appendicitis.

This is more frequently demonstrated in the current and relapsing forms. The question is really one of degree of severity rather than one of variety of diseased condition.

It is my rule to *insist* upon operation in any one of the varieties which I have classed as malignant, and to advise operation in the recurrent and relapsing cases, unless there is some special condition of the patient which would contraindicate an operation on general principles.

In these cases I always operate between the attacks, and long enough after an attack to avoid operating through an infected and inflamed area.

Every acute case of mild severity may be treated expectantly with the hope of checking the disease before it becomes one of malignant type.

Any case in which there is not rupture or perforation of the appendix, and in which there is not purulent peritonitis, may completely recover.

This is true of cases with adhesive peritonitis, when there is a perceptible tumor; but it is not true of cases in which there is a periappendicular abscess.

Now comes the important part of this subject—namely, how is one to determine from the clinical evidences of a case of appendicitis just what the local pathological conditions are? This is a most difficult problem to solve, for the symptoms are not always in keeping with the severity of the disease.

Many cases of mild appendicitis are attended by very severe symptoms; while many of the most grave cases give rise to very slight symptoms. This latter is particularly true of the most malignant type—namely, the fulminating variety.

In the beginning of such an attack, symptoms may be even less significant and severe than in a case of catarrhal or simple parietal appendicitis. There is no local peritonitis, no tumor, and perhaps the only symptoms will be pain and tenderness in the right iliac fossa, slight rise of temperature, and slight acceleration of pulse rate; in fact, the symptoms may clearly point to a mild attack until perforation or rupture takes place, and, when severe symptoms first appear, it will be to announce a condition that is already beyond hope of cure.

In considering this question the physician will naturally be guided by his own experience; but he should always give careful heed to the lessons others have learned. It is very

desirable that this subject should be regarded too seriously rather than too trivially. If a physician has been fortunate enough to have been limited in his experience to a number of cases of the benign type, he is apt to have formed the idea that all cases of appendicitis may recover without operation, and a patient with a malignant form of the disease is very unfortunate if he comes under the care of that man. Fortunately, there are to-day few practitioners so narrow-minded and ignorant.

The real danger in cases of appendicitis is that the operation shall not be done when necessary; and that an operation may be done in a case which would have recovered if treated expectantly is not a matter of much importance, for, if the operation be properly done, the risk to the patient is almost *nil.* In appendicitis the danger lies in the disease, and not in the operation.

It is of the utmost importance in acute cases calling for surgical interference that operation be done as early as possible. In a case of acute suppurative or gangrenous appendicitis the patient's chance of recovery is much greater if operation can be done before perforation or rupture has taken place, even if protecting adhesions are formed, and, of course, if these are not present when the breakdown comes, the chance of recovery is very small.

I know of no question more difficult to decide than the one which presents itself in the early hours of an acute appendicitis—namely, is it the beginning of a benign case, or is it the beginning of a malignant one?

This is a question that can not be answered in many instances, for in the two forms the onset is the same.

In some cases the local and general symptoms are so severe or significant from the beginning that there can be no doubt that the case is one of a severe and dangerous type. But the converse of this is not true, since one can never predict in a case that has a mild beginning that it will not have a serious ending.

In such cases one can only decide on the proper plan of treatment by making repeated examinations, and noting the progress or regress of the disease.

As a general rule it may be stated that a patient that is not decidedly better at the forty-eighth hour than at the twenty-fourth is not going on to spontaneous recovery.

General practitioners frequently put surgeons to a great disadvantage by not calling them in consultation early enough to allow them the benefit of making an early and then a later examination, and thus comparing the conditions. Too often the surgeon is called upon to decide a one-sided question. He can work to better advantage for many reasons if he sees

the case early. His judgment can be soundly formed, his knowledge of the case from its early stages is of importance, and, when operation does become necessary, it can be the better accomplished if it has been anticipated and prepared for than if it be undertaken on the spur of the moment, perhaps at night, and without time for the best arrangement of details.

A typical attack of acute appendicitis will have about the following symptoms: A sudden onset, usually beginning with abdominal pain, starting around the umbilicus, and becoming more or less general, and finally becoming most intense in the region of the right iliac fossa. This may or may not be attended by vomiting. Soon there will be slight elevation of temperature, about 100° F., and acceleration of the pulse rate to about 90.

The most characteristic symptom is tenderness, with its seat of maximum intensity at the appendix. There is always a change in facial expression, varying from a slightly anxious look to a well-marked Hippocratic face.

Muscular rigidity will soon be present, especially in the right rectus abdominis.

All these symptoms may be present to a greater or less degree in the mildest case of catarrhal appendicitis. In the most severe of all cases — namely, the acute gangrenous without peritonitis—there may be no symptom present before rupture save point tenderness, muscular rigidity and accelerated pulse.

After an acute case has progressed a few hours, if local peritonitis is produced, either the simple plastic or the fibrinopurulent, a distinct tumor will be present in the neighborhood of the appendix. This may be obscured by the rigid muscles.

No fixed rule can be laid down for deciding in the early stages between the mild and the severe cases.

No man is capable of deciding this question positively and correctly in all cases. Ample and widespread experience with the various types of the disease will give one a faculty of determining the nature of the condition which may almost be called intuitive.

An exact and true word-picture of a given case of simple catarrhal in the first thirty-six hours might fully and accurately describe a given case of the fulminating type; but, to one properly experienced, an indescribable character of some one symptom, as the pulse or facial expression, may indicate a malignant process. Usually a catarrhal or simple parietal appendicitis will present a mild train of symptoms from the start, and under the proper expectant treatment will show marked improvement in some or all of the symptoms by the forty-eighth hour.

At this time, in the majority of cases of suppurative or gangrenous cases with local peritonitis, "tumor," pain, and vomiting will have ceased, and the evidences present will be as follows: Temperature about 100°; pulse about 100; muscular rigidity, tumor well marked, hard, defined, and increasing; local tenderness now over site of tumor. Facial expression more or less anxious.

A gradual abatement of these symptoms will point to a regression of the disease. A sharp rise of temperature and acceleration of pulse rate, followed by a sudden fall of temperature and a sudden decrease in the pulse rate, usually marks the rupture or perforation of an appendix into firm adhesions.

During an attack of appendicitis a sudden cessation of symptoms is always a bad sign.

A fulminating attack of gangrenous or suppurative appendicitis may have about the following symptoms marking three stages:

First. The stage before perforation. Temperature, 103°; pulse, 120, high tension, small volume; pain localized, severe, lancinating; tenderness exquisite; facial expression anxious, haggard; respiration, 30 a minute, costal variety; vomiting reflex in character. General feeling of severe illness.

Second. The stage of rupture, short in duration, sudden in advent. Temperature normal or subnormal; pulse, 80; pain gone; tenderness slight; facial expression much improved; respiration normal; vomiting none. General feeling of relief and recovery.

Third. The stage of general septic peritonitis or sepsis. Temperature about 101° to 102°; pulse, 110 to 120, small and weak; pain severe, general abdominal; tenderness, general abdominal with maximum at appendix; facial expression Hippocratic; respiration costal, rapid, irregular; vomiting may become stercoral. Great exhaustion and prostration.

Finally, collapse and heart failure will close the scene.

It must be borne in mind that a fulminating case may cause death by peritoneal sepsis without the production of septic peritonitis.

It is most unfortunate that no well-defined rule can be given for determining which is a benign case and which is a malignant one. This has to be decided by one set of symptoms in one instance, and on entirely different grounds in another. In one case the character of the pulse is most important, in another the temperature may decide the question, but usually one must judge by the patient's general condition, and by a careful study of all the symptoms, and of the relation of one symptom to the others.

Concerning the treatment of appendicitis the cases may be classed in three groups:

First. Those in which operation is unnecessary and in which expectant treatment should succeed.

Second. Those in which operation is advisable and justifiable, but in which delay may not do harm.

Third. Those in which operation is imperative, and is the only safe method of treatment.

The first group is limited to the cases of primary catarrhal and primary parietal appendicitis without suppuration and without gangrene.

The second group embraces all cases of recurrent and relapsing appendicitis.

The third group embraces all the forms of appendicitis which I have classed as malignant—*i. e.*, all cases of suppurative or gangrenous appendicitis with periappendicular abscess and the fulminating type.

Before leaving the first group, let me set down briefly the proper method of expectant treatment:

Put the patient to bed and keep him there. Apply over the whole of the right iliac region a soap "poultice," consisting of a thick layer of green soap spread on a single thickness of muslin or sheet lint.

Over this apply a broad ice bag—better still, an ice coil.

Relieve the bowels by a soap-and-water enema.

Keep the stomach at rest while vomiting exists.

Restrict the patient to milk, if he can take it; if not, give him clear broth.

Note the temperature, pulse and respiration every four hours.

Give no drugs.

Never give opium or morphine in cases of appendicitis, except in case of abdominal shock from rupture of appendix or abscess.

Any case that does not improve under this plan of treatment will be found to be of one of the severer types.

The operative procedures may be described as pertaining to four classes of cases.

First. Cases of recurrent and relapsing appendicitis, without acute local peritonitis between attacks.

Second. Cases of acute, suppurative, or gangrenous appendicitis with local peritonitis, with or without periappendicular abscess.

Third. Chronic cases with persistent sinus.

Fourth. Fulminating appendicitis with rupture or perforation and general peritoneal involvement.

There are certain general rules which apply to all of these forms of operation. I shall touch on those at once, and then take up the special indications and procedures.

I always insist upon having one of my own assistants when it is possible to do so. I consider that the man who has charge of the protecting sponges and packings is of more importance than the one who does the operating.

I also prefer to have a nurse who has been accustomed to my method of operating.

The entire abdominal surface should be sterilized as completely as possible.

A proper operating table is very necessary. The Trendelenburg posture should not be used.

Hand sponges and flat laparotomy sponges should be made of sterilized gauze. For catching and removing the pus, I use very small marine sponges on holders.

The patient should be slowly and carefully anæsthetized. This is very important.

A careful final examination should be made when the patient is thoroughly narcotized and the muscles are relaxed.

The operation should be done deliberately and carefully, but with all compatible speed.

We shall now take up the special form of operation.

First. For relapsing and recurrent appendicitis without acute local peritonitis.

The propriety of operating on these cases must depend on the nature of the attacks, the frequency of the attacks and their severity, the amount of disability they cause the patient, and the patient's condition of general health—that is to say, whether he is a fit subject for an operation or not.

In a patient of good general health and vigor this operation is free from danger.

After the patient has been thoroughly anæsthetized, the skin properly prepared, the whole operation field properly protected by sterilized coverings, and the final examination made, the operation is done as follows:

An incision is made down to the external oblique muscle. In a thin subject this incision may not need to be over an inch and a half in length. It must correspond to the thickness of the abdominal wall. It should be in a direction parallel to the fibres of the external oblique. Its middle point should be on a line drawn from the umbilicus to the anterior superior spine of the ilium. It should be external to the rectus muscle.

Next, the external oblique should be opened, by separating its fibres, not cutting, as far as the full length of the above incision. With this wound carefully held open the internal oblique should be cut, not split, in the same direction as the wound. The transversalis is divided in the same manner.

When the peritonæum is reached it should be lifted by

two mouse-toothed forceps and divided, such care being taken as to positively insure against wounding the intestine, whether there be any adhesion or not. Of course, before opening the peritonæum, all bleeding should be arrested and the wound thoroughly dried.

When the peritonæum has been sufficiently opened, the index finger is introduced and the region of the appendix explored. If many adhesions are found, the entire wound should at once be so enlarged that the necessary separating and dissection can be done with facility and in plain view.

If this is not the case, the appendix should be sought for, and, if it be free, its tip should be brought out of the wound. Then, as you come to its mesentery, it should be ligated with fine catgut and divided. The mesentery will require one or several ligations, according to its width.

When the appendix is separated from the intestine, except at its base, it and a portion of the intestine should be brought out of the wound, so that the ablation can be done extraperitoneally. I pass the appendix through a hole in the centre of a flat sponge, so that a very small surface of the intestine is exposed.

I prefer Dawbarn's method of closing the intestine, which is done as follows: A purse-string suture of fine silk is passed completely around the base of the appendix, about a quarter of an inch from the orifice of the appendix, involving only the peritoneal coat, the ends left untied.

The appendix is now cut off about half an inch from its base. Its canal is now probed to see if it be pervious. If not, it is made so by means of a small cautery point, and next the divided end of the appendix is grasped by a fine thumb forceps and pushed into the bowel by a complete invagination. The silk suture is now half tied and drawn tight. As the forceps is withdrawn the closure is complete and the full knot tied.

If all this has been carefully and satisfactorily done there will be no infection. The wound may be closed at once.

I close the wound by a single row of silkworm-gut sutures passed through the entire wall. Simple pad dressing.

I do this operation as an aseptic one, using no fluids after the final cleansing. The operation will take from fifteen to twenty minutes to perform.

I do not believe in McBurney's method of splitting both the internal and external obliques. It necessitates a larger wound, and it requires an unnecessary damage to the abdominal wall, for it means a tearing apart and separation of its layers. I strive as far as possible to keep the various layers in apposition.

The after treatment of these cases is very simple—*i. e.*, fluid diet for four days; enema daily; stitches removed on the seventh day; first dressing removed on seventh day; patient up and well on ninth to fourteenth day.

I never have a patient wear an abdominal supporter unless the wound has necessarily been unusually long.

Second. Operation for acute, suppurative, or gangrenous appendicitis with local peritonitis, with or without peri-appendicular abscess,

After the above described preparation of the patient and operation field an incision is made similar to the one above described, but it must be extended at each end, and should be at least four inches in length.

The external oblique is opened by blunt dissection; the rest of the layers should be clean cut, and care should be taken not to separate one layer of the wall from another. If the aponeurosis and fascia are stripped bare they are very apt to slough, and thus leave a weak wall.

The essential part of this operation consists in the intra-peritoneal work in searching for and treating the abscess, if one exists, and in searching for and dealing with the appendix if there be no abscess.

The most important thing of all is the protection of the uninvaded peritonæum. This requires the exercise of sound judgment to determine how much to do, and of knowledge and skill to do it properly.

As soon as the peritonæum is opened sponge packing should be begun.

Throughout the operation this must be done in such a manner that no infected tissue nor disease product can come in contact with healthy peritonæum.

The first assistant must take entire charge of this.

When all the open spaces around the mass of adhesions have been completely closed by dry gauze pads, the wound should be well retracted and the tumor gently entered by separating adhesions and by blunt dissection. When an abscess is reached I make a pin-hole opening, and at once prevent the escape of pus by pressure of a small sponge held in an artery clamp. After a minute the sponge is replaced by a clean one and the pus is removed drop by drop, all of it being absorbed by these sponges and none of it allowed to escape into the wound.

After pressure is sufficiently reduced by emptying the abscess, the opening is gradually enlarged, and finally the cavity can be thoroughly sponged out.

Now it should be freely opened and its interior disinfected with hydrogen peroxide. The size of the abscess will depend upon the duration of the disease.

Its walls are composed of adherent intestines thickly

coated with plastic lymph, and the ruptured or perforated appendix usually forms some part of this wall.

We have now reached the point when the average of the results will depend upon the judgment of the operator. If he is wise, he will remove the appendix in only those cases in which it can be readily found and removed without separating many adhesions. If he is rash, he will unduly persist in his manipulations, and in many cases he will break through Nature's safeguard at some point unseen and cause the death of his patient by secondary infection.

If the appendix can with safety be removed, it should be separated from the intestine with great care and gentleness, its mesentery properly ligated ; then it should be ablated about a quarter of an inch from its base, and the canal thoroughly sterilized with the cautery.

Now a single ligature of catgut should be tied around the appendix, including all its coats, then the superfluous stump beyond this ligature trimmed away with the cautery or scissors. Now the operator should thoroughly resterilize his hands, and all towels, etc., about the wound should be replaced by clean ones. One or two sutures may be used at each end of the wound, but an ample opening must be left, for the wound must be treated by packing.

Remember that in packing a wound for drainage you must not proceed as you would if you were calking a ship to prevent leakage.

These wounds, whether the appendix has been removed or not, should be packed as follows : One piece of iodoform gauze, folded longitudinally, is passed to the bottom of the abscess cavity and brought out of the wound, and turned to the outer side of the wound.

It should be large enough to completely fill the cavity, but not to stuff it. Now, as the first assistant slowly removes his gauze pads, they should be replaced by pads of iodoform gauze which must be carefully protected from any contamination.

These pads must completely close any spaces where adhesions are wanting, and they must come in contact with healthy peritonaeum and separate it from all infected areas.

Careful note must be kept of the number of pieces used. Now the entire wound should be covered by first a pad of iodoform and then several pads of plain, sterilized gauze ; flat ones are the best. These should be firmly held by strips of adhesive plaster. Over this a thick layer of absorbent cotton is placed and secured by an abdominal binder.

In case the operation is done before the appendix has broken down, and there is no circumappendicular abscess, the procedure should be the same as the one just described ; but the appendix can be removed in nearly all instances.

The after-treatment of these cases is most important. It should be as follows : Complete rest of the stomach for

twelve hours. Peptonized milk in small quantity after twelve hours, if there is no nausea or vomiting.

Patient should be kept quiet on his back for four days.

Enema of soap and water every day ; if there is much tympanites, turpentine should be added.

The outside dressing should be removed at the end of twenty-four hours, and changed as often after that as it becomes saturated.

The packing should not be removed until the fifth day—that is, on the fourth day after operation.

This needs be done as carefully as the operation itself. Retractors should be used and the wound well opened.

Then the gauze should be removed from the tumor cavity. This should be thoroughly cleaned by dry sponging. No fluids should be used. Now this cavity should be carefully repacked, and then the protecting pads should be gently separated from the adhesions they have caused and new pieces substituted.

After this the wound should be dressed every third day. Soon a single packing will be sufficient, and this should be reduced in size at each dressing. The patient should be kept on fluid diet for one or two weeks, and be kept in bed until the wound is healed to a narrow sinus, which it will be in from three to five weeks. When the patient gets up he should wear an elastic binder for one year to prevent hernia.

No drug treatment will be needed. I insist on my rule concerning morphine. These patients will be comfortable and free from pain if they have not been reinfected at the operation, unless the case were already one of progressing peritonitis.

Third. Chronic cases with persisting sinus. Of this operation I shall write briefly. I make an oval incision which shall include the sinus ; the next step is to enter the general peritoneal cavity at some point free from adhesions. Now the intraperitoneal dissection is begun, and the mass containing the sinus is slowly separated and pushed outward, while the healthy intestines are pushed toward the median line, and ample gauze packing is interposed. The sinus will usually lead to a diseased appendix.

The entire diseased mass should be dissected and removed without opening the sinus or appendix, except, of course, when the latter is amputated.

The appendix stump should be closed by Dawbarn's method, and if the wound has not been subjected to contamination it may be closed by suture. If there be any doubt about this, it should be packed and drained.

Fourth. Operation in fulminating appendicitis, with rupture or perforation of appendix, with general peritoneal involvement.

This operation must accomplish removal of the appendix and of all infective material and the cleansing toilet of the entire peritonaeum.

When the diagnosis of this condition is positive, a large median incision should be made. The right iliac region should first receive attention. If the appendix is still attached, it should be removed and the stump secured. If the appendix has sloughed off, the intestinal orifice must be closed.

With one hand in the abdomen, a separate opening in this region should be made for special drainage.

Now every portion of the visceral and parietal peritonaeum must be cleansed by thorough sponging, which shall remove all inflammatory products and all foreign material. After this is done, every portion of the peritoneal surface must be washed again and again with hot salt solution (6 to 1,000).

If the patient's strength will permit it, the intestines should be systematically, coil by coil, washed outside of the abdomen.

The work *should* be done thoroughly ; but it *must* be done rapidly, for these patients are always in a bad condition.

Often you will be obliged to be incomplete in your work to avoid death on the table.

After the cleansing is accomplished, gauze packing should be used so as to drain the entire abdominal cavity.

Enough suturing should be done to prevent escape of the intestines into the dressings.

A very large dressing must be applied externally ; this should be changed in a few hours.

In these cases opium is called for to relieve the pain and as a stimulant against shock. A full dose should be given before operation.

Acting in the main on the principles set forth in this paper, I have been operating in cases of appendicitis during the last eight years. Of five cases with general peritonitis I have lost three patients.

I have lost no other patient with appendicitis.

NEW YORK, 60 West Forty-seventh Street.

Progress of Medical Science.

SURGERY.

IN CHARGE OF

FRANK R. ENGLAND, M.D.,

Prof. of Clinical Surgery University of Bishop's College; Surgeon Western Hospital,

AND

GEORGE FISK, M.D.,

Instructor in Surgery University of Bishop's College; Assistant Surgeon Western Hospital.

THE TREATMENT OF THE HYPERTROPHIED PROSTATE BY THE GALVANO CAUTERY.

Bottini (*Archiv für klin Chir.*, 1897, *Band liv. Heft* 1) describes a new method of treating the diuresis accompanying the hypertrophied prostate, which he has perfected, and which has produced both in his own hands and in the hands of other eminent surgeons results that are all that could be desired.

He describes the instruments, which he has had constructed according to his own designs, and the technique of the operation, illustrating his subject by the report of three clinical observations.

He claims for the operation the following points:

1. The unmistakable efficiency of the operation—a patient who has not urinated for years passing his urine of himself a few hours after the operation.

2. The harmlessness of the operation even in patients over eighty years of age with foul urine.

3. The permanency of the cure, no case as yet having been known to recur.

4. No post-operative bad effect or effect upon the morale of the patient.

5. The operation is painless, and can be done without anæsthesia. (*American Journal of the Medical Sciences.*)

A NEW METHOD OF REMOVING POLYPOID GROWTHS FROM THE BLADDER.

By GEORGE CHISMORE, M.D., San Francisco.

So far as I know, no one has hitherto undertaken to remove vesical polypi by the method which is the object of this paper to describe.

Although my experience is limited to the two cases here reported—purely accidental in the first, entirely intentional in the last—the immediate results—checking a dangerous

hemorrhage and relieving an over-distended bladder—were so easily attained, that, whether the cure proves permanent or not, I believe the procedure of sufficient value to bring it to your attention, and to recommend it for trial at your hands.

The principle on which the operation is based is that of, by aid of the suction exerted by an aspirator attached to a litholapaxy catheter, or other suitable tube, catching the growth, or growths, in the eye of the instrument, when, by gentle traction and slight to and fro movements, they are torn from their attachments and drop into the reservoir of the wash-bottle.

To accomplish this I use an ordinary curved litholapaxy tube, of available size, to empty the bladder, then couple on my evacuator, which is so shaped as to fit the hand and give one full control of the point of the catheter; inject two or three fluid ounces of a borated solution as hot as can be borne, to which cocaine is added if needed to control the pain. Then systematically go over the interior surface of the viscus with the point of the catheter, at the same time compressing and relaxing the bulb, trying by touch to locate the site of the growth. If the outflow is arrested when the point is in contact with the bladder wall, the instrument is held stationary a few moments, the hand holding the bulb, regulating the amount of suction exerted, then gentle traction, accompanied by a slight sawing motion, is made.

If the occluding body be a polypus it will soon givesway and quickly find its way into the reservoir. I find it ea y to determine whether it be the healthy wall of the bladder that is caught or not, by the absence of the well-remembered thud and the evidence of pain that all who have done a litholapaxy will recall.

When a polypus is caught the check of the outflow is not nearly so abrupt; there is no expression of pain from the patient, the point of the occluded catheter i somewhat moveable, and not, as in the first case, apparently glued to a fixed spot; besides, in cases of pedunculated tumors the stoppage may take place while the eye of the catheter is not nearly in contact with the bladder wall. It is hard to convey in words the slight variations in the sense of touch, but I was astonished and delighted in my last case to observe how easily and clearly I located the site of the growths, and with what ease the tumors here submitted for your inspection were brought away.

I had supposed from my first case that the growth would have to be large enough to fill completely the eye of the catheter in order to make suction effective. The second, however, clearly demonstrated that such was not the fact.

You will note many small polypi entirely too little to close the eye of the No. 25 F. catheter which I used. Either their bases must have been sessile, several caught at once, or some alterations have taken place in the mucous coat from which they sprung that enabled the suction to exert sufficient power to drag them away.

For reasons that are obvious no estimate of the ultimate results of such an operation can be predicted, but it is contended that enough has been shown to make recourse to this simple and painless procedure justifiable in cases of emergency, where necessary time to remove a patient to the hospital, or other preliminaries to more radical measures, are to be gained, particularly in those cases where the bladder is filled with clots, and retention from overdistention is present with its attendant suffering.

CASE I.—On March 21, 1893, I was called, in consultation, by Dr. James F. Sullivan to see W. B. W., aged fifty-two, German drayman, suffering from retention due to clots in the bladder. He had been bleeding profusely *per urethram* for several weeks, was very anemic, cachectic in appearance, and suffering great pain.

The twenty-four hours previous he had passed 1600 c.c., in eight voidings, of dark bloody urine containing large clots; odor of blood, acid, sp. gr. 1026, solid on boiling, one per cent. urea, and containing small pavement cells, blood-and-pus-corpuscles.

I introduced a No. 22 F. litholapaxy catheter and by aid of my aspirator broke up and removed about twenty ounces of clot and bright, bloody urine, then partly filled the bladder with hot borated solution containing about four per cent. cocaine. While searching for remaining clots I felt a sudden stoppage of the outflow, and almost at once it gave way and a small piece of tissue appeared in the reservoir. This was saved and sent to Dr. Douglass W. Montgomery for microscopic examination. He returned a guarded opinion that, "it was not, certainly, malignant."

The bleeding ceased, and the next day Dr. Sullivan reported that it had not recurred. Fourteen days after, the patient came to my office, greatly improved in appearance, stating that "until that morning he had had no trouble; now his urine was again colored." Thinking the styptic effect of the cocaine responsible for the arrest of the hemorrhage, I again used the solution as before. Once more the outflow was checked, but this time I was clearly aware that I had caught something. The aspirator was a new one, with a good strong pull; so much so that I thought best to diminish it somewhat by mild compression. After a few moments I made a little traction, when, *plouf*—the obstruction gave way,

the bag filled, and a polypus nearly an inch in length and half an inch in diameter dropped into the reservoir.

I saw the patient last July 20, 1893, four months after the first visit, and he reported himself well, at work, and not a sign of blood since last operation. I made a brief verbal report of this case at the 1893 meeting of this Association.

In preparing this paper I saw Dr. James F. Sullivan, to learn, if possible, if the relief had been permanent. He reported that he had not seen the patient since; that he had heard that he had died in the care of an "irregular"—he could not learn when nor from what cause.

CASE II.—P. N. R., aged fifty-nine, French, accountant. Family history contains nothing bearing on his case with the exception of death from a cancer of one sister, aged forty-six. At the age of eighteen he had some "liver trouble," for which he was tapped several times. Was sent to Mexico, where he regained his health and remained well until October, 1896, when he noticed that his urine was cloudy. This led him to consult a physician, who placed him for sixty days on a milk diet and told him he had "kidney disease." During this time, about November 20th, he began to pass bloody urine, which gradually became worse until retention took place, and he came to my office January 14, 1897, in great pain, not having passed a drop of urine in sixteen hours. He was very anemic, with marked cachexia. With a No. 25 F. litholapaxy catheter I drew twenty-four ounces of dark, tarry fluid, looking and smelling precisely like fluid extract of ergot.

Placing him upon the table in my office, with the end of the catheter I easily made out a soft mass in the upper anterior wall of the bladder a little to the left of the median line. Pursuing the method already described, I rapidly removed about a dram or more of tissue, made up of numerous papillomata, upon which Dr. Douglass W. Montgomery reports as follows: "I have examined several slides made both from the tissue sent me on the paper and that in the bottle, and find the growth to be a villous papilloma. Each villus has a delicate core of well-formed connective tissue, carrying numerous thin-walled blood-vessels. The epithelium covering the villi is well and regularly formed, and does not have the appearance of growing with unnatural rapidity, as it frequently has when such a papilloma has undergone, or threatens to undergo, cancerous degeneration. I therefore, from my observation of this growth, would say that it is a villous papilloma of the bladder, showing no evidences of cancerous degeneration."

He went home after the operation, which was quite painless and occupied but a few minutes, but did not regain the ability to evacuate his bladder without recourse to the

catheter for several days. There was no more bleeding for eight days, when the urine again became quite bloody. Once more, in my office I searched the bladder and the site of the former mass appeared quite normal to the touch, but I discerned another patch near the mouth of the right ureter, and again removed a dram or more of the same kind of tissue. After this he improved rapidly in health and resumed his occupation. There was no more bleeding until March 20th, when there was a slight discoloration, and I again repeated the same measure, this time, getting five very small pieces. Since then he has been perfectly free from hematuria. and has apparently quite regained his health and strength.—*Journal of Cutaneous and Genito-Urinary Diseases*, July, 1897.

TETANUS CAUSED BY BITE OF APE, TREATED WITH ANTITOXIN; RECOVERY.

A student of the Budapest Veterinary College who had been bitten by an ape on the palm of his left hand was imprudent enough to dissect on the same day a horse which had died from tetanus, and on the following night he was seized with pain in his left hand, but waited till next morning, when he went to Professor Reczey's clinic. The wound of the hand was at once enlarged, thoroughly cleansed with a solution of perchlorid of mecury and subsequently cauterized with caustic potash. He was then sent home, and, although advised to present himself at the clinic next day, did not do so, but stayed at home, where he was seized on the following night (November 12) with tetanic convulsions. A neighboring practitioner who was called in ordered large doses chloral-hydrate to be taken every two hours. On November 13 the convulsions increased in frequency and intensity. The patient was conscious, his secretions and excretions were normal, he perspired freely, and his temperature was 107.3 degrees F. He was now given a subcutaneous injection of pilocarpin, which arrested the convulsions for a few hours, but in the evening he was seized again every thirty minutes with convulsions lasting from a minute to a minute and a half. On November 14 pilocarpin was again administered, giving relief for several hours. On November 15 the pilocarpin ceased to be effective, the convulsions came on again twice every hour, and sometimes respiration stopped owing to the spasm of the respiratory muscles, so that artificial respiration had to be resorted to. It was consequently resolved to give the tetanus antitoxin a trial. The antitoxin was given in doses of 3 c. c. thrice daily on November 15, 16 and 17, and once on November 18. The patient's nights were quieter from the beginning of this treatment, and the

last of the fits occurred during the night between November 17 and 18. He has been free from convulsions ever since, and may be safely considered as recovered. His highest temperature was 109.7 degrees F. on November 17, and the lowest was 95.3 degrees F. on November 20. The special features of this case were: 1. The early development of the tetanus, the period of incubation lasting generally from eight to fourteen days; this rapid onset may be attributed to the obvious fact that the disease was in this case not due to bacillary infection but rather to the absorption of toxins. 2. The absence of trismus and the absence of troubles connected with the secretory and excretory functions. 3. The marked predominance of very violent clonic convulsions, the characteristic tonic contractions being but little marked.—London *Lancet*, January 23—*Journal Am. Medical Association*, April 10, 1897.

TREATMENT OF BURNS AND SCALDS WITH PICRIC ACID.

In the *St. Louis Medical Review* of February 20, 1897, *Therapeutic Gazette*, June, Thompson contributes a practical article on this subject. He begins by pointing out a fact well known to the readers of the *Gazette*, namely, that picric acid has been recommended by French surgeons as being the nearest approach to an ideal treatment of burns. It was subjected by them to several years of experimental use, and their reports have been most flattering. In this official capacity as Dispensary Physician of the St. Louis Health Department, the writer has had large opportunities to thoroughly test the value of the drug. His experience consists of the study of some sixty cases—all emergency ones—and they presented a great variation as to cause and condition: they were burns and scalds from explosion of gasoline, gas reservoirs, lamps, contact with electric wires, hot water, hot tar, steam, molten metals, colored fires, etc. In all cases picric acid was used as a local treatment, and it was so agreeable to the patient and so successful from a scientific standpoint that there was no desire to return to the older methods.

Picric acid has long been known and valued as a laboratory reagent. It is one of the most valuable microscopical stains; it is the reagent in Esbach's quantitative test for albumen; and it appears in a pretty sugar reaction. Its properties are as follows: it is a local anæsthetic, it coagulates albumen, is a stringent and antiseptic. It can be applied in most any manner; the dry powder can be sprinkled on, or gauze compresses saturated with a solution of the acid can be applied; or, if the burn is universal, the body may be

immersed in a bath of the solution. For minor burns we find it very satisfactory to allow the patient to procure some of the acid and bathe the surface every few hours or as often as pain returns. No toxic effects come from the absorption of the drug, even if it colors the urine a deep yellow.

The acid is not very soluble in water, two drachms saturating a quart; the solubility can be increased by the addition of one ounce of alcohol to a quart of water. For emergency work any amount of the acid can be added to the water, which being stirred is ready for use. The first and most gratifying effect of the acid is the almost instantaneous relief of pain, even in cases where the epidermis has peeled off, exposing the papillæ to the air. In most cases the pain will be entirely eliminated, and in all it will be reduced to a minor symptom. A remarkable fact is that the acid will prevent blistering if applied soon enough, and it will limit the blistering if it has already begun. The acid is a strong astringent, and it contracts the superficial vessels and consequently checks the escape of serum from them. Picric acid coagulates albumen. If the epidermis is disorganized by the heat, the acid will fix it in a firm coagulated layer, and healing will take place, as it were, under a scar. Healing under a scar is always a desired method of tissue repair.

The timely use of the acid is a great safeguard against suppuration, because it is antiseptic and because it contracts the vessels, thereby preventing pressure necrosis of the cells.

The effect of the use of picric acid is remarkable, and in the writer's experience of more than half a hundred cases he is convinced that its worth has not been exaggerated. The results are uniformly good; healing will be rapid, with little scarring or deformity.

There are a few practical points to be remembered. In the first place, the blisters which are formed should never be incised—it will expose the naked papilla to the air and increase the pain and danger of infection; they should be punctured and the serum forced out; the epithelium will then collapse on the corium, and rapid subcutaneous healing will follow. It is also wise to let the shreds of clothing which have been burned into the skin remain until the second dressing; the cloth will be burned and asepticized, and it will do no harm by remaining, while its removal can only be accomplished by stripping away the flesh. The cloth will act as a capillary drain into the skin, and it will promote a permeation of the acid solution into the injured tissue. At a second dressing the thoroughly soaked fibres can be more easily removed.

It is a very noticeable fact that dressings soaked in a picric acid solution do not stick as fast as other applications;

this may be due to the astringent effect of the acid on the secretions.

In handling the solution of the acid the hands of the attendant will be stained a deep yellow color; this unsightly staining can be prevented by a preliminary application of vaseline to the hands, and by a final scouring of them with soap and boric acid.

If suppuration takes place the dressing should always be of gauze or some hydrophile substance. Drainage is most essential. The writer has not experimented with picric acid in the treatment of pus cases and cannot speak of its value in such, but as an emergency first dressing of burns and scalds it has no equal.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, March 12th, 1897.

J. GEORGE ADAMI, MD., FIRST VICE-PRESIDENT, IN THE CHAIR.

DISCUSSION ON ISOLATION AND DISINFECTION OF SCARLET FEVER, MEASLES AND DIPHTHERIA.

Dr. G. GORDON CAMPBELL exhibited a table which he had compiled showing the facts, so far established, concerning the period of incubation, duration of infection, date of appearance of the eruption, etc., in these three diseases.

Dr. E. P. LACHAPELLE discussed first the management of infected cases in the house. With regard to scarlet fever, isolation should last from the time of diagnosis for forty or fifty days and should be absolute; the nurse chosen should be one who had previously had the disease. The patient, before leaving the room, should be thoroughly disinfected and dressed in clean clothes, and then the room also should be thoroughly disinfected before other members of the family were admitted.

Diphtheria, with ordinary precautions, was much more easily isolated, as air was not a medium of transmission of the infection. It was impossible to determine how long isolation was necessary; it should be kept up as long as bacilli were found in the throat.

Of the three diseases, measles was much the most difficult to isolate at home, and, as the contagion was well marked even before the diagnosis could be made, the whole family would already have become contaminated. The whole household must therefore be quarantined, and as the disease was not a long one, this was not a very great hardship.

Though not usually fatal, statistics showed that measles in a large proportion of cases left serious sequelæ; the physicians were not careful enough in making the family understand that strict isolation would do away with the periodical outbreaks at present experienced.

The question of transmission of these diseases by the attending physician was a very important one. He must remember that he was liable to convey the disease unless proper precautions were taken to prevent it. Dr. Lachapelle advised that the infectious cases should be seen last, and that the physician should have a wrapper or overall in the passage near the door of the patient's room to wear while making his visit. This garment should be put aside and disinfected before the next visit. He should also disinfect his hands and face before leaving the house. These procedures would not only protect other families but would serve to educate the public to the necessity of taking rigid precautions against infection, and the physician must also make them understand that they must give up all social engagements, shopping, etc., and that, if the head of the family must attend to his work, he must live elsewhere.

On making a diagnosis, the first duty of every physician was to report to the local Board of Health so that they could, in some measure, control the spread of the disease. The Board might also aid the doctor in the discharge of his duties by having a little pamphlet, instructing people in the methods of isolation, etc., which could be distributed by the officer whose duty it was to placard the house.

Dr. WYATT JOHNSTON stated that by order of the Provincial Board of Health he had recently been investigating the question of disinfection, especially by means of formaldehyde. In discussing the usual means of house disinfection after contagious disease, he pointed out the necessity of waiting until the inmates of the house were no longer a source of infection before disinfecting the premises. In the case of diphtheria, the throat should be free from the bacilli.

In disinfecting articles of clothing, bedding, etc., it was necessary to have a rapid and certain method which would not damage the goods. Steam under pressure answered these requirements well for most articles, the only precaution needed being that of warming the articles to about 180°F., and thus avoid condensation before letting in the steam, as it was moisture from condensation and not that in the steam vapour itself which did mischief.

Expensive and fine goods, such as laces, silks and velvets, stood steam disinfection better than the cheaply dyed fabrics belonging to the poor. The colours of the latter were liable to run.

With reference to sulphur gas, it appeared now to be generally admitted that this was only a surface disinfectant, and had not sufficient powers of penetration to disinfect bedding, clothing, carpets and hangings.

In the absence of better means of disinfection, sulphur could be used, but all that could be reasonably expected of it would be the destruction of germs on the bare walls and floors. There was some epidemiological evidence to prove that in the case of smallpox and yellow fever sulphur was more efficient than in other infectious diseases.

Sulphur gas to be efficient required the presence of moisture, and this was liable to injure delicate goods. Chlorine or hydrochloric acid gas were both powerful but very destructive germicides; for disinfecting stables and outbuildings they were excellent.

A large number of things were injured by steam treatment, such as furs, leather, books and toys and upholstered furniture. These, for the same reason, could not be thoroughly treated with antiseptic solutions. For these the use of formalin vapour was admirably suited, as it gave complete disinfection without any injury to the textures of colors. Prolonged contact with formalin solutions would, however, act on iron somewhat. Formaldehyde vapour also offered a good means of sterilising walls, hangings and curtains. A sufficient quantity of the gas could be disengaged in a room to thoroughly sterilise the exposed surfaces and even to secure a certain amount of penetration. For this latter object, however, the disinfection in a closed chamber was more certain and economical, as it enabled more work to be done with less material.

The Health Board of the City of New York proposed issuing formaldehyde for treating certain goods. Formaldehyde was officially recognized as a disinfectant in the State of Maine.

Formaldehyde could be generated in the room by means of a lamp converting methyl alcohol quickly. In this case at least one quart of alcohol per 1000 cubic feet should be used, and the lamp should be capable of converting at least one quart per hour.

A better means of evolving the vapour was by regenerating it from a solution, for example, of formalin by treating it under pressure and allowing it to escape under a pressure of about three atmospheres. The presence of calcium chloride in the solution apparently ensured the gas being given off in a more effective state. Equal parts of formalin and a 10 p. c. or even 20 p. c. solution of calcium chloride in water formed a convenient formula. From this mixture the gas was generally

to be all supposed disengaged before the water had evaporated.*

The proper amount to be used was not yet fully determined. The Board of Health of the Province of Quebec, as the result of a number of experiments, advised at least one pound of formalin per 1000 cubic feet, while double that amount would be of advantage when penetration of bedding and upholstery was considered necessary. These amounts were larger than those usually recommended, and the printed directions generally given by the vendors of special patented appliances for this were usually far below the safety limit.

In disinfecting a room the doors and windows, as well as any other openings, are usually pasted up and the gas blown in through the key-hole for a period of a half to two hours, according to the effect desired. The room was then left closed for two or three hours more. When opened, the fumes of formalin could be instantly neutralised by ammonia vapour. The resulting *formamide* compound had no noticeable smell, but was liable later on to decompose and liberate formaldehyde afresh, hence repeated applications of ammonia might be necessary. By simply opening the windows and waiting a few hours this late evolution of formaldehyde could be avoided.

Formaldehyde vapour penetrates clothing and bedding much more slowly than steam, but it is very efficacious in the dry state.

The capacity of formaldehyde for killing spores is relatively high, whereas sulphur gas has practically no action upon spores.

Much of the apparatus sold for formaldehyde disinfection is very inefficient.†

Dr. A. D. BLACKADER pointed out the possibility in some cases of effectually isolating scarlet fever even after the disease had actually commenced. He cited the following case. In a family of two children, brother and sister, the boy while suffering from vomiting, soar throat and fever, was repeatedly kissed by the little girl who lay beside him on the sofa with her arms around his neck. The patient was seen by him thirteen hours later, at once isolated, and later on developed a moderately severe case of scarlet fever, and yet the little sister escaped. He had isolated scarlet fever as late

* A statement which does not appear to be very satisfactorily proved.—W. J.

† A number of different models of formaldehyde apparatus, the property of the Board of Health of the Province of Quebec, were shown at the meeting. The officials of the Board are willing to furnish any information in their power as to the most efficient forms obtainable. Changes and improvements in the apparatus are so frequent and considerable that it does not appear desirable to specify here which forms comply with the requirements mentioned above.

as sixty hours after the appearance of the rash and in no case was there an outbreak in the family.

With regard to the length of the time the infection lasted, he thought we were not able to speak in an absolute way, and that it depended upon the duration of desquamation, which in some cases it was possible to shorten so as to allow isolation to be completed at four weeks. The physician should also take into account the condition of the nose, throat and ears in determining this point.

He thought that in children returned from hospital more or less isolation should be kept up for a few days, as Ashby's statistics showed that from two to four per cent. of returned cases communicated the disease.

In measles, probably more could be done in the way of isolation than was generally supposed. The probability of the physician carrying disease from one house to another was not great where proper care was exercised, and he thought the plan suggested by Dr. Lachapelle, of having a coat for the physician's use while in the house, a very desirable one.

Dr. MACPHAIL considered the time had come for a revision of our views upon disinfection and isolation, just as the views upon antiseptics and quarantine had been revised, and that the present discussion tended in that direction. He believed that isolation should hold first place, combined with instant destruction of all the infected secretions and excretions of the patient in the same definite way as is practised in the laboratory. If, he said, in cases of diphtheria and scarlet fever, the secretions from the air passages were received and burned, and if, in case of intestinal infection, the discharges were properly sterilized at the time, it would be a far safer method than depending upon indiscriminate disinfection. From bacteriologic evidence he showed the difficulty in the way of effective household disinfection. It was quite impossible in ordinary cases to ensure even a reasonable degree of isolation; it should be made a public duty and a public charge.

Dr. D. F. GURD thought that, if the doctor would wear his overcoat buttoned up at infectious cases and take it off before entering the rooms of non-infectious ones, the danger of carrying infection would be minimized. He always followed this practice and had never carried any disease to his own or anybody else's children. The linen duster mentioned by Dr. Lachapelle would be a source of increased danger, for if kept in the sick room it must surely put contagion on the doctor's clothes, and, if brought and kept out of the room, it would rightly frighten the well persons.

Dr. F. W. CAMPBELL had understood Dr. Lachapelle to say that, if these three diseases had been effectively isolated, they would have been got rid of just as in the case of small-

pox. He did not agree with him here, but considered that we were free from smallpox because of vaccination rather than isolation.

Dr. WESLEY MILLS thought that the principle of educating the public on the subject of isolation and disinfection, as advocated by Dr. Lachapelle, was the most powerful means of all of preventing the spread of these diseases.

Dr. J. G. ADAMI felt that it was the duty of the physician to ostentatiously educate the patients in these principles, and it would be ridiculous to demand precautions from others we did not observe ourselves. Among the poor the only way of entirely stamping out these diseases would be by compulsory isolation in a proper fever hospital.

Dr. LACHAPELLE, in replying to Dr. Campbell, said that he did not intend to classify these three diseases with smallpox, but, if isolation were properly carried out, they would be checked or reduced to a minimum. Though the real cause was unknown one case certainly followed another, and if the first case were isolated there would be no epidemic.

In replying to Dr. Gurd, he thought that visiting with one's overcoat on was not a safe practice.

Stated Meeting, March 26th, 1897.

GEORGE WILKINS, M.D., PRESIDENT IN THE CHAIR.

LEFORT'S AMPUTATION OF THE FOOT.

Dr. J. H. HOGLE reported for Dr. Armstrong the following case, and exhibited the patient:—

C. I. F. was admitted to the wards of the Montreal General Hospital on February 20, 1897, suffering from severe laceration of the foot. The bones of the tarsus were fractured and displaced, leaving the foot hanging by the skin of the plantar surface. Immediate operation was advised, and Lefort's modification of Syme's operation was performed. An incision, commencing half an inch below the external malleolus, was made across the front of the ankle with a slight convexity downwards to the corresponding point half an inch behind the internal malleolus, and the ends connected by an incision transversely across the sole from point to point, slanting a little forward. The joint was then opened. The foot being depressed the lateral ligaments and the tendo Achillis were divided. The malleoli were removed, leaving the surface convex. The articular surface of the oscalcis was then sawn through, leaving a concave surface. The posterior tibial artery was carefully avoided, the tendons were shortened, hæmorrhage checked, the bony surfaces brought together and wired with silver wire (No. 4), and the flaps sutured with silk-worm gut. Drainage was left at the most dependant

part for forty-eight hours. Union took place by first intention, and the patient was able to stand on the stump of the foot four weeks after the operation.

Compound Depressed Fracture of the Skull.

Dr. J. H. HOGLE exhibited the case for Dr. Armstrong, and read the following report :—

J. H., male, æt. 50, was admitted to the Montreal General Hospital with a compound depressed fracture of the skull. Over the squamous portion of the temporal bone there was a large hæmatoma with a punctured wound in the centre admitting a large probe. Fracture of the skull was made out just above the auricle. The patient was in a semi-conscious condition, with pupils dilated, acting sluggishly to light, but there were no changes in the fundus. He remained in the same condition for two days when operation was advised. The incision was enlarged for two inches, the tissues were reflected and the fracture exposed. The thin squamous portion of the temporal bone had been fractured in a number of pieces with fissures running into the sphenoid. The pieces of bone were depressed, making a considerable indentation in the membranes. The blood clot was all turned out, twelve pieces of bone removed and placed in a warm carbolic solution. Considerable hæmorrhage followed, but was checked. Six pieces of bone were replaced over the membranes and the incision brought together, with drainage for forty-eight hours. Union resulted by first intention. The patient was discharged in three weeks in good condition, and on return three weeks later he showed no signs of necrosis of bone.

Suffocation and Intussusception.

Dr. ANDREW MACPHAIL showed the specimens, a trachea and œsophagus occluded with a piece of meat, and an intestine obstructed by the process of intussusception. In the former case the piece of meat was impacted in the upper part of the gullet, and a small projection from the side was inserted beneath the epiglottis into the windpipe. The intestine was obstructed for the space of six inches, the bowel intensely congested, but no appearance of lymph or gross signs of peritonitis. The patient was picked up on the street and died, it was thought, from chloral poisoning, so marked was the intestinal lesion.

Dr. WYATT JOHNSTON thought the condition of suffocation was more common than was generally supposed, and that many cases were mistaken for sudden syncopal attacks. In sudden obstruction of the larynx a person might fall dead without a symptom. Statistics of autopsies of sudden death showed six per cent. due to this particular cause. An instance

was recorded where a man falling off a load of grain got a grain of wheat in his larynx and died of suffocation.

The PRESIDENT referred to a case reported in Taylor's Legal Medicine in which a sudden death occurred after a brawl, and the cause of death given at the autopsy was congestion of the brain. Further investigation proved it to be due to suffocation from a small piece of meat in the larynx.

PLAGUE BACILLI.

Dr. J. G. ADAMI gave a demonstration of the plague bacilli, and showed a rat killed by the disease, and exhibiting the characteristic glandular enlargements.

DOCTORS AND LAW.

Mr. PEERS DAVIDSON, of the Montreal Bar, read this paper.

Stated Meeting, April 9th, 1897.

J. GEORGE ADAMI, M.D., FIRST VICE-PRESIDENT, IN THE CHAIR.

APPARENT PRIMARY CANCER OF THE INGUINAL GLANDS.

Dr. A. E. GARROW reported this case.

Dr. F. J. SHEPHERD asked how Dr. Garrow explained the enlargement of the corresponding glands on the opposite side, seeing that there was no connection through the lymphatics.

Dr. J. G. ADAMI drew attention to the fact that it was not unusual to find in mammary cancer both glands affected. The explanation might be that there were two primary foci.

Dr. J. C. WEBSTER stated that the so-called primary cancer of the inguinal glands in women was sometimes secondary to cancer of the cervix or side of the bladder, the connection between the inguinal and hypogastric glands being through the glands of Guerin. He, therefore, asked if a careful examination of the inside of the pelvis had been made.

Dr. A. E. GARROW in replying stated that a careful examination of the pelvis had revealed nothing more than an enlarged prostate. On his patient's first visit Dr. Garrow had detected an indurated mass on the dorsum of the penis, but a tight foreskin had prevented examination, and he had since refused operation.

PERFORATED GASTRIC ULCER.

Dr. R. C. KIRKPATRICK exhibited a patient, and gave the following account of the case :—

The patient whom you see before you was taken suddenly ill on the morning of March 3rd. She complained of

intense pain in the upper part of the abdomen. She had previously been in good health with the exception of a slight amount of indigestion. On this morning she had gone to her work as usual and about eleven o'clock was suddenly seized with intense pain in the region of the stomach. She became very faint but did not lose consciousness. She was conveyed to her home, where I saw her shortly after one o'clock. At that time she was pale, with a rapid pulse and sub-normal temperature. On examination, the whole abdomen was tender, but the point of maximum tenderness was in the epigastric region. She was removed to the Montreal General Hospital, and at three o'clock, four hours after the onset of the attack, the abdomen was opened. Stomach contents escaped as soon as the peritoneum was cut through, and a short search discovered a perforation in the anterior wall of the stomach, four inches from the cardiac orifice and near the lesser curvature. The opening was about the size of a bean. The edges were drawn together by a row of continuous sutures and then inverted by a double row of Lembert sutures. The peritoneum in the vicinity was cleansed by sponging, no irrigation being used. A rubber drain was inserted and the abdomen closed. A glass drainage tube was inserted into the pelvis through a small opening made just above the pubes, and from this latter opening fully a pint of turbid serous fluid escaped. The upper tube was removed in twenty-four hours and the lower tube in forty-eight. In twelve hours small quantities of hot water were given by the mouth, and in twenty-four hours milk and lime water was given. The patient made an uninterrupted recovery.

The diagnosis was based on the suddenness of the onset, the signs of peritoneal irritation with the point of maximum tenderness over the region of the stomach, and the previous history, indefinite though it was, of derangement of the stomach. Such a combination of symptoms point very strongly to a perforated gastric ulcer.

Dr. JAS. BELL emphasized the fact that in early operations success was almost certain, but if a number of hours was allowed to elapse one would be almost sure of failure.

EPITHELIOMA OF THE FLOOR OF THE MOUTH.

Dr. JAS. BELL exhibited this patient.

BRAINS OF FOUR EPILEPTICS.

Dr. J. A. MACPHAIL exhibited the brains of four epileptics, in course of preparation by Jones' method, which were not yet examined in sections. They formed part of a series of ten epileptic brains, prepared for examination in various

ways. The gross appearance of the brains varied greatly, depending upon such associated or causative conditions as those arising from alcoholism or connective tissue changes. It was mentioned that the brains examined showed a uniform appearance, namely, a fatty degeneration and a vacuolation of the nuclei, when stained with aniline blue black. He thought the statement would have to be altered that "the changes in the nerve centres in epilepsy elude the most minute research."

Resection of Gangrenous Intestine.

Dr. Jas. Bell showed a section of intestine removed for gangrene and exhibiting some unusual features.

Three Cases of High Operation for Cancer of the Rectum.

Dr. Jas. Bell read a paper on this subject.

Dr. F. J. Shepherd agreed with Dr. Bell that the sacral was the only proper method. He thought preliminary colotomy was a very important point in the treatment, as it was possible by this means to keep the bowel clean. He felt that an uncontrollable anus low down was not as valuable as a controllable one higher up.

Dr. G. E. Armstrong felt that the sacral incision could be made safely and successfully when inguinal colotomy previously performed ensured asepsis. Heinecke's incision allowed of the greatest degree of access to the pelvis and the whole of the rectum, thus hæmorrhage could be controlled and the operation performed with a minimum loss of blood. He referred to a man shown before the Society a year ago, upon whom he had practiced the high operation, and was still well and defecating through his colotomy wound.

Early diagnosis was a most important point, and he felt that every man getting up in years, anæmic, loosing weight and complaining of diarrhœa, should have his rectum examined.

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Editorial.

BRITISH MEDICAL ASSOCIATION.

MONTREAL MEETING.

The time of the great medical event of the year at Montreal is not very far distant, and it behooves all who may not have decided to be present at the Meeting to speedily make up their minds, and, if the visit is contemplated, to at once inform the Committee at Montreal of the fact. We learn that they are very anxious to know approximately how many they will have to entertain, and urgently request all who intend going to notify the Local Secretary, Dr. J. Anderson Springle, 2204 St. Catherine street. The probable attendance of medical men is estimated at the present time to be about 1000, 250 from England, 300 from the United States and 400 Canadians; also 50 from other Colonies, Three or four lady members have signified their intention of coming across the Atlantic, among them Mrs. Garrett Anderson. Dr. Saundby Dr. Barnes and Mr. Fowke will arrive in Montreal on the 14th of August by the "Parisian."

Dr. Adami writes that the names of members who intend coming across are coming in daily, but when he wrote was not certain that a special steamer would be required, but he is prepared at any moment to charter a vessel in the event of a sufficient number of late applicants appearing.

Several eminent men who cannot be present at the Meeting have promised to send demonstration specimens.

The English Secretaries are generally working in that direction.

Among the interesting discussions which are likely to be arranged for is one on syphilis, between the Dermatological and Pharmacological Sections, introduced by Dr. Whitla of Belfast, Ireland; members of other sections of course being invited to attend.

Full arrangements will be made in advance whereby members intending to land at Quebec may obtain cards of membership entitling them to half fare and the privileges granted by the Customs Department. Vessels conveying members will probably be met at Rimouski by Canadian representatives.

One of the most interesting and pleasant of the many excursions will be the one arranged for to Ottawa, probably on Saturday. Dr. Roddick met the profession in Ottawa some days ago, and the Finance Committee of the City Council subsequently promised to undertake all the expenses connected with the giving of a luncheon to the members of the Association.

During Dr. Roddick's recent visit to Toronto, he spent some time with Professor Macallum, Secretary of the B.A. A. S., from whom much information was obtained regarding the arrangements for the Meeting. He found that a great many proposed attending both Meetings, more especially those belonging to the physiological section. Dr. Roddick arranged with the President of the Branch, Dr. I. H. Cameron, to have any members of the B.M.A. entertained during their stay in Toronto. He found the profession as a whole very enthusiastic regarding the Meeting, and very anxious to assist their Montreal brethren in every way.

It was Dr. Roddick's intention to have formed other branches in Western Ontario, in such places as London and Hamilton; but there was a feeling on the part of the medical men of these places that there was not room for branches which might interfere with the existing local medical societies.

The Rev. Dr. Norton has kindly offered the Association the English Cathedral for a special service, and Dr. Adami will arrange with either Bishop Courtney, Bishop Dumoulin

or Bishop Sullivan, who are now attending the Lambeth Conference, to officiate.

Some 600 invitations have already been sent out, and replies have been received from 221 accepting. Among those who have intimated their intention to be present are :— A. C. Abbott, John Ashhurst, jr., L. D. Bulkley, W. T. Bull, H. T. Byford, H. P. Bowditch, J. Solis-Cohen, T. M. Cheesman, D. W. Cheever, W. B. Coley, J. McKeen Cattell, Fred. S. Dennis, D. B. Delavan, Reginald Fitz, Geo. H. Fox, Frank P. Foster, Christian Fenger, Virgil Gibney, H. G. Garrigues, E. H. Grandin, Landon Carter Gray, Geo. M. Gould, Hobart A. Hare, C. A. Herter, James Nevin Hyde, E. Hodenpyl, B. C. Hirst, A. Jacobi, Chas. Jewett, M. McKeen, Howard A. Kelly, Wm. W. Keen, C. A. Lindsley, John H. Musser, W. F. Mittendorf, Hunter McGuire, Thos. G. Morton, H. H. Mudd, J. B. Murphy, Paul F. Munde, W. P. Northrup, Wm. Pepper, Roswell Parke, Fred C. Shattuck, Louis Starr, M. Allen Starr, J. V. Shoemaker, E. C. Sitzka, Geo. F. Shrady, E. L. Trudeau, James Tyson, Hiram N. Vineberg, Wm. H. Welch and Casey A. Wood.

The English list of members coming has already appeared in the *British Medical Journal* and the daily papers, but it will be of interest to be reminded that those attending the meeting will have the privilege of listening to such men as Professor Chas. B. Ball, William Mitchell Banks, Henry Barnes, Prof. R. Boyce, Watson Cheyne, Sidney Coupland, J. Ward Cousins, J. H. Crocker, Prof. E. M. Crookshank, C. Heath, Arthur Kelsey, D. J. Leech, Right Hon. Lord Lister, Harvey Littlejohn, Donald MacAlister, Stephen Mackenzie, Thos. M. Madden, Malcolm Morris, E. Nettleship. Robt. Saundby, W. J. Sinclair, Prof. W. Whitla, Dawson Williams and Professor Richet, of Paris. Replies have been received from 12 of the Branches accepting the invitations tendered requesting them to send delegates.

The Museum Committee report that all their space has been taken up, and they probably will have to secure another building besides the large Victoria Skating Rink. This department will prove one of the most interesting features of the Meeting. A rare opportunity will be afforded to see pharmaceutical preparations, surgical and medical appliances,

and everything that interests the physician, from the leading firms of the United States and Canada as well as from across the Atlantic. Among the leading surgical instrument manufacturers will be Collin, of Paris, and Down Bros., of London, the latter making a special exhibition of antiseptic furniture which will be well worthy of inspection. Among the leading pharmaceutical houses that are making elaborate displays will be H. K. Mulford & Co., of St. Louis; Parke Davis & Co., of Detroit; Wyeth, of Philadelphia; Sharpe & Dohme, of Baltimore, and others. Zeiss is making a special display of microscopical apparatus. There will also be a great variety of exhibits from leading firms in Vienna, Berlin, Edinburgh, London, Paris and New York.

The Local Entertainment Committee are being assisted by a Committee of ladies, consisting of the wives of the profession in Montreal and others. Among the entertainments, provided for, in addition to those mentioned before, are a number of afternoon tea and garden parties. The Ladies' Committee will specially interest themselves in looking after lady visitors, and will make ample provision for continuously entertaining them during the progress of the Meeting, so that members may without hesitation bring their ladies with them, and be assured, while they themselves are fully occupied with the essential features of the meeting, the former will be so well looked after that the time will not hang heavily. The Annual Dinner will be held at Windsor Hotel. The large dining room will accommodate 600. The dinner will cost five dollars, including wines.

The Excursions Committee have arranged an attractive and varied programme which cannot fail to meet the desire of all. The printed outlines of some of the excursions which was issued recently appeared in our last number.

Among other excursions, not noted on the printed list, is the one on Lake Memphremagog to Newport and Magog. This is one of the most picturesque spots in the Province of Quebec, and the trip will carry the tourist through one of the most fertile portions of Canada, with scenery of mountain, lake and river, fairly typical of what is characteristic of the Province, and to be seen more especially in almost endless variety in the Laurentian District, which for want of time

cannot be visited. A special train will be provided which will enable the party to return in the evening. The steamer will accommodate about 800. Lunch will be taken at Newport, or probably at the foot of Owl's Head Mountain if it is found that the Hotel there can supply refreshments for the number expected to go. The excursion will be arranged for Saturday, and it is thought probable that, for those desiring it, the privilege of remaining over Sunday and returning on Monday will be obtained.

A trip is also proposed to Shawenagan Falls, on the St. Maurice River, which are said to almost rival Niagara.

Among other local trips on different afternoons are a ride round the Mountain on the electric cars and through some of the more interesting parts of the City; a trip to the top of Mount Royal, where a lunch will be served by the Mayor and Corporation of Montreal. The Incline Railway, carriages or bicycles may be the means of arriving there; a steamboat trip down the St. Lawrence; another to Ste. Anne and down the Lachine Rapids. It can be gained from what we have indicated that those going to the Montreal Meeting will not only be benefited from a medical point of view by coming in contact with the leading members of the profession from Britain, United States and Canada, and taking in the various discussions and papers which may be expected to represent the most recent advances, but that they will also be fully regaled by a varied and full round of social entertainments and pleasure trips such as has not been privileged to the members at any previous meeting.

BRITISH MEDICAL ASSOCIATION.

SIXTY-FIFTH ANNUAL MEETING.

The adjourned annual meeting of the British Medical Association will be held at Montreal on Tuesday, Wednesday, Thursday and Friday, August 31st, September 1st, 2nd, and 3rd, 1897.

President.—Henry Barnes, M.D., F.R.S.C., Senior Physician to the Cumberland Infirmary, Carlisle.

President-Elect.—T. G. Roddick, M.D., Professor of Surgery in McGill University, Montreal.

President of the Council.—Robert Saundby, M.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer.—Charles Parsons, M.D., Dover.

An Address in Medicine will be delivered by W. Osler, M.D., F.R.C.P., Professor of Medicine in the Johns Hopkins University, Baltimore, U.S.A.

An Address in Surgery will be delivered by William Mitchell Banks, F.R.C.S., Surgeon to the Liverpool Royal Infirmary.

An address in Public Medicine will be delivered by Herman M. Biggs, M.D., Director of the Bacteriological Laboratory of the Health Department, New York City.

The Scientific Business of the Meeting will be conducted in Eleven Sections, as follows, namely ;

A. MEDICINE.

Macdonald Chemical Building.

President.—Stephen Mackenzie, M.D., London. *Vice-Presidents:* J. E. Graham, M.D., Toronto; W. Bayard, M.D., St. John, N.B. ; J P. Rottot, M.D., Montreal ; F. W. Campbell, M.D., Montreal ; James Stewart, M.D., Montreal ; H. P. Wright, M.D., Ottawa. *Hon. Secretaries :* H. A. Lafleur, M.D., Montreal ; W. F. Hamilton, M.D., Montreal ; William Pasteur, M.D., 4 Chandos Street, Cavendish Square, London W.

The following discussions will take place :

1. The Dietetic Treatment of Diabetes, to be opened by Dr. Robert Saundby (Birmingham).

2. Arthritis Deformans (Rheumatoid Arthritis), more especially its Relation to Rheumatism, Nervous Disease and Tuberculosis, to be opened by Dr. James Stewart (Montreal).

3. Cholelithiasis ; its Causation, Symptomatology, Diagnosis and Treatment, to be opened by Dr. William Hunter (London) and Dr. Graham (Toronto).

The following, among others, are expected to take part in the Discussions in this section : Dr. Reginald Fitz (Boston), Dr. Jacobi (New York), Dr. Musser (Philadelphia), Dr. Pepper (Philadelphia), Dr. F. C. Shattuck (Boston), Dr. E. L. Trudeau (Saranac Lake, N. Y.), Dr. Jas. Tyson (Philadelphia, Dr. Wyman (Marine Hospital Service, Washington), Dr. R. L. Bowes (London), Mr. Wm. Armstrong (Buxton), Dr. Sydney Coupland (London), Professor Osler (Baltimore), Dr. S. Monckton Copeman (London), Dr. H. Handford (Nottingham), Dr. Myrtle (Harrogate), Dr. Graham (Toronto).

The following papers have been promised :—

Armstrong, William, M.R.C.S. The Exciting Cause of Rheumatoid Arthritis.

Bowles, Dr. R. L. (London.) Further experience of dangers connected with Respiration and their avoidance, with special reference to Anæsthesia, Hæmoptysis, Drowning, Apoplexy, and all Paralysed and Unconscious Conditions.

Fussell, Dr. M. H. (Philadelphia). Two Cases of Hæmophilia.

Graham, Dr. J. E. (Toronto.) A Case of Crossed Hemiplegia, the result of injury to the Pons Varolii.

Hamilton, Surgeon-Major-General (P.M.O. Plymouth). The Enteric Fever of Armies, contrasting the Disease in Tropical, Subtropical and Temperate Climates.

Osler, Dr. Wm. Exophthalmic Goître (*a*) Development of Maniacal Symptoms in, (*b*) Scleroderma with, (*c*) Myxœdema following.

Pepper, Dr. Wm., and Stengel, Dr. Alfred (Philadelphia). A Contribution to the Clinical Study of Venesection.

Star, Dr. M. Allen (New York). A Contribution to the Subject of Brain Tumours and their Surgical Treatment.

Stockton, Dr. Chas. G. (Buffalo). A type of Diarrhœa associated with Gastric Anacidity.

Tyson, Dr. James (Philadelphia). Note on the Proper Use of Terms to denote Myocardial Changes.

Whittaker, Dr. James T. (Cincinnati). Generalisations from seven years' Use of Tuberculin.

McConnell, Dr. J. Bradford (Montreal). Pyopericardium following Pleuro-pneumonia. Pericardiotomy.

B. SURGERY.

Large Lecture Room, McGill Medical College.

President: Christopher Heath, F.R.C.S., London, *Vice-Presidents:* Hon. Sir William Hingston, M.D., Montreal; Hon. M. Sullivan, M.D., Kingston, Ontario; Hon. E. Farrell, M.D., Halifax, Nova Scotia; I. H. Cameron, M.D., Toronto; F. Le M. Grasett, M.D., Toronto; James Bell, M.D., Montreal; George E. Armstrong, M.D., Montreal. *Hon.-Secretaries:* Robert C. Kirkpatrick, M.D., Montreal; Thomas Walker, M.D., St. John, N.B.; Jordan Lloyd, F.R.C.S., Broad Street, Birmingham.

The President will give a short introductory address.

A discussion will take place upon the Surgical Treatment of Appendicitis, which will be opened by Dr. G. E. Armstrong (Montreal). Dr. J. Ward Cousins, Professor C. B. Ball (Dublin), Mr. Jordan Lloyd (Birmingham), will take part in the discussion.

A discussion will also take place upon the Treatment of Cancer of the Rectum by Kraske's Operation, to be opened by Dr. James Bell.

Among those who, it is anticipated, will take part in the discussions in this Section are: Dr. W. W. Keen (Philadelphia), Dr. Collins Warren (Boston), Dr. John Ashhurst (Philadelphia), Dr. Cheever (Boston), Dr. Dennis (New York), Dr. Murphy (Chicago), Dr. McGraw (Detroit,) Dr. J. C. White (Boston), Dr. Chas. T. Bull (New York), Professor C. B. Ball (Dublin), Mr. Jordan Lloyd (Birmingham).

The following gentlemen have given notice of their intention to read papers in this Section:

Ball, Professor C. B. (Dublin). On Trans-sacral Resection of the Rectum.

Cousins, J. Ward, M.D., F.R.C.S. (Southsea). Operative Treatment of Organic Stricture of the Urethra.

Ferguson, Dr. W. W. (Kingston, N.B.). Varicosity of the Lingual and Buccal Veins.

Garrow, Dr. A. E. (Montreal). Ventral and Umbilical Hernia in the same Patient.

Lloyd, Jordan, F.R.C.S. Stone in the Ureter and its Treatment.

Marcy, H. O., M.D. (Boston). On the Suturing of Wounds.

McGraw, Theo., M.D. (Detroit). Invagination of the Cæcum and Vermiform Appendix.

Newman, David, M.D. (Glasgow). (1) Cases illustrating some Interesting Points in the Pathology and Surgical Treatment of Renal and Vesical Hæmaturia. (2) Transitory Hydronephrosis and Albuminuria in cases of Movable Kidney treated by Operation.

Ross, James F. W., M. D. (Toronto). Some rare Conditions of the Kidney.

Roth, Bernard, F.R.C.S. (London). Analysis of One thousand Consecutive Cases of Lateral Curvature of the Spine, treated by Posture and Exercise exclusively (without mechanical supports).

Shepherd, F. J., M.D. (Montreal). A case of Abdominal Tumour, in which nearly eight feet of the small intestine were resected.

Smith, Dr. A. Lapthorn (Montreal). Seven cases of Appendicitis with Pus Tubes.

Spanton, W. D., F.R.C.S. (Hanley). Two cases of Meningocele successfully operated on.

Thomson, Alexis, M.D., F.R.C.S. (Edinburgh. (Stricture of Intestine as Sequel of Strangulated Hernia.

C. Public Medicine.

Large Lecture Room of the Redpath Museum.

President: E. P. Lachapelle, M.D., Montreal. *Vice-Presidents:* F. Montizambert, M.D., Quebec; Robert Craik, M.D., Montreal; P. H. Bryce, M.D., Toronto; Sir James Grant, Ottawa; R. H. Powell, M.D., Ottawa. *Honorary Secretaries:* Wyatt Johnston, M.D., Montreal; E. Pelletier, M.D., Montreal; Harvey Littlejohn, M.B, C. M., Surgeons Hall, Edinburgh.

The business of the Section will be carried out as follows:

The President will give an address on Sanitation in Canada; its Progress up to date.

Lachapelle Dr. E. P. (President of the Board of Health of the Province of Quebec, Montreal). Sanitation in Canada; its Progress up to date.

Newsholme, A., M.D. (M.O.H. Brighton). A Plea for the International Study of Diphtheria, Illustrated by Facts and Figures.

Kaye, J. R. (M.O.H. to the Council of the West Riding of the County of Yorkshire). The Relationship of the Health Officer to the Registration and Certification of Deaths.

Dr. F. Montizambert (Superintendent of the Canadian Quarantine Service, Grosse Ile, Quebec), and Dr. W. Wyman (Superintendent of the Quarantine and Marine Hospital Service, Washington) will open a discussion on the Utility of Quarantines as now Conducted (Inspection, Disinfection, and Isolation Stations) in Certain Countries at Least.

Dr. P. H. Bryce (Secretary of the Provincial Board of Health, Ontario), Dr. H. Handford (M. O. H. to the County of Nottingham), and Dr. C. B. Probst (Secretary, State Board of Health, Ohio), will open a discussion on How Far should Mandatory Measures go in Dealing with (*a*) Measles, (*b*) Whooping Cough, (*c*) Tuberculosis, (*d*) Leprosy.

Johnston, Wyatt, M.D. (Bacteriologist, Board of Health, of the Province of Quebec). Experiments with Disinfectant Gases.

Janin, G., C.E. (Montreal). On the Different Processes recommended for the Treatment of Sewage; Mechanical, Chemical and Epuration by the Arable Soil.

Motter, Dr. D. Murray Galt (Washington). Underground Zoology and Legal Medicine: a Study of Fifty Disinterments, with Additional Experimental Observations.

Kinyoun, Dr. Jos. J. (United States Marine Hospital Service, Washington). Methods of Disinfection.

Neech, Dr. James T. (M.O.H. for Atherton). The Period of Infection of Scarlet Fever.

Copeman, Dr. Monckton (Medical Inspector to the Local Government Board of England). Some Alleged Dangers of Vaccination and their Prevention.

Dr. R. F. Ruttan, Chemist to the Board of Health of the Province of Quebec, will open a discussion on the Respective Value of the Chemical and Bacteriological Methods of Water Analysis.

D. Obstetrics and Gynæcology.

Large Lecture Room, McDonald Physics Building.

President: William Japp Sinclair, M.D., Manchester. *Vice-Presidents:* William Gardner, M.D., Montreal; James Perrigo, M.D., Montreal; J. A. Temple, M. D., Toronto; J. C. Cameron, M.D., Montreal; T. Johnston Alloway, M.D., Montreal; James Ross, M.D., Toronto. *Honorary Secretaries:* D. J. Evans, M.D., Montreal; W. Burnett, M.D., Montreal; Arthur E. Giles, M.D., 58, Harley Street, Cavendish Square, London, W.

The following discussions will, it is proposed, be held in this Section on the days indicated:

September 1st.—The Causation and Treatment of Hyperemesis Gravidarum.

September 2nd.—The Vaginal *versus* the Abdominal

Route in dealing with Inflammatory Conditions and Tumours in the Pelvis. To be opened by Mr. Lawson Tait.

September 3rd.—The Palliative and Radical Treatment of Uterine Flexions and Displacements. To be opened by Dr. Barton Cook Hirst (Philadelphia).

The following papers are promised.

Alloway, T. G., M.D. (Montreal). Title not announced.

Anderson, Professor Winslow, M.D. (San Francisco). Uterine Fibroids, their etiology, pathology, symptoms, diagnosis, and treatment.

Barnes, Robert. M.D. (London). Notes and a drawing to illustrate "Barnes's Boundary Line" in Placenta Prævia.

Campbell, John, M.D., F.R.C.S. Eng.,(Belfast). Labour Complicated by Abnormalities of the Cervix Uteri and Vagina.

Eden, T. W., M.D. (London). Title not announced.

Garrigues, H. J., M.D. (New York). The treatment of Abortion.

Hart, D. Berry, M.D. (Edinburgh). The Pathology and Treatment of Chronic Non-suppurative Conditions of the Uterus and Appendages.

Lucas, T. P., M.R.C.S. (Brisbane, Australia). Menstruation, its Purpose and Design.

Macdonald, A. A., M.D. (Toronto). Title not announced.

Maclean, Ewen J., M.D. (London). The After-history of some Gynæcological Operations.

Madden, T. More, M.D., F.R.C.S.I (Dublin). 1. On some Points in Modern Treatment of Tedious Labour with description of a new Traction Forces; (2) On the Conservative Treatment of Fallopian Tube Disease.

Mundé, Paul F., M.D. (New York). Pelvic Abscess.

Parsons, J. Inglis, M.D. (London). A new Method of Treatment for Prolapse of the Uterus

Robson, A. W. Mayo, F.R.C.S. (Leeds), to be read by Dr. Collier (Ripon). Porro's Operation for Tumour of the Pelvis complicating Pregnancy.

Smith, Dr. (Montreal). Diagnosis and Treatment of Retroversion of the Uterus, with Fixation.

Temple, G. Algernon, M.D. (Toronto). Title not announced.

It is expected that Dr. Howard Kelly, of Baltimore, will give a demonstration on Genital Endoscopy.

Among those who are expected to take part in the work of this Section are: Professor A. W. Mayo Robson (Leeds), Mr. Lawson Tait (Birmingham), Dr. T. W. Eden (London), Dr. Inglis Parsons (London), W. H. A. Kelly (Baltimore), Dr. P. F. Mundé (New York), W. R. Goffe (New York), and Dr. John Campbell (Belfast).

E. Pharmacology and Therapeutics.

Lecture Hall of the Wesleyan College.

President: D. J. Leech, M.D., Manchester. *Vice-Presidents:* A. D. Blackader, M.D., Montreal; James Thorburn,

M.D., Toronto ; C. R. Church, M.D., Ottawa ; J. B. McConnell, M.D., Montreal ; F. J. Austin, M.D., Sherbrooke ; Walter George Smith, M.D., Dublin. *Honorary Secretaries:* F. X. L. de Martigny, M.D., Montreal ; J. R. Spier, M.D., Montreal ; C. R. Marshall, M.B., Pharmacological Laboratory, Downing College, Cambridge.

The President will delivery a short Introductory Address.

Discussions on the Treatment of Insomnia, the Treatment of Syphilis, and Diuretics will be held on September 1st, 2nd, and 3rd respectively.

1. The Treatment of Insomnia will be opened by Dr. C. K. Clarke, Physician to the Rockwood Hospital, Kingston, on General Treatment ; by Dr. R. W. Wilcox, Professor of Medicine and Therapeutics in the New York Post-Graduate School on the Value of Individual Drugs, with special reference to the newer Hypnotics ; by Dr. A. McPhedran on the Ill Effects and Contraindications to the Use of Drugs ; and by Dr. R. Ferguson, Lecturer on Therapeutics in the Western University, on the Mode of Action of Hypnotics.

2. The Treatment of Syphilis will be opened by Dr. Whitla (Belfast). The introducer will deal with questions under the following heads: (*a*) How mercury and iodides are supposed to act in syphilis ; (*b*) when should mercurial treatment be started, especially should it be given in the primary stage ; (*c*) the various methods for its routine administration, dosage, etc., and the length of time necessary for mercurial treatment ; (*d*) the treatment of tertiary and congenital syphilis.

(Hypodermic and intravenous medication will be dealt with by a dermatologist.)

The question of Diuretics will be opened from the clinical side by Dr. Barr (Liverpool), and from the experimental by Mr. Marshall (Cambridge).

Among those who have promised to take part in the discussions are: Professor Richet (Paris), Dr. A. R. Cushny (University of Michigan, Ann Arbor), Dr. H. A. Hare (Philadelphia), Dr. A. D. Blackader (Montreal), Dr. H. Barnes (Carlisle), Dr. Saundby (Birmingham), Dr. Donald MacAlister (Cambridge), Dr. Whitla (Belfast), Dr. J. A. Campbell (Carlisle), Dr. Brookhouse (Nottingham), Mr. Jordan Lloyd (Birmingham), Dr. J. Ward Cousins (Southsea), Dr. D. Berry Hart (Edinburgh), Dr. R. C. Stewart (Leicester), Dr. H. A. McCallum (Western University), Dr. J. J. Cassidy (Toronto) Dr. James Watson (Southsea), and others.

Those who have promised papers are:

Hare, W. A. The Importance of Studying the Absorption and Elimination of Drugs.

Blackader, A. D. On Apocynum Cannabinum.

Cushing, A. R. A Contribution to the Pharmacology of the Mammalian Heart.

Leech, D. J. On Quillaia Bark.

Phillips, C. D. F., and Pembrey, M. S. On the Physiological and Therapeutical Actions of Hydrastis Canadensis.

Halliday, A. (Nova Scotia). The Effect of Certain Drugs on Gastric Secretion.

Fotheringham, J. T. (Toronto). On the Prescribing of Proprietary instead of Pharmacopœial Preparations.

Hutchison, R. On the Pharmacology of the Thyroid Gland.

Marshall, C. R. On the Treatment of the Heart Failure of Arterio-sclerosis.

Marshall, C. R., and Taylor, J. J. On the Absorption of Mercury.

Chisholm, M. (Halifax). The Opposite Effects of Drugs in Large and Small Doses.

Bazin, M. On Diphtheria Antitoxin.

Marshall, C. R. Furtner Experiments on Indian Hemp.

F. Pathology and Bacteriology.

Lecture Room II, McGill Medical College.

President: Watson Cheyne, F.R.C.S., F.R.S., London. *Vice-Presidents:* J. G. Adami, M.D., Montreal; J. Caven, M.D., Toronto; J. Stewart, M.D., Halifax; J. C. Davie, M.D., Victoria, B.C.; L. C. Prevost, M.D., Ottawa; M. T. Brennan, M.D., Montreal. *Honorary Secretaries:* W. T. Connell, M.D., Kingston, Ontario; C. F. Martin, M.D., Montreal; Rubert W. Boyce, M.D., University College, Liverpool; William Hunter, M.D., 54 Harley Street, Cavendish Square, W.

The following will be the subjects for discussion:

1. Serum Diagnosis and the Agglutinating Action of Serums, to be introduced by Professor Wyatt Johnston (Montreal).

2. Immunisation.

3. The Bubonic Plague.

Among those who will take part in the discussions will be Professor Welch (Johns Hopkins), Professor Crookshank (London), Dr. W. Hunter (London), Dr. A. S. Grunbaum (Liverpool), Dr. A.C. Abbott (Philadelphia), Dr. T.M. Cheesman (New York), Dr. R. Fitz (Boston), Dr. E. Hodenpyl (New York), Dr. Trudeau (Saranac), and Dr. F. F. Wesbrook (Minneapolis).

It is urged that British pathologists unable to be present should send to Dr. Rubert Boyce lantern slides and other material for demonstration bearing upon the subjects selected for discussion.

The following papers are promised:

Adami, J. G., M.D. and Staples, E., M.D. (Montreal). On the Appendices Epiploicæ.

Barker, Lewellys F., M.D., (Baltimore). On the Changes in the Nerve Cells in Epidemic Cerebro-spinal Meningitis, with special reference to lesions in the lower motor neurons.

Boyce, R. The occurrence of the B. Tuberculosus in Milk.

Caren, Professor J., M.D. (Toronto). Title of Paper not received.

Connell, W. (Kingston, Ont.) Title of Paper not received.

Copeman, S. Monckton, M.D., (London). On Vaccinia.

Flexner, Simon, M.D. (Johns Hopkins University). Pseudo tuberculosis Hominis Streptothricia.

Goldman, Professor (Freiburg). On Early Infection of Blood Vessels in Carcinoma and Sarcoma (lantern slides).

Grunbaum, A. S., M.D. The Smegma Bacillus.

Herter, C. A., M.D. (New York). Experimental Observations on the Relation between Bacterial Activity in the Intestine and the Indican in the Urine.

Hodenpyl, Eugene, M.D. (New York). On the Occurrence of Typhoid Fever without Lesions of the Small Intestine.

Manson, Patrick, M.D. On Filaria Sanguinis Hominis, with the demonstration of a new Species from Central and South America.

Stiles, H. J. On the Evolution of Cancer Bodies (lantern slides).

Thomson, Alexis H. Epithelioma of Penis.

Van Gieson, Ira, M.D. (New York). On Hæmato-myelopore and its Relations to Syringomyelia.

Washbourn, J. W., M.D. Demonstration of Specimens of an Infective Neoplasm from the Dog.

Welch, Professor (Baltimore). The Distribution and Pathogenic Effects of the B. Aerogenes Capsulatus.

Wright, Hamilton K., M.D. (Montreal). On the Topography of the Posterior Columns.

G. PSYCHOLOGY.

Morris Hall, Presbyterian College.

President: R. M. Bucke, M.D., London, Ontario. *Vice-Presidents:* D. Clarke, M.D., Toronto; T. J. Burgess, M.D., Verdun, Quebec; A. Vallée, M.D., Quebec; G. Wilkins, M.D., Montreal. *Honorary Secretaries:* J. V. Anglin, M.D., Montreal; George Villeneuve, M.D., Montreal; J. G. Blandford, M.R.C.S., D.P.H., London County Asylum, Banstead, Sutton, Surrey.

The officers of this Section, believing that many of the papers already offered will be provocative of considerable debate, have determined to announce no special subjects for discussion. Among those who have offered to contribute papers are:

Bucke, R. M., M.D. (London, Ontario, Asylum). On Mental Evolution.

Clark, W., M.D. (Toronto Asylum). The Reflexes in Psychiatry.

Hobbs, —, M.D. (London, Ontario, Asylum). Surgical Gynæcology in Insanity.

Russell, J., M.D. (Hamilton, Ontario, Asylum). Insanity in its Relation to the State.

Villeneuve, George, M.D. (Longue Pointe). Crime and Insanity.

Among those who intend to take part in the business of the Section are Dr. N. H. Beemer (Mimico Asylum, Ontario), Dr. G. Alder Blumer (Utica, New York), Dr. C. K. Clark (Rockwood Hospital, Kingston, Ontario), Dr. Edward Cowles (Waverley, Mass.), Dr. T. D. Crothers (Hartford, Conn.), Dr. G. Stanley Hall (Worcester, Mass.), Dr. Hazlitt (Sunbury), Dr. Henry Hurd (Baltimore), Dr. Rogers (Asylum for the Feeble-Minded, Faribault, Minn.), Dr. George H. Rohe (Maryland Hospital for the Insane, Catonsville), Dr. Rothesay Stewart (Leicester) and Dr. A. R. Urquhart (Perth).

H. OPHTHALMOLOGY.

Lecture Room I, McDonald Engineering Building.

President: Edward Nettleship, F.R.C.S., London. *Vice-Presidents:* F. Buller, M.D., Montreal; R. A. Reeve, M.D., Toronto; Ed. Desjardins, M.D., Montreal; A. A. Foucher, M.D., Montreal. *Honorary Secretaries:* W. H. Smith, M.D., Winnipeg; J. Jehin-Prume, M.D., Montreal; Thomas Herbert Bickerton, M.R.C.S., 88 Rodney Street, Street, Liverpool.

It is intended that a discussion should take place on the Prevention of Accidents to the Eyes of Persons engaged in Industrial Employments. The following gentlemen have expressed their intention of contributing papers to the Section:

Bickerton, T. H. (Liverpool). (1) The Question of Colour Vision in the Public Services; (2) on Mules's Operation.

Buller, Dr. F. (Montreal). Abnormalities in the Functions of the Extrinsic Ocular Muscles.

Foucher, Dr. A. A. (Montreal). Auto-Infection in Pustulous Keratitis.

Fulton, Dr. John F. (St. Paul, Minn., U.S.A.) Amblyopia of Strabismus.

Jehin-Prume, Dr. Jules (Montreal). A Contribution to the Treatment of the Syphilitic Affections of the Eye.

Lee, Charles G. (Liverpool). On an Unusual Case of Orbital Tumour.

Wurdemann, Dr. H. V. (Milwaukee, Wis., U.S.A.) Relation of Skiascopy to other Objective and Subjective Methods for the Estimation of the Ocular Refraction (with Exhibition of Hand Skiascope).

Specimens.—Specimens will be shown by Mr. Treacher Collins, Mr. Priestley Smith and Dr. C. H. Usher.

I. Laryngology and Otology.

Lecture Room II, McDonald Engineering Building.

President: Greville Macdonald, M.D., London. *Vice-Presidents:* W. Tobin, M.D., Halifax; G. A S. Ryerson M.D., Toronto; H. S. Birkett, M.D, Monteal; G. R. Mc Donagh, M.D., Toronto. *Honorary Secretaries:* A. Chretien M.D., Montreal; H. D. Hamilton, M.D., Montreal; W. Permewan, M.D., 7 Rodney Street, Liverpool.

The following papers are announced in this Section:

Bryan, J. H. (Washington). A Contribution to the Anatomy of the Fronto-Ethmoidal and Frontal Maxillary Regions.

Delavan, Dr. D. B. (New York). Surgical Treatment of Malignant Disease of the Larynx.

Farlow, Dr. Jno. W. (Boston, Mass., U.S.). Presentation of Instruments, with remarks.

Hobbs, Arthur G., M.D. (Atlanta, Ga.). When not to Inflate the Middle Ear.

Horne, Jobson, M.D., and Yearsley, MacLeod, F.R.C.S. (1) On Eucaine as a Local Anæsthetic in the Surgery of the Throat, Nose, and Ear. (2) On Turbinectomy.

Ingals, E. Fletcher, M.D. (Chicago). On the Relation of Nasal Diseases to Pulmonary Tuberculosis.

Jones, T. W. Carmallt, F.R.C.S.Ed. Some After Effects of Turbinotomy.

Knight, Chas. H., M.D. (New York). Upon a Foreign Body (Metallic Button Hook) removed from the Larynx by Laryngo-Fissure.

Mackenzie, Dr. John N. (Baltimore, Ind., U.S.). The Physiological and Pathological Relations between the Nose and the Sexual Apparatus.

O'Dwyer, J., M.D. (New York). Acute Syphilitic Stenosis of the Larynx in the Adult treated by Intubation.

Roe, John O., M.D. (Rochester, New York). The Correction of Nasal Deformities by Subcutaneous Operations.

Spicer, Scanes, M.D. (London). (1) On Reduction of the Inferior Turbinate Bone in Certain Cases of Nasal Obstruction. (2) On the Significance and Treatment of Recurrent Retention of Secretion in the Lacunæ of the Tonsils. (3) A Case of Multiple Papillomata of Larynx in a Man aged 73.

Wurdemann, Dr. H. V. (Milwaukee, Wis., U.S.A.). Phosphoric Necrosis of Temporal Bone.

Among those who intend to take part in the business of the Section are also Dr. J. Solis-Cohen (Philadelphia), Dr. Birkett (Montreal), Dr. Chretien (Montreal), Dr. G. R McDonagh (Toronto), Dr. D. B. Delavan (New York), Dr. Charles Warden (Birmingham) and Dr. J. W. Mackenzie (Baltimore).

J. Anatomy and Physiology.

Lecture Room I, McGill Medical College.

Presidents : Augustus D. Waller, M.D., F.R.S., London. *Vice Presidents :* F. Shepherd, M.D., Montreal; A. B. Macallum, M.D., Toronto; T. Wesley Mills, M.D., Montreal; A. Primrose, M.D., Toronto; J. B. A. Lamarche, M.D., Montreal; D. B. Fraser, M.D., Stratford, Ontario. *Hon. Secretaries :* J. M. Elder, M.D., Montreal; W. S. Morrow, M.D., Montreal; Robert Hutchison, M.D., Physiological Laboratory, London Hospital Medical College, Turner Street, Mile End, E.

The following have been selected as subjects for the discussions:

September 1st. Anæsthetics, to be introduced by the President of the Section (Dr. A. Waller). Among those who are expected to take part in this discussion are Dr. Shore (Cambridge), Dr. Kemp, F.R.S. (Baltimore), Professor W. D. Halliburton, F.R.S. (London), Dr. A. B. Macallum (Toronto), Dr. H. A. Hare (Philadelphia), Dr. G. T. Kemp (Baltimore), Dr. G. Gordon Campbell (Montreal), Dr. Kenneth Cameron (Montreal).

September 2nd. The best methods of Teaching Anatomy, to be introduced by Professor Alex. Macalister (Cambridge) and Dr. F. J. Shepherd (Montreal).

September 3rd. The Causation of the Heart Beat and its Modifications, introduced by Dr. Gaskell, F.R.S. (Cambridge) and Professor T. Wesley Mills (Montreal). Dr. Porter (Boston), Dr. Howell (Baltimore,) and Dr. Bowditch (Boston), Dr. W. Townsend Porter (Boston), Dr. A. B. Macallum (Toronto), Dr. T. Wesley Mills (Montreal), Dr. G. Carl Huber, (Ann Arbor, Mich.), Dr. A. P. Knight (Kingston), are expected to take part in the discussion.

The following papers have been promised :

Huber, G. Carl, M.D., Assistant Professor of Histology and Embryology, University of Michigan, Ann Arbor. A brief account of some observations on the Sympathetic Ganglia of Vertebrates.

Kemp, G. T., M.D., Ph.D. (Baltimore). Nitrous Oxide Anæsthesia.

Knight, A. P., M.A., M.D., Professor of Physiology, Queen's University, Kingston, Ontario. Action of certain Chemical Salts on the Heart Beat of Fish Embryos.

Lombard, Warren P., M.D., Professor of Physiology, University of Michigan, Ann Arbor. Anatomy of the Knee-joint of the Frog, with special reference to the action of Flexor and Extensor Muscles.

Macalister, Professor Alex. (Cambridge). The Influence of Head Shape on Cranio-cerebral Topography.

Macallum, A. B., M.B., Ph.D., Professor of Physiology, Toronto University. Some observations on the Micro-Chemistry of Cells and Tissues.

Meltzer, S. J., M.D. (New York City). On the effect of Anæsthesia upon the Reflexes of Deglutition and of the Closure of the Glottis.

Mills, T. Wesley, M.D., L.R.C.P., Professor of Physiology, McGill University. Title of paper not yet received.

Paton, Dr. Noel, (Edinburgh). The Phosphorus Compounds and the Exchange of Phosphorus in the Salmon.

Pembrey, Dr. M. S. Title not received.

Stewart, Dr. G. N. The relation of Electrolytes to the other Constituents of Animal Cells and Liquids, with especial reference to the Blood Corpuscles and Blood Plasma.

Thompson, Professor W. H. (Belfast). Degenerations resulting from Lesions of the Sensory Area of the Cortex Cerebri.

Dr. Gustav Mann will send for exhibition specimens illustrating the Minute Histology of the Liver in Activeand Resting conditions. Dr. D. A. Welsh (Edinburgh) will exhibit specimens illustrating the Histology of the Parathyroid Glands. Dr. Geo. Oliver will exhibit his new Hæmoglobinometer and Hæmocytometer.

Dr. Shore and Professor Sherrington will take part in the proceedings.

K. DERMATOLOGY.

Lecture Room III, McDonald Engineering Building.

President: Malcolm Morris, F.R.C.S.Ed., London. *Vice-Presidents:* J. E. Graham, M.D., Toronto; F. J. Shepherd, M.D., Montreal; J. A. S. Brunelle, Montreal; G. L. Milne, M.D. Victoria, B.C. *Hon.-Secretaries:* Gordon Campbell, M.D., Montreal; J. M. Jack, M.D., Montreal; James Galloway, M.D., 54 Harley Street, Cavendish Square, W.

A subject selected for discussion in this Section is the Clinical and Pathological Characteristics of Vesicular Skin Diseases, especially the Dermatitis Herpetiformis Group.

It is intended that a joint meeting should be held with the Section of Pharmacology and Therapeutics for the discussion of the subject of the Treatment of Syphilis.

The following papers are announced:

Fox, T. Colcott. Demonstration of the Biology of the Trichophyte.

Galloway, James (London). On Melanotic Conditions of the Skin preceding Malignant Disease of the Skin.

Among those who are expected to take part in the discussions of this Section are Dr. E. B. Bronson (New York),

Dr. L. D. Bulkley (New York), Dr. J. A. Fordyce (New York), Dr. J. N. Hyde (Chicago), Dr. G. T. Jackson (New York), Dr. Stephen Mackenzie (London), Dr. A. Eddowes (London), and Dr. White (Boston).

Programme of Proceedings.

Tuesday, August 31st, 1897.

11 a.m.—Cathedral Service.

2.30 p.m.—Opening Ceremonies. Welcome by His Excellency the Governor-General, Lord Aberdeen, the Mayor of Montreal, and others. Address by the President-elect, Dr. T. G. Roddick.

4 p.m.—Garden Party at the Royal Victoria Hospital (Mr. W. B. Angus, President of the Royal Victoria Hospital), etc.

9 p.m.—*Conversazione* at Laval University. Address by Professor Richet, Delegate from the French Government, etc.

Wednesday, September 1st, 1897.

10 a.m.—McGill University: Opening of Sections.

2.30 p.m.—Windsor Hall: Address in Medicine by Dr. W. Osler.

4 p.m.—Excursion down the St. Lawrence: Garden Parties, etc.

9 p.m.—Reception by the Hon. Sir Donald A. Smith, High Commissioner of Canada.

Thursday, September 2nd, 1897.

9.30 a.m.—McGill University: Sectional Meetings.

2.30 p.m.—Windsor Hall: Address in Surgery by Mr. W. Mitchell Banks.

4 p.m.—Excursion across the Island, International Golf Match, etc.

7.45 p.m.—Annual Dinner of the Association.

Friday, September 3rd, 1897.

9.30 a.m.—McGill University: Sectional Meetings.

1 p.m.—Lunch on the Mountain, given by the Mayor.

2.30 p.m.—Windsor Hall: Address in Public Medicine by Dr. Herman Biggs; Concluding Speeches, etc.

4 p.m.—Excursion down the Lachine Rapids; Garden Parties, etc.

9 p.m.—*Conversazione* at McGill University.

Saturday, September 4th, 1897.

Excursions to Lake Memphremagog, Saranac, Ottawa, Quebec, etc.

ANNUAL MUSEUM.

The Pathological Museum.

The Pathological Museum will be established in the Dissecting Room of McGill Medical College, a large, lofty, and well-lighted room. The Secretary of the Pathological Sub-committee of the Museum Committee is Dr. C. F. Martin, McGill Medical College, Montreal, who will be glad to receive the loan of specimens, drawings, and photographs illustrative of both normal and morbid anatomy, as also any new apparatus for research in physiology, pathology, or bacteriology.

Specimens illustrating diseases peculiar to the remoter portions of the Empire are especially desired. It is proposed to make a special collection of photographs and micro-photographs of morbid conditions. These will be suitably mounted and carefully returned to the owners.

Suitable vessels and jars, and spirit and other media will be provided for moist specimens.

Foods, Drugs and Appliances.

Regulations Regarding Exhibits.

1. Communications on general matters connected with the Museum and applications from intending exhibitors should be addressed to the Honorary Secretaries, Drs. J. W. Stirling or J. M. Jack, 2204 St. Catherine Street (British Medical Association Rooms).

2. Applications for space must be in the hands of the Secretaries before July 25th, accompanied with a brief descriptive account of each exhibit for insertion in the Museum Catalogue. Information of the allotment of space will be furnished as promptly as possible, and on receipt of cheque for the cost of such space, a card for the admission of the exhibit will be forwarded.

3. All cheques to be made payable to J. W. Stirling, M.B.

4. All exhibits should be directed to the British Medical Museum, Victoria Skating Rink, Drummond Street, Montreal, Canada, with the name of the Section for which they are intended. Packages must also be addressed to a firm's representative at the Museum.

5. Exhibits must be delivered between August 27th and 28th; they must each bear a card indicating the name and address of the exhibitor; they must be arranged in their allotted space efore 2 p.m. on August 28th, and it is desirable that they be not removed till September 6th.

6. Signs or placards must be so arranged as not to interfere with adjacent exhibits: on the central tables no sign or placard must reach higher than 2 feet 6 inches from the table.

7. The Committee will not be responsible for any risks or expenses incurred; they reserve discretionary power to exclude any exhibit they may consider unsuitable; they will only receive exhibits conditionally upon strict compliance with the foregoing regulations, and in all matters of doubt and difficulty their decision shall be final.

8. The Museum Committee or its representatives must be recognized as being in full control of the exhibition building and its management.

Tables occupying the centre of the Hall, and other prominent positions, are to be let by private tender; other tables varying in charges from 4s. to 2s. per square foot. Certain floor space will be let at 1s per square foot.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION

MEETING AT LOUISVILLE, OCT. 5-8, 1897.

The Executive Committee met recently at Louisville in conjunction with the local Committee of Arrangements, the following being present: Drs. Stucky, Grant, Mathews, Love, Holloway and Reynolds. It was determined to make the coming meeting the largest and best in the history of the Association, and everything points to a fulfillment of this endeavor. The railroads will make a round-trip rate of one and a third fare or probably one fare. The address on Surgery will be delivered by Dr. J. B. Murphy, Chicago; the address on Medicine by Dr. John V. Shoemaker, Philadelphia. Title of papers should be sent to Dr. H. W. Loeb, Secretary, St. Louis, Mo.

Book Reviews.

Lippincott's Medical Dictionary. A Complete Vocabulary of the terms used in Medicine and the Allied Sciences. With their Pronunciation, Etymology and Signification, including much Collateral Information of a Descriptive and Encyclopædic Character. Prepared on the Basis of Thomas's Complete Medical Dictionary. By RYLAND W. GREENE, A. B., with the Editorial Collaboration of JOHN ASHHURST, Jr., M.D., LL.D., GEO. A. PIERSOL, M. D., and JOSEPH P. REMINGTON, PH. M., F. C. S. Imperial octavo; pp. 1154. (Philadelphia

and London: J. B. Lippincott, 1897.) Dominion agent, Chas. Roberts, 593a Cadieux St., Montreal.

We have presented to us in this volume an ideal dictionary for the student. and one eminently fitted as a book of reference for the physician and special investigator. It is, in our opinion, the best book of its kind yet published. Of course there are many larger dictionaries and encyclopædias, but these very often contain much information useless, or at least unnecessary, to the ordinary inquirer.

The volume although large is not cumbrous, embracing in all some twelve hundred pages; the binding is exceedingly neat and the type large and clear, and in this it differs from many other dictionaries which attempt to put all the information possible in the smallest space possible, and for this purpose sacrifice readable type. Throughout it the editor has employed the new system of phonetic notation, based on the principles of phonetics recognized by all modern philologists, and here used for the first time in a medical dictionary. The definitions are very concise and lucid, the simplest English words being chosen in their construction. In addition to definition, certain of the more important headings have received treatment of a descriptive and encyclopædic character: thus under important organs and tissues is given an outline of their structure and function; under each drug, its physiological action, therapeutic use, official preparations and doses; under chief diseases, some account of their symptoms, causes, and treatment.

It contains all the words which have lately been introduced into medical terminology, and, as is stated in the preface, the compiler and his associates thoroughly gleaned hundreds of volumes and periodicals in their desire to make this list as perfect as possible. Many of the terms which have fallen into entire disuse, and which are only to be met with in dictionaries, are completety ignored, but those of the terms of the old school which are at all in use to-day receive recognition.

We can unhesitatingly give the work our fullest endorsation as being quite up to date and fulfilling all the requirements of a reliable, convenient Dictionary adapted to the wants of the practitioner and student.

PUBLISHERS DEPARTMENT.

CANADA
MEDICAL RECORD

AUGUST, 1897.

Original Communications.

CONVENIENT LOCAL ANÆSTHETICS IN MINOR SURGERY.

A REVIEW OF A FEW PRACTICAL POINTS.

By GEORGE FISK, M.D.

Instructor in Surgery, Bishop's College; Surgeon to Out-department, Western Hospital.

In this age of heroic surgical treatment we are apt to under-estimate the pain suffered in many minor surgical ailments, and to banish the little precautions which are so essential to the comfort of the sufferer.

In the hurry of many visits one is apt to forget that simple anæsthetic cold, in the form of cracked ice or snow, mixed with a little salt, will deaden pain when using the lance or needle. When some local affection only is being treated, the nervous system, and consequently the sensibility to pain, is not depressed as it is in many graver conditions, and one should not gauge the actual suffering by the extent of the lesion. A few minutes spent in the application of cold is amply rewarded by the increased comfort of the patient. Cold as produced by the evaporation of chloride of ethyl acts more superficially, and is sometimes so rapid in its action as to cause pain. If applied longer the tissues are frozen to such an extent as to interfere with a plastic operation of any great extent.

Subcutaneous injections of various drugs in fluid form have proved the most successful and lasting of local anæsthetics. Many drugs have been recommended from time to

time as being admirably adapted for this purpose, but one by one they have been laid aside for something more reliable. Cocaine mur. has probably stood the test of time better than any other single drug, and with proper precautions it is invaluable. Lately, a sister drug to cocaine has been introduced by some German chemists and called eucaine. The desired object in producing this new drug was to obtain the anæsthetic properties of cocaine without its heart-depressing element. The result on the whole has been very successful, as eucaine gives very satisfactory results in minor surgery. One drawback, however, soon developed, which limited its use in minor surgery and almost prohibited it in ophthalmic work, viz., its irritative and congestive qualities. To overcome this a eucaine has been produced synthetically, which is much less irritating, although not nearly so soluble. The new preparation is styled Eucaine "B," to distinguish from the older form Eucaine "A."

The great advantages claimed over cocaine are that a much larger quantity can be used without danger, and thus complete and extensive anæsthesia is always obtainable, and that the solution is easily sterilized by boiling, without injury. On the other hand, cocaine is more rapid in its action, less irritating, and causes anæmia of the part, but is a powerful cardiac depressant and is unstable in solution.

Many drugs have been tried as antidotes to this depressing action, especially those having an opposite physiological action, as nitrite of amyl, but without marked success. Dr. G. Lenox Curtis, oral surgeon, of New York, has been experimenting for two years past with a compound called "Volasem," which he finds answers admirably. By its use he is enabled to use cocaine in sufficient quantities to anæsthetize any desired area without bad results. A report of his observations may be seen in a current number of the "Items of Interest." Stimulants are always in order in using cocaine, the best being tr. digitalis 5-10 m. or strych. sulph. gr. 1/30—1/15 and spts. frumenti. These given hypodermically together with hot nourishing drinks enable the patient to withstand any depressing effects of the anæsthetic or subsequent shock with much greater ease.

Dr. Schleich, a German surgeon, has introduced a me-

thod of local anæsthesia which depends largely for its action on the pressure exerted on the nerve tissue.

Dr. Schleich has carried his method beyond the usually selected cases in minor surgery, and has used it in all major and minor operations, placing on record some 3,000 cases in which he reports good results. In employing this method a small area of skin or mucous membrane is anæsthetized with ether spray or carbolic acid (10 p.c.), and the hypodermic needle is inserted parallel with and just beneath the surface. The fluid when forced in rapidly forms a wheal or bubble, and this bubble represents to us the whole thing in a nutshell, for this bubble or wheal may be punctured or incised within certain limits without causing pain. It is made anæsthetic by infiltration œdema, and, whether the fluid is pure water merely or the solution of Schleich, the result is nearly the same; but Schleich found that the effect is considerably heightened for surgical operations by adding minute quantities of cocaine, morphine sulphate, and sodium chloride. The amounts of these ingredients are so small—about one to 500, or one-fifth of one per cent. in the strongest solution—that one can scarcely credit the fact that they are effective.

The formulæ for the solutions are :—To 1 litre or quart of sterilized water, to which has been added 20 drops of a 5 p.c. sol. carbolic acid, add :

No. 1, or strongest, sol.

Cocaine mur.....	2.0	g.m.
Morph. sulph.....	0.25	g.m.
Sod. chlor. (sterilized).....	2.0	g.m.

No. 2, or medium, sol.

To the litre as above,

Cocaine mur.....	1.0	g.m.
Morph. sulph.....	0.25	g.m.
Sod. chlor. (sterilized).....	2.0	g.m.

No. 3, or weakest, sol.

To the litre as above,

Cocaine mur.....	0.1	g.m.
Morph. sulph.....	0.05	g.m.
Soda chlor. (sterilized).....	2.0	g.m.

As much as 25 c.c. (6 dr.) of No. 1, 100 c.c. (3 oz.) of No. 2, and 500 c.c. (15 oz.) of No. 3, may be considered the maximum of these fluids to be used on the average adult. No. 2 solution is used in 95 per cent. of the cases, while No. 1 is used in highly inflamed and tender parts, and No. 3 only when in some large operation the limit of No. 2 is approached.

To proceed: after the first wheal is formed the needle point is again inserted near the edge and within the first bubble, and another formed, and so on in any direction desired until a chain of bubbles extends in the line of proposed incision which can then be made with absolutely no pain. This "œdematous infiltration" is applied to all operations, and, if the incision is very extensive, an application to the deeper tissues is necessary after the primary incision. The puffing and swelling of the parts resulting from the injections speedily subsides and does not interfere with primary union.

The anæsthesia lasts for twenty minutes, and, should the operation take longer than this, reinfiltration is necessary. Where infiltration is systematic and thorough it is a very satisfactory method for selected cases in minor surgery; but for major operations of longer duration, where more serious conditions demanding immediate attention may supervene, and in operations in cavities, especially about the head, other forms of anæsthesia are desirable.

Whatever local anæsthetic may be chosen, it is always well to look to the condition of the patient as the first precaution. The gradual reduction of the mortality in general anæsthesia is due, in a large measure, to the careful preparatory treatment of the patient, and, to reduce the risk in local anæsthesia to a minimum, certain precautions should be taken as a matter of routine.

The question of operating under local anæsthesia is influenced largely by the "grit" of the patient, but it is manifestly unfair to subject a patient, suffering from some organic circulatory trouble, to the depressing effect of a local anæsthetic, the pain and the mental shock without some supporting treatment. In all cases, and especially where the effects of shock are to be dreaded, all possible precautions should be taken to limit the depressing effects as much as possible.

Give hot stimulating drinks, as strong coffee, egg-nog, malted milk or beef-tea, before commencing the operation, and again after finishing if necessary. If there are any satisfactory antidotes to the local anæsthetic used, see that they are administered. Strive to eliminate all exciting elements and to reassure the patient. Do not allow any undue exposure of parts to chill the patient, and loosen any constricting bands of clothing. Place the patient in the prone position if possible.

The syringe for hypodermic work should be of considerable capacity and power, and armed with a fine pointed needle. After suitable antiseptic measures, it is well to insert the needle point well into the skin—not through it—for the first injection of a few minums. This will instantly anæsthetize the spot, and future injections should radiate from this. To anæsthetize a furuncle pass the needle not only around the tender part but beneath it. An abscess cavity will not absorb injected fluid, and care should be taken to inject directly into the abscess walls. After injecting the part carefully apply some of the many methods of limiting circulation, as by rubber bands, metallic rings, arterial pressure, etc., if it is possible. If it is impossible to retard absorption, use a weaker solution of the anæsthetic if cocaine or eucaine is employed, and the effect will not be so effervescent.

Inject sufficient fluid at the first introduction of the needle to completely anæsthetize the part, and thus gain the confidence of the patient. Too frequently, a desire to "go easy" results in an insufficient quantity being injected, and consequently an increase of pain to the patient. Plan carefully the intended line of incision and anæsthetize it thoroughly. With a long needle lateral injections to the main line may be made through the same puncture by partially withdrawing the needle and changing its direction. It is to be remembered that all local anæsthetics act much better when cold, especially the solutions prepared by Dr. Schleich.

It is to be regretted that cataphoresis of local anæsthetics has not proved speedy and extensive enough for minor surgical work, as it is an ideal antiseptic method. Undoubtedly, electricity holds some valuable secrets in this department which will be revealed in their own good time.

59 Beaver Hall Hill, Montreal.

SERUM THERAPY RESULTS.

By J. BRADFORD McCONNELL, M.D., Montreal.

The two following cases represent strikingly the advantages of this method of treatment, and the vast gain to the physicians' means of controlling disease which these remedies afford.

Mrs. M. H., aged twenty-three, was delivered by a midwife of her second child on June 12th, 1897. Labor was normal, and the patient appeared to progress favorably until the third day, when she had rigors, headache and fever, and there was a marked cessation of the lochia. Her condition did not improve. I saw her on the 18th, the temperature was 102 2-5°; there was headache, anorexia, no tenderness on pressure over the uterus, but some in the left iliac region. The uterus was enlarged, and the discharge was slightly offensive. Permanganate of potash intra-uterine douches were given twice daily, strength 1 to 3,000. As there was no change in the symptoms, on the twenty-first, a thorough curetting of the endometrium was performed and the uterus loosely packed with iodoform gauze, and at the end of twenty-four hours this was removed and the douching continued, but the symptoms improved for a day or two only and again became worse, the temperature on the 26th being 103 2-5°, although the pain in the side was not appreciable. On the 26th 10 cc. Marmorek's antistreptococcic serum was given. In twelve hours the temperature was 101 2-5°, and in eight hours after was normal. It remained so until the 29th, when the patient having got out of bed for awhile she had a chill, and at 11 a.m. temperature was 104° and in the evening 104 1-5°. On the 30th a.m. temperature was 104, pulse 120, no pain complained of, and but little tenderness on pressure. Another vial of the serum was administered at 1.30 p.m., the douching having been in the meantime steadily continued; at 10 p.m. temperature was 100°. The next day a.m. the temperature was normal and remained so.

Such results are exceedingly gratifying, and demonstrate the potency of this serum as an antidote to streptococcus and doubtless staphylococcic poisoning. When, after a thorough douching and curetting, the symptoms of puerperal septic in-

fection do not disappear, we have undoubtedly a resource in antistreptococcus serum of the nature of a real antidote.

On April 18th, 1897, H. C., aged 3 years, complained of sore throat and headache, was feverish, slightly hoarse, croupy cough, vomited several times. I saw him on the morning of the 19th; he was suffering from laryngeal stenosis pale, slightly cyanotic with a croupy cough; a grayish white patch covered the left tonsil; P. 164, R. 32, T. 101°; he was sluggish and drowsy. He was given internally tr. ferri mur. acid borici with glycerine and water every half hour, and the throat painted every hour with hydrozone, and (11 a.m.) one bottle 5 c.c. of Schering's diphtheritic antitoxin was given (with our present knowledge, three or four times this amount should have been the dose administered).

At 5 p.m. child was cyanotic with stridulous respiration, comatose, and in a moribund condition. I intubated at 5.30 p.m.; in an hour he had returned to consciousness; at 9 p.m., although breathing somewhat heavily, the cyanosis had disappeared and water was swallowed with the head lowered; had perspired considerably.

20th a.m., P. 140, R. 32, T. 99 2-5°. He had slept off and on during the night, and looked in his normal condition, sitting up in bed, playing with some toys.

21st, P. 140, R. 30, T. 97 4-5°. During a spell of coughing about 1.30 a.m. the tube was coughed out, and portions of membrane also came up after; he slept well; aphonia was present, and there was occasional flushing of the face, but an uninterrupted recovery ensued. Not being able to have the membrane examined bacteriologically at the Board of Health laboratory, one has here to depend on the clinical evidence of true diphtheria to establish the diagnosis, but they are sufficiently marked to remove any doubt; and the interest of the case lies in the fact that, with antitoxin and intubation, one can, as it were, snatch a victim from imminent death in cases which but a short time ago we could only have helplessly watched through the rapid stages of life extinction which characterizes them.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

Associate Professor of Medicine and Neurology, and Professor of Clinical Medicine University of Bishop's College; Physician Western Hospital.

THE CURE OF OBESITY.

Dr. Wm. T. Cathell in the *Maryland Medical Journal*, June, 1897, gives his five years experience with a reliable and harmless method. His method is the drinking of a large glass of Kissingen water, kept at drug stores and other soda water fountains, twenty or thirty minutes after each of the three daily meals, one day, and a similar glass of artificial Vichy water after each of the three daily meals the next day, and persistently continue this treatment week after week until reduced to a medium weight. At the same time the treatment is aided by exercise and suitable diet, avoiding the fat-producing foods. In regard to the mode of action he states: Now, while it is extremely difficult to search out the ultimate of anything in physiology, for instance, why opium relieves pain and colchicum benefits gout, yet, after studying the subject thoughtfully, I am quite sure there exists either a specific physiological action, or some definite chemical affinity, between artificial Kissingen and Vichy waters, taken by this rule, and abnormally-fat human tissues, that results in a lessening of the fat, with neither purging nor sweating, or injury to brain, blood, muscle or general health; but how, or why, is still debatable.

They may reduce adipose, and prevent further infiltration or storage, in either of several ways: One is, by merely inhibiting or controlling the disproportionate activity of fat-cell nutrition; thus placing less fatty pabulum, and more blood, brain, muscle, nerve and gland elements, at the disposal of the absorbents, while the simple fatty tissue and oily material of the body, being the most lowly organized, are naturally the first to be removed by the corrected physiological processes.

Or, it may be that they act as alteratives, and restore equilibrium to the nutritive processes, by destroying or neutralizing some morbific fat-forming agency, occult derangement of digestion, or perversion of assimilation, that have been causing diminished oxidation, and a consequent accumulation of fat.

Again, when we study their analyses, and consider the complexity of the potent medicinal ingredients that lie hidden in each glass of these waters, another rational hypothesis arises: artificial Kissingen being an acidulous saline, and Vichy an alkaline, and both containing salts of calcium, magnesium, potassium, sodium and other minerals, in decided and definite quantities, united with carbonic acid and other gases, it seems logical to suppose, that when alternately mingled with the food-pulp or chyme in the stomach and intestines, day after day, their special combination of ingredients bring about reduction by some chemico-physiological readjustment of the alkalinity and acidity of the blood and the visceral fluids, or possibly of both humors and solids; and that this readjustment makes the fat-yielding pabulum less plentiful and less rich, therefore less favorable for fat creation, and explains why increase of fat ceases, and why reabsorption of the surplus contents of the fat-cells begins, and also why physiological reduction and reconstruction both result; all uniting to prove that Kissingen and Vichy, taken by this plan, are a reliable combination for preventing increase, and reducing surplus, to the normal proportion of one to fifteen or twenty.

A number of cases are reported in which the desired reduction was accomplished with an improved condition of health generally.

THE SKIN AS A DIAGNOSTIC FACTOR IN DISEASE.

Dr. H. A. Hare, of Philadelphia, contributes a paper on this subject to the *Medical Record*, June 9, 1897. The paper deals more especially with the conditions in which the state of the skin is liable to mislead the physician as to the cause of the illness of the patient. In regard to the underlying predisposing agents he quotes Stephen Mackenzie:

The seven stages of man could be well illustrated by diseases of the skin, though we lack a Shakespeare to do justice to the theme. In the "mewling and puking" infant we meet with sclerema and œdema neonatorum, the "red gum" or strophulus of the older writers, intertrigo, eczema, urticaria papillosa (lichen urticatus), urticaria pigmentosa, xeroderma pigmentosum, and impetigo; the "schoolboy," with his chilblains and ringworm; alopecia areata, pityriasis rosea, ecthyma, and "football disease;" and then the "lover," with his acne and sycosis, and, as a result of irregular sexual excursions, his syphilides; "and then the justice, in fair round belly," with acne rosacea, diabetic boils, and pruritus ani; the sixth age shifts into the "lean and

slippered pantaloon," with rodent ulcer and "gouty" eczema; "last scene of all, sans teeth, sans eyes, sans taste, sans everything"—except an incessant and intolerable itching of the skin which we call senile prurigo.

Lesions of the skin following drugs are referred to. Iodoform is credited with producing in a case of symphyseotomy a sudden elevation of temperature, with a week later red lines reaching downward from the nose, and in other places crescent in shape, painless, no itching, becoming reddish violet. Eruptions disappeared in three and a half hours with desquamation afterwards.

Usually eruptions after operations resemble scarlatina; and similar ones are sometimes seen after labor without any fever. Iodoform produces sometimes an erythematous rash, appearing a few hours after until as late as the twelfth day; it reaches its acme in from one to a few days, and lasts about a week, followed by furfuraceous desquamation.

Quinine produces in some cases of cinchonism a roseola, simple erythema, or a marked scarlatinal eruption, sometimes an acute eczema or urticaria, usually widely diffused if limited. It is usually found about the sternum or groin. If on the face, it is a tumefaction or œdema, and lasts seven or eight days after drug is stopped. Desquamation occurs, and if after its disappearance quinine is given again it reappears. Opium eruptions are usually limited to the face, sometimes general. They are more commonly erythemata or scarlatinal, desquamation is furfuraceous, or in plaques. A point of diagnosis is the reappearance of the rash after subsequent doses.

Turpentine may cause from local or internal use an erythematous rash, vesicles or papules.

The conclusions of Guirard, from whose paper in the *Archives Clinique de Bordeaux*, January, 1897, much of this paper was taken, are as follows:

1st. That medicinal eruptions are commonly limited to the face, afterward extending to the trunk symmetrically, and usually developing suddenly, as does erysipelas.

2nd. Unless they arise from very large doses they generally develop without being associated with general systemic symptoms. He thinks that the absence of these symptoms aids us in separating these cases from the infectious diseases.

3rd. The eruptions due to drugs often change from one type to another, particularly those due to the balsams.

4th. The eruptions are usually sudden in onset and develop rapidly.

ON THE MODERN NEGLECT OF LEECHING IN PRACTICE.

SIR DYCE DUCKWORTH, well known for his able "Treatise on Gout," writes in the *Liverpool Medico-Chirurgical Journal* for January, 1897 (*Therapeutic Gazette*, June) under this title. He believes that medicine is now suffering bitterly from a neglect of bedside study as compared to laboratory instruction. Bacteriology is now uppermost, and dominates everything. We gladly welcome all that comes to us in this channel, and should duly apportion it its place in the great domain of pathology. If we lose our heads we may begin to think just now that all pathology is bacteriology, and that bacteriology covers the whole field of pathology. This, of course, is nonsense. Twenty years ago the danger was that we were becoming stereotyped in the belief that pathology was entirely displayed for us by high powers of the microscope. We now see that that was but a part of pathology, and have relegated the results of such investigations to their proper place in that science. In due time bacteriology will find its appropriate place, and we shall be in face of some further development which may again dominate the views of our successors. These ideas ought to be fairly regarded by us as each new discovery comes up to engross us. We must hold firmly by what we have each acquired, and build up a solid basis on which to rear cautiously worthy and dependable superstructures.

Duckworth is led to make these remarks by finding that the good, old-fashioned employment of leeches has been allowed to drop out of our therapeutic armamentarium. So much is this the case that few practioners are now aware of the value of the pactice of leeching, and the pharmacists hardly think it worth while to keep leeches. Not many young practitioners could state correctly the amount of blood withdrawn by an ordinary leech, aud a common view is that local bloodletting is generally unnecessary, and can be dispensed with in favor of some analgesic or antipyretic tabloid form of drug; further, that bleeding is a lowering and devitalizing process, and has no power in modifying the inflammatory conditions as now explained by the modern laboratory pathologist. Familiarity with local blood-letting enables the author to deny these assertions, and an ounce of practice is worth a pound of theory. He often teaches that when common sense and practice of medicine do not agree, he is sorry for the principles that determine the latter. He believes that ophthalmic surgeons still testify to the beneficial use of leeching in early inflammatory conditions. General physicians and gynæcologists have lost this part of their art,

and their patients are the sufferers in consequence. For acute pain such as ushers in acute pleurisy, pericarditis, and peritonitis, from any cause, there is no remedy so certain to afford prompt relief as local leeching. We may thus often withhold opium, and leave other symptoms to declare themselves without the masking effects of this drug. Two or three leeches will often accomplish this result, and the blood lost hardly exceeds one ounce. In early typhlitis we may resort to this practice, and in many local forms of painful pelvic peritonitis. Much mischief in the future may thus be averted.

In cases of cardiac dilatation in an advanced stage, with hepatic and general venous engorgement, leading to respiratory distress, gastro-enteric symptoms—a veritable "agony"—the application of half a dozen leeches to the epigastrium is often of singular benefit, and brings prompt relief sooner than any other remedies he is acquainted with. In the face of facts such as these, to be certified in daily clinicial practice, we may well ask why such a valuable method has been allowed to pass into desuetude. The answer is that other methods have come into vogue, all inferior really, but fouuded on more modern views of pathology. These methods do not stand the test of actual practice when duly compared with the older—call it "rule of thumb" or "routine" practice of our forefathers; but they have not been carefully compared, but allowed to drop out in the belief, perhaps honestly maintained, that a "more excellent way" had really been revealed to us in accordance with modern light.

With this plea in favor of this much-neglected method he closes his remarks, and hopes that he has done some good by expressing them. It is too often forgotten that our duty as physicians is to heal our patient if we can; and, if we cannot bring back health, at least to alleviate to the utmost all suffering and discomfort as readily and certainly as we can.

In adopting any new method of treatment we have to keep our heads, to weigh most carefully the merits of such practice, and compare it honestly with the ripe experience and wise teaching that have come down to us from those who have preceded us, remembering that "our forefathers were not all fools," and that the full light of midday is not perhaps yet shining upon us, even at the close of the nineteen century.

DIABETES MELLITUS.

Dr. ORD in the London *Practitioner* for February, 1897 (*Therapeutic Gazette*, June), in giving a course of lectures on renal diseases, also speaks of diabetes and directs as to its treatment. As he states the treatment of diabetes of the

typical kind is generally laid down as follows: That you cut the patient off from every kind of aliment which may be broken down to form sugar; you take away, of course, sugar itself—cane sugar; you take away all starches as starches, and you take away sweet vegetables, potates, everything that contains the carbohydrates; and you put the patient on a diet which is mainly one of proteids and fat, including plenty of meat and green vegetables which contain no starch. You replace bread by gluten in some forms, or by almonds variously prepared. These contain cellulose, and not starch, and do not yield sugar. In bad cases you are supposed not to give him milk, because of the sugar of milk. The diet thus instituted when carried out with completeness certainly becomes after a time excessively wearisome to the patient, for the craving after carbohydrates, always considerable, grows with the prolonged deprivation. It is an exaggeration of the diet which the late Mr. Banting used for taking down that fat which he called his parasite. Well, if you do your duty according to the usually received instruction, you will take care to carry this out. When you have done it is not certain that you have done altogether the wisest thing, for, supposing you put a diabetic patient upon such a diet, you do not stop sugar in the urine; it still comes, although in diminished quantity, and it comes either from the breaking down of animal foods into sugar or from the breaking down of the constituents of the body itself. And it appears to be also a very serious thing that we should be introducing into the system in such large proportion the nitrogenous foods which may become themselves sources of irritation of the liver itself and very often of the kidneys. It has long been for the writer a matter for very grave consideration whether we are not in the habit of carrying this restricted diet too far. You will remember that, after all, the presence of sugar is in one sense a very undesirable thing; in another sense a symptom of something which you cannot reach, a symptom possibly of some condition of the central organs which may be actually in itself injuriously affected by such diet. It must be admitted that the sugar is not altogether a symptom; it is no doubt an irritant, but still one cannot help keeping the other possibility in mind.

A few words may be said next regarding the treatment of diabetes by drugs. So far as is known the more marked cases are not curable in spite of many assertions of cure. But something can be done to reduce the excretion of sugar and to help the sufferer. We owe to Dr. Pavy the important help afforded by codeia. Experience has taught us that opium has a power of diminishing glycosuria and of controlling many of the accompanying distresses. Opium, however,

has the drawback of exerting a constipating influence, while regular action of the bowels is desirable. Codeia possesses the moderating power, and is less prone to produce constipation. It may be given with advantage in doses of one half of a grain twice or three times a day. Arsenic, percloride of iron, the mineral acids and mercury have their supporters, but are mainly applicable to the relief of particular accessory symptoms—*e.g.*, of skin and nerve troubles, of anemia, and of disorders of digestion.

TUBERCULOSIS AND CLIMATE.

E. T. Campbell, M. D., Tabor, Iowa, contributes a paper on this subject in *Medical Record*, June 12, 1897.

Nothing within the whole range of medicine has given the physician more discouragement and heartache than tuberculosis; and nothing does he hail with more joy than a treatment which gives promise of better things—that gives promise that that dreaded disease may be stayed or modified if not cured. Not a drug listed in our pharmacopœia but has had its brief day as a champion for first place in the cure of this disease, only to be retired after a short time to the place it formerly occupied; some to appear for a second trial, with like results. All the solids, all the liquids, and all the gases have in turn been "weighed in the balances and found wanting." Many, it is true, have won permanent places as aids to alleviate certain conditions or symptoms, but one and all have been denied first place.

The discoveries of Koch mark the beginning of a new era in the battle with this prince of destroyers. Founded on this established truth, investigation and experimentation have established a more rational line of treatment. In place of the empirical administration of medicines, we now have a definite object in view, viz., the destruction of the bacilli and the repair of the damage done.

Until recently the disease-resisting power of the system has not been sufficiently considered, the germicidal properties of the white blood corpuscles have been overlooked; but now the plan of treatment is to assist nature in her battle with the countless millions of enemies which are besieging the portals of our being, and the question now is: "In what way can we most quickly and safely help nature to shake off her enemy and repair the breach?"

Our most efficient means at present are climate, hygiene and diet. We find that in low, moist localities, with great extremes and sudden changes of temperature, great humidity and dearth of bright sunshiny days, this disease works deadly havoc; whereas in localities of higher altitude, more sun-

shine, lower humidity, less variation and fewer degrees of temperature, and better drainage, the disease is arrested and often cured.

Too great an altitude is not to be advised, as it is dangerous save in incipient cases in which there is no associated heart trouble, an altitude of from fifteen hundred to two thousand feet above sea level being better in a vast majority of cases than much higher altitudes.

A uniform temperature also is to be sought for, not too cold in winter or too hot in summer, and freedom from sudden changes and a large proportion of bright sunny days.

Above all, climate must not be taken in given doses, like medicine, but continously, *ad infinitum*. Those affected should seek a desirable climate to live in, not to get cured in, for innumerable subjects apparently cured have returned to their former homes only to have the disease return.

One essential factor in the climatic cure of tuberculosis has been touched on only slightly, and that is the presence of ozone in the atmosphere of those elevated regions. Ozone we know to be a powerful disinfectant and respiratory stimulant. In a recent paper read before the Iowa State Medical Society, Dr. Braunworth spoke of the purifying effect of the electric arc light, attributing this effect to the light itself, whereas the purification was due undoubtedly to the ozone produced by the electric current.

Colorado and parts of California are perhaps most noted as resorts for tuberculous patients, but other parts of our country are claiming attention as possessing the necessary qualities to recommend them. The vicinity of Asheville, N. C., is becoming very well known, and not without cause. And again, on the southern slope of the Ozark Mountains in southern Missouri, we find all the advantages of elevation, large number of sunny days, freedom from extremes of temperature, the thermometer seldom registering more than 90° F. in summer, or below 15° F. in winter, with always cool nights in summer, freedom from sudden changes such as occur in higher altitudes, large proportion of ozone, plenty of pure water, and good drainage. Many have come to this region while in the first and second stages of consumption, and found complete restoration.

One point in favor of this country, perhaps above all others, is that, it being a comparatively new country, lands are cheap, thus giving the man of limited means a chance to come and buy a home. It being in the lumber region also, lumber is cheap.

It is a most important factor in the treatment of any disease, and especially tuberculosis, that the patient's mind be as free as possible from all worry ; and patients with limited

means cannot gain the advantages of curative climates when the expense thereof is beyond their means, or so great as to be a source of worry and anxiety to them.

In a meeting of the New York State Medical Society, one member suggested that in the place of consumptive hospitals we have consumptive farms; and this will surely prove the keynote to success in the treatment of this disease. To live continuously in the pure ozone-permeated air, with good wholesome food, water, and plenty of exercise, cannot but work wonders.

And the exercise should be of a constant, not periodical character. If posssible, the patient should be continuously in the fresh air, attending to work about a farm if possible; if not, then wandering at will over the hills, botanizing or geologizing, or bent upon some object. Above all, let the mind be constantly diverted from himself toward some interesting occupation.

Hygiene in conjunction with a favorable climate is essential. Frequent bathing and well-ventilated rooms both day and night, good wholesome food, pure water aad good drainage, combined with a suitable climate, will prove our most efficient means of combating this most dreaded disease.

THE PATHOLOGY OF THE DIARRHŒAL DISORDERS OF CHILDHOOD.

From an extended clinical and pathological study at the Kaiser and Kaiserin Friedrich Kinderkrankenhaus in Berlin, Baginsky (*Archiv. für Kinderheilkunde*, Bd. xxii., H. 3-6, *Medical Record*, July 10th, 1897) concludes that the diarrhœal disorders of childhood arising under the influence of high summer temperature are at first only functional in character, consisting in changes in the motor and secretory functions of the gastro-intestinal tract, with abnormal digestive chemism. In their further course profound anatomical alterations take place in the walls of the stomach and bowels, which may range between catarrh and necrosis of the mucous membrane. The follicular changes are processes of peculiar character and independent of the catarrhal, with which they may in the course of time be associated. They lead sometimes, in addition to superficial changes, also to ulceration. These changes are attributable not to specific bacteria but to the ordinary aprophytic micro-organisms of the intestinal tract that assume especial virulence. Under peculiar circumstances other bacteria, not ordinarily found in the intestinal tract, may act as causes of diarrhœal disorders. These also induce profound anatomical changes in the walls of the bowel. The invasion of other organs by these bacteria is not unusual, but is rather relatively common with regard to the kidneys. Under these

circumstances the bacteria may cause profound anatomical lesions, even to the extent of suppuration. The transmission does not usually take place through the blood stream, the bacteria being but rarely found in the blood, and then only in small numbers. The most profound disturbances are occasioned by the fermentative products of bacterial activity, toxic or non-toxic. These are either of the nature of acids or products of albuminous degeneration, down to ammonia and its combinations, which behave as active irritants, and thus cause injury to the walls of the bowel. Further, through the blood current and the lymph stream they exert a degenerative influence upon other organs, especially those possessed of excretory functions, such as the liver, the kidneys, etc. Under the influence of this intoxication from the intestinal tract, the resistance of the whole organism to the invasion of other pathogenic micro-organisms is diminished, as is manifested by numerous complications.

APPLICATION OF THE FLUOROSCOPE TO THE DIAGNOSIS OF DISEASES OF THE THORAX.

(*Revue de la Tuberculose*, December, 1896.) By Professor Bouchard. *Int. Med. Magazine*, June.

Normally the thorax of men shows, when viewed with the fluoroscope, the bones of the skeleton, and particularly, the shadow of the heart, which may be observed to pulsate. The region of the lungs should be clear, and the mediastinum hidden by the spinal column and sternum. If, however, pleurisy exists on one side, it casts a shadow, deepest at the base and growing lighter towards the apex, and moreover causes displacement of the mediastinum towards the opposite side. If an old pleurisy with retraction exists, the mediastinum may be drawn toward the side diseased. Regarding the course of the disease, it is very easy by this method to watch the rapid absorption of the exudate, indicated by a clearing up of the upper portion. In case of pulmonary consolidation, due to tuberculosis, it is possible to recognize the region affected by the very deep shadow that it casts. If cavities are present they may also be easily perceived. It can nearly always be demonstrated that the area of dulness corresponds exactly with the area of shadow. Ordinarily, of course, in cases of pulmonary tuberculosis this shadow is found at the apex. Pulmonary consolidation may be further distinguished from pleurisy by the fact that it does not cause dislocation of the heart or mediastinum. In regard to other thoracic diseases, Bouchard has been able to recognize aneurism, enlargement of the aorta, mediastinal tumors, and even hypertrophy of the heart.

ON URIC-ACID EXCRETION IN CROUPOUS PNEUMONIA.

(*Zeitsch. f. klin. Med.*, Vol. XXXIII., Nos. 1 and 2. *International Medical Magazine*, June). By Dunin and St. Nowazek.

Pneumonia offers the best field for the study of the relation between leucocytosis and uric acid excretion, since the leucocytosis must here be general, while in some experimental forms it may be local only, and because the sudden crisis, with absorption of the exudate and disappearance of the leucocytosis, would lead one to expect an increase in excretion of uric acid in the latter days of the fever, which increase should become most marked soon after the crisis, and sink to normal after five to seven days. All this, if Horbaczewski be correct in saying that the excretion of uric acid, arising from the body nuclein, is in direct proportion to the leucocytosis or to the destruction of leucocytes. The authors have examined systematically the uric acid secretion in five cases of croupous pneumonia (by Haycraft's method), and found in all cases a moderate increase in the last few days before the crisis. After the crisis came a pronounced increase, sometimes to triple the amount excreted during the febrile stage. This "uric-acid crisis" continued two to four days, then excretion lessened, to reach the normal point after seven to eight days. This uric acid crisis had nothing to do with the urinary crisis (polyuria), and was often over entirely before the latter set in. These results are in accord with those of Ranke and Gerdes, and to a great extent with the more recent and extensive of Kuhnau. That some of Kühnau's cases lend less complete support to Horbaczewski's views than do their own, the authors explain by the occurrence of complications during convalescence. Their own results could not have been due to change of diet, since the patients were put upon freer diet only after the highest point in excretion was reached.

DOES ANTITOXIN ACT AS AN IMMUNIZING AGENT IN MAN?

M. KASSOWITZ (*Wiener Medic. Wochenschr.*, 1896, *xlvi*, 1020; *Pediatrics*, June) critically studied the literature bearing on this subject. The result was an overwhelming judgment against this method of immunization by serum, and is contained in the following resumé:

(1) An immunity against diphtheritic infection cannot be produced in the human subject either by a severe attack of diphtheria, or by the injection under the skin of a large quantity of "units of immunization."

(2) After small or large doses of immunizing serum, diphtheria is just as frequently contracted as without it.

(3) The illness of the "immunized" individual may occur at any time, from a few days after to a few weeks or months after treatment.

(4) The illness from diphtheria, in individuals who have been immunized, is frequently very severe, and has resulted in death in many cases in spite of repeated injections of large doses of the serum.

(5) The attempt to produce immunity to diphtheria in the human subject by serum injections must, for the present at least, be considered a failure.

He believed that every conscientious physician should hesitate and consider whether he had the right to subject a healthy child, on account of a theoretical belief which in no wise had been confirmed by facts, to those disturbances which every one acknowledged frequently occur after serum injections. Again, the possibility of causing death, which is asserted by many observers, should not be overlooked.

THE VALUE OF THE RÖNTGEN RAYS IN CARDIAC DIAGNOSIS.

Albert Abrams, A.M., M.D., Professor of Pathology Cooper Medical College, San Francisco, writes in the *New York Medical Journal*, June 12, 1897, on this subject. The estimation of the area of cardiac dullness, whether determined by light, strong, or palpatory percussion of the heart's resistance by the method of Ebstein, is an indefinite procedure too frequently influenced by the prejudiced wish of the observer. It is usually the skilled diagnostician who seeks to eliminate by other physical signs the errors of cardiac percussion. The estimation of the size and shape of the heart by the Röntgen rays affords a trustworthy guide by direct vision. This method is especially applicable in adults and children with thoraces scantily furnished with musculature and panniculus, although obese individuals are not always exempt from this method of examination. Before appreciating departures from the normal it is absolutely necessary for the observer to acquaint himself with the appearances of the heart in the normal condition. It is also necessary to employ the requisite apparatus. Without the latter, skill and experience count for naught. In my work I employ an eight-plate static machine, made by Van Houten & Ten Broeck, of New York city. The latter have thoroughly mastered and brought to a high state of perfection the practical details of the construction of their static machines. I also employ a Newton fluorescent screen, which yields excep-

tionally good results. If an individual is so placed before a vacuum tube that the rays pass through the chest, the heart may be seen by the aid of the screen as a definite shadow, surrounded by a light area, occupied by the lungs. The movements of the heart can also be detected, particularly so when the patient is instructed to take a deep inspiration. The latter manœuvre also aids in defining more clearly the boundaries of the heart. The Röntgen-ray illumination demonstrates that the apex approaches the base of the heart during systole, so that there is no apex impulse, in the sense of Skoda, but merely a lateral systolic apical stroke. It is also shown by direct vision that the ventricles do not completely empty themselves at each systole. When the patient takes a deep inspiration the diaphragm descends, and the lower margin of the heart can be separated from the liver, as manifested by a bright line between the two organs. The latter phenomenon is of exceptional value in diagnosis, for by the conventional methods of percussion the separation of the lower margin of the heart from the liver is impossible. With a little practice an outline of the heart can be traced on the chest wall. A dermograph in a metallic casing should be employed for tracing purposes. It is difficult, without considerable practice, to accurately define the position of the dermograph through the screen, and each observer will be compelled to improvise some specially constructed marker for tracing purposes. Another simpler, though less practical, method is to attach a sheet of white paper to the back of the fluorescent screen. The screen is next placed in position to obtain a clear outline of the heart, and this outline is traced on paper with a suitable pencil. The method which I usually employ to the best advantage is to trace directly on the glass covering my screen the outline of the heart with a pencil for writing on glass. This necessitates working in a dark room. The figure on the glass is then transferred to tracing paper, and the latter properly filed for future reference. The best position of the patient in relation to the focus tube for cardiographic purposes can only be determined by experience.

The entire outline of the heart can be determined with a front view. From the posterior surface of the chest wall only a portion of the organ is seen, owing to a part of the heart being obscured by its position in front of the vertebral column and the oblique situs of the organ in the thorax.

The shadow to the left of the vertebral column corresponds to the left ventricle, and the shadow to the right of the column corresponds to the right auricle. Radiography applied to the chest enables one to diagnosticate aneurysm of the aorta, cardiac aneurysm and dilatation of the heart. As an instance of the value of the Röntgen rays in diagnosis the following case

may be cited: An individual was referred to me for diagnosis. Several physicians had examined him, and they had all concurred in the opinion that there was a pericardial effusion. The physical signs were undoubtedly those of fluid effused into the pericardium, but there was some evidence suggesting cardiac dilatation as a possible condition. The diagnostic verdict was in favor of the latter, as determined by the Röntgen rays. It was possible, in this case, by means of the fluorescent screen to accurately define the borders of the heart, and to note that the apical stroke corresponded exactly with the extreme left border of the shadow outline of the heart. The apical movements were more clearly defined on the posterior surface of the chest wall. It is apparent that if an effusion were present, and the movements of the apex could be discerned, they would be within the shadow of the heart and not confined to the extreme left border of that organ. In carrying out the Schott treatment, the Röntgen-rays, in controlling the progress of my cases, have furnished me definite and invaluable assistance. After faithfully mapping out the outlines of the heart, tracings can be taken directly from the chest and preserved for future reference. The examination of the heart by direct vision enables us further to determine with certainty the influence of posture and respiration on the position of the heart, the presence or absence of pleuro-pericardial synechiæ, and the extent of the apical stroke, which is invaluable in the diagnosis of hypertrophy or dilatation of the left ventricle. Never before did I appreciate so keenly the influence of the stomach on the heart's action as I did a few days ago in the case of a student who was examined with the Röntgen rays. In his case there was a congenital absence of the spleen, and the outline of the stomach was clearly discernible The phenomena furnished by insufflation of the stomach explained many conditions which were to me heretofore inexplicable.

COMPARATIVE DIAGNOSIS IN PULMONARY TUBERCULOSIS BY THE ROENTGEN RAYS. A SERIES OF SEVENTY-THREE CASES.

J. Edward Stubbert, M. D., Liberty, New York, in the *Medical Record*, May 22, 1897, writes:

The following cases are presented for the purpose of demonstrating that in the Roentgen rays and fluoroscope we possess accurate agents for diagnosing tuberculous changes of lung tissue in its various stages, using them not only as corroborative factors of results arrived at by auscultation and percussion, but in some instances discovering isolated foci of infection not recognizable by ordinary methods.

In addition these cases prove that the fluoroscope enables us to recognize more fully and accurately the degree, position, and relation of areas of infiltration and consolidation, and also delineates plainly the limits of these areas. It is unfortunate that as yet no satisfactory photographs have been taken of the images cast upon the fluoroscope plates.

In order that these observations might be of more value the examinations have been made by different physicians and written notes thereof taken by different nurses, it having been my desire to obviate all danger of bias due to familiarity with the results of examination by the ordinary method before using the fluoroscope and *vice versa*. In addition, after fluoroscopic examinations have been made and notes taken in numerous cases, laymen have been requested to look into the fluoroscope and report the relative intensity of the transmitted light in different regions. Blue pencil marks were made by their direction, and they have invariably coincided with the professional examinations. In some cases there is simply haziness of the infiltrated areas, and in some incipient trouble, at the apex. The first thing that is noticed may be a comparative haziness or indistinctness of outline of the clavicle on the affected side.

In cases of slight infiltration of one or two apices there isa haziness or fog between the light and the observer, the clavicle in other instances appearing to have a gauzy veil thrown over it. When there is marked consolidation the transmitted light is relatively less, the edges of the clavicle are indistinct, or the bone may be invisible. When there is present the same pathological condition at both apices it is an easy matter, by comparing the two sides, at once to decide upon which the disease has made the most progress. Comparative shadows at the apices are generally seen more distinctly from behind than in front, by directing the patient to bring his shoulders forward so as to separate as widely as possible the scapulæ and then placing the fluoroscope directly over the spinal column.

Ordinarily a practised eye can by these methods alone clearly distinguish areas of the most incipient infiltration, but if it is desired to be more accurate in defining their limits, a metal rod may be placed evenly against the chest walls in front or behind and moved up and down with the fluoroscope until its outline becomes more distinct, which will indicate that the upper and lower borders of the consolidation have been reached. If a pencil mark now be made along the edge of the rod and subsequently percussion practised, the area of dulness will be found between the lines.

In cases of complete dulness, say, to the second interspace, with relatively less dulness for one or two interspaces below,

a dark shadow will be seen over the first-named region, which will gradually shade off consecutively into haziness and normal reflex of light below, the area of haziness corresponding to the limits of relative dulness. In one or two instances slight haziness has been observed in spots which at the time showed no other physical signs of disease, but where they subsequently developed.

In cases in which the cavity is single, it appears as a bright reflex amidst an area of consolidation or shadow. This bright spot assumes the shape of the cavity. At times the observer can plainly discern a decidedly dark ring surrounding the dark spot.

In a case where there were multiple cavities, the dense intervening tissue was shown in the form of dark streaks winding between the spots of bright reflex.

In another case, the fluoroscope demonstrated a cavity which had presented no signs by percussion or auscultation, probably owing to obstruction at its outlet.

In other cases, old pleuritic adhesions were seen as areas of absolute darkness, even more dense than the normal shadow over the cardiac region. In another case, displacement of the heart downward and to the right was easily marked out, also an old pleuritic thickening. Cardiac dilatation was discovered in one case. When I state that the exact areas in these last two cases were marked out by my house physician, William M. Bryan, without any knowledge of my previous diagnosis, the value and exactness of the fluoroscope as a diagnostic agent is well authenticated.

At different times we have outlined the convexity of the arch of the liver, which can be seen to rise and fall with expiration and inspiration. The cardiac pulsations are easily discernible.

A series of fifteen healthy cases was examined in order to familiarize the observer with normal reflexes and shadows.

A summary of the result of our investigations at the sanitarium shows:

1. Slight haziness indicates the beginning of tuberculous infiltration, and may or may not be accompanied by dulness.

2. Decided shadows indicate consolidation, the extent of which is in direct relation to the comparative density of the shadow thrown on the fluoroscope.

3. Circumscribed spots of bright reflex, surrounded by narrow dark shadow rings or located in the midst of an area of dense shadow, indicate cavities.

4. Intense darkness, especially at the lower portion of the lung, indicates old pleuritic thickenings over consolidated lung tissue.

A great deal depends upon the intensity and steadiness of the light, and for this reason a motor generator is better than a vibrator, as the latter gives a flickering light. An eight-inch-spark coil was used. Considerable practice is necessary before the eye can appreciate perfectly the finer differences of shades and outlines.

At the Loomis Sanitarium the examination of patients by the *x*-ray is now as much a matter of routine as that by auscultation and percussion.

SURGERY.

IN CHARGE OF

FRANK R. ENGLAND, M.D.,

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AND

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THE TREATMENT OF GENERAL SEPTIC PERITONITIS.

A. J. McCosh (in Annals of Surgery, June, 1897) gives his experience in the technique of operative treatment. In addition to the usual incision and irrigation, he has employed intraintestinal injection of sulphate of magnesia and other cathartics, and to this detail he attributes much of his late success. He says:—

While the details of the operation must vary somewhat according to the condition found in each case, the plan of treatment employed was as follows:—

(1) Chloroform is employed as the anæsthetic.

(2) A free incision is made generally five or six inches in length. Its situation varies according to the organ which has excited the peritonitis. The purulent fluid is allowed to flow out, its escape being often aided by turning the patient on the side.

(3) As a rule, the intestines are allowed to escape from the abdominal cavity into hot towels held in the hands of assistants (the patients generally being turned on the side).

In certain cases, where the distention is enormous, and where the heart's action is very weak, any considerable escape of the intestinal coils is prevented. Where possible, however, even at a great risk, the intestines are removed, and, if well protected by hot towels, I have not found that this evisceration increases to any great extent the shock of the operation. If the distention is such that their return is impossible, I do not hesitate to open the ilium and allow gas and fæces to

escape. These openings are closed by Lembert sutures. I have never seen any reason for establishing a temporary artificial anus by suturing the gut to the abdominal wall as has been recommended.

(4) The cause of the peritonitis is removed. If it be an appendix or tumor, it is extirpated; if it be a perforation, it is sutured.

(5) The intestines and the cavity of the peritoneum are thoroughly irrigated with hot, normal salt solution. If the intestines have been removed, they are thoroughly but gently washed with the contents of several two-litre flasks, as is also the abdominal cavity; at the same time a stream from a three-gallon irrigating jar is steadily flowing into every corner and crevice of the cavity through the soft rubber tube which is moved about in different directions. The temperature of the solution is 110° to 112° F. If the removal of the intestines has been considered unwise the edges of the incision in the abbominal wall are grasped by the assistant, held well up and separated to their full extent, and the cavity flooded by flaskful after flaskful of the solution at the same time that the irrigating tube is pouring a steady stream into all pouches and recesses opened up by the hands of the operator, which are gently moved about among the intestinal coils. I have not found that much shock is caused by irrigation carried out in this manner, indeed, on the contrary, the heart's action will often be stimulated by the hot water. It is of the utmost importance that the temperature of the water should not be below 110° F., indeed 112° F. or even 114° F. is probably safer. Irrigation is preferred to the swabbing of the intestines and peritoneum by means of gauze pads or sponges. I doubt if the cleansing by this latter method is as effectual, and it seems reasonable to suppose that the mechanical friction must damage to a certain extent the peritoneal endothelium, and so diminish the vitality of this serous coat and its power of resistance against infection. Of course I do not mean to claim that perfect cleansing can be accomplished by any method. A considerable amount of the salt solution is allowed to remain in the abdominal cavity for the purpose both of stimulating the heart and of favoring intestinal drainage.

(6) Sulphate of magnesia is injected, through a hollow needle attached to a large aspirating syringe, into the small intestine, a point in the jejunum or in the ilium, as high up as possible being selected.

A saturated solution containing between one and two ounces of salt is used. The needle puncture is closed by a Lembert suture.

(7) The peritoneal cavity is drained generally by four or more strips of sterile gauze thrust in different directions

among the intestines. At times a large glass tube is also inserted into the pelvis. In other cases strips of rubber tissue are used, and recently I have employed strips of pure silk sponges instead of gauze. These appear to drain well and are easily removed, but are not so well suited for walling off septic areas from the general peritoneal cavity. The strips of rubber tissue are most easily removed of all, but I do not feel sure that their drainage is as efficient. Each gauze strip is often surrounded for two or three inches at its point of exit by a cuff of rubber tissue which facilitates its removal.

(8) The abdominal wound is but partially closed by sutures. The edges are not closely approximated but are generally partially drawn together by two or three silkworm gut sutures, between which and the intestines is placed a compress of gauze. A wound which gaps somewhat affords freer exit for the escape of the peritoneal secretions.

(9) After the return of the patient to bed, if the condition of the stomach will permit, a ten-grain dose of calomel is given. If chloroform has been used this will generally be retained.

Rectal stimulation is employed during the first twenty-four or thirty-six hours. If there be persistent vomiting lavage is sometimes useful.

In conclusion, I will again express the conviction that success in the treatment of septic peritonitis depends largely on thorough irrigation and restoration of intestinal peristalsis.

TRANSPLANTATION OF THE SPINE OF THE SCAPULA FOR ABSENCE OF THE UPPER HALF OF THE HUMERUS.

By DR. BARDENHEUER (Cologne).

This procedure was employed in two cases. The upper part of the shaft of the humerus had become necrosed as a result of osteomyelitis, and had been removed. The spine was exposed by an incision from its base to the acromion, and the trapezius and the acromial and spinal portion of the deltoid stripped off. A second incision was made at right angles to the first along the posterior border of the deltoid to its insertion. The infra- and supra-spinati having been stripped off, the spine was chiselled out of the body of the scapula with a portion of the glenoid fossa and the whole of the acromion. By dissection of the external rotators, the periosteum was made available and the bony flap introduced into it. Both ends of the bones were united with silver wire. Bony union not having been obtained at the end of six weeks, the sutures were replaced, and in four weeks more a satisfactory result was obtained. Case reported while still under treatment.

The operation was repeated in a lady after removal of the glenoid fossa and seven centimetres of the shaft of the humerus.

The spine was divided in its middle, and together with the acromion and a portion of the neck and the articular surface of the scapula implanted in the deficiency. The wound was completely healed at the end of four weeks.—*Verhandlungen der deutschen Gesellschaft fur Chirurgie*, XXV Congress, 1896; *Annals of Surgery*, June, 1867.

BOWEL OBSTRUCTION BY A GALL-STONE SIMULATING APPENDICITIS.

Hurdcastle (*Maryland Medical Journal*, November 28, 1896; *University Medical Magazine*, March, 1897) reports the case of a man, aged 56, weight 210 pounds, who had at times, for the past three or four years, suffered with slight pains in the region of the transverse colon and both iliac fossæ. A peculiar, striking sound, as if water, drop by drop, was falling into a bottle, and again like a little stream passing with a gurgling sound, was noticed by the patient.

On the night of July 1 he was seized with sudden pain, accompanied with vomiting of a green, sweetish fluid, which soon changed to a brown color; there were also two or three small semi-solid evacuations of the bowels; then there was a cessation of the pain and vomiting for several hours, when it returned with increasing severity.

Stercoraceous vomiting occurred on the fourth and fifth days, with great prostration. On the fifth day appendicitis was diagnosed, and an operation suggested, but the pain and vomiting suddenly ceased, and the patient made an uninterrupted recovery.

On the fifteenth day a large gall-stone was passed per rectum, and for several days later a number of smaller stones passed.

THE NATURE OF GONORRHŒAL INFLAMMATION.

The character of the inflammation set up by the gonococcus was discussed at length in the Congress recently held in Frankfort. In the *Centralbl. f. Gynaek.* the results of the discussion are given in an article by Wertheim.

Bumm took the stand that in the vast majority of cases of gonorrhœa the affection was one of the mucous membrane; that the gonococcus is purely a parasite of the mucous membrane, and, except under certain conditions, which seldom arise, it does not extend into the other tissues; and that, especially in chronic inflammation, it exists in the superficial epithelium.

Neisser expressed the opinion that a gonorrhœal inflammation is essentially an epithelial affection, and it is at least questionable whether gonococci are able to penetrate into healthy connective tissue. Wertheim claimed that numerous investigators have proved the ability of gonococci to exist in the cutaneous tissues, and that in every case of gonorrhœa in a mucc us membrane a sufficiently careful investigation will demonstrate their presence in the subepithelial tissue. This fact is so important for the correct understanding of gonorrhœal inflammation that it ought never to be lost sight of. It explains the frequent obstinate course of gonorrhœa and the frequent failure of treatment. In order to overcome the gonococci, means must be employed whose effects extend to the superficial portion of the subepithelial layer of connective tissue. To do this thoroughly would be to destroy in toto the epithelial layer, and hence the failure of remedies in so many cases.

Certain other ideas formerly held in connection with gonorrhœa are now known to be false. We know to-day, for example, that a gonorrhœal infection of pavement epithelium is by no means an impossibility. This has been demonstrated to be true of the vagina as well as of the bladder. We know, further, that gonococci can multiply in the endothelium of the peritoneum as well as in the subendothelial connective tissues. We know that the changes which are so often found in gonorrhœa of the tubes or ovaries—the adhesions, the infiltrations of the pelvic organs and cellular tissue, the collections of pus in the tubes and ovaries, etc.—are purely of a gonorrhœal nature. We know, further, that there is a gonorrhœal metritis. Finally, we recognize that there are undoubted gonorrhœal metastases; that the gonococci can penetrate into the capillary vessels at the seat of the primary lesions and set up an arthritis or an endocarditis, or even a myocarditis.

The knowledge of these facts rests on demonstrations of the gonococci, and must be regarded as scientifically exact. There is no reason to suppose that these distant lesions, except in isolated cases, are due to a mixed infection. This supposition rests on the exploded theory that gonococci can neither penetrate into pavement epithelium nor into the peritoneum nor into the deeper layers of the connective tissue.

However, in spite of all these changes in our views of the nature of the gonococcus, Bumm's statement remains true that gonorrhœa in the vast majority of cases is an affection of the mucous membrane. It always was that, and that it will always remain; but it is quite another thing to says that the gonococcus is purely a parasite of mucous membrane, and, even if favorable influences are necessary to permit its spread to other tissues, such influences are encountered not so very seldom.—*American Medico-Surgical Bulletin*, July 25, 1897.

MYXŒDEMA CURED BY THE USE OF IODOTHYRIN.

MM. M. P. Marié and M. Jolly (*La Sem. Méd.*, No. 61, p. 489) cite a case of myxœdema of several years' duration in a woman 54 years old, treated with iodothyrin, giving each day from three to four papers containing 30 ctg. each, corresponding to .001 milligramme of iodine in organic combination, or to 30 ctg. of fresh thyroid gland.

Though the patient presented a marked cardiac dyspnœa and a little albuminuria, recovery was complete in six weeks.

In a case of goitre with phenomena of dyspnœa and tachycardia, MM. Marié and Jolly obtained likewise with iodothyrin a notable amelioration.—*American Medico-Surgical Bulletin*, July 25, 1897.

OBSTETRICS.

IN CHARGE OF

H. L. REDDY, M.D., L. R. C. P., London,

Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

THE USE OF THE CURETTE IN PUERPERAL AND CHRONIC ENDOMETRITIS.

Dr. R. Peterson, in *American Journal of Obstetrics*, says that there is no one operation more often performed on the female generative organs than uterine curettage. The general practitioner who habitually avoids surgery, and turns over to the gynæcologist the simplest operations, will unhesitatingly curette the puerperal and non-puerperal uterus. To the trained hand curettage is a simple operation, the reverse is true of the untrained touch, and fatal sepsis is by no means an uncommon sequela. The studies of Bumm show two primary forms of puerperal endometritis, putrid and septic. In putrid endometritis the changes in the decidua are produced by saprophytic micro-organisms, but no development of septic germs occurs. This gives rise to fever and other symptoms of intoxication. There is found a zone of cellular infiltration beyond the necrosed decidua, which acts as a barrier to the entrance of germs. Septic endometritis is marked by the development of septic germs upon the decidua, of which the streptococci are the most frequent. This septic endometritis may be separated into two classes. First, localized septic-endometritis,—here the streptococci are prevented from penetrating beyond the endometrium by a granular layer; second, septic endometritis followed by general infection. The reason why one is localized and the other becomes general depends

on the virulence of the septic germ present. The sharp curette is used for abortions occurring before the end of the third month; the reason for this is that the openings are smaller at this period, and hence less chance for absorption of septic germs. Uterus should be well washed with sterilized water after curettage. After the third month, remove necrotic tissue by the large dull curette, followed by copious intra-uterine injections of sterlized water. In the septic form of endometritis the curette is only of use where the disease is localized. The uterus may be packed after currettage with gauze, but not too tightly. Ergot should be given. It is well to remember that in the virulent cases of septic absorption the lochial discharge is rarely foul, and tenderness of the abdomen is met with late in the disease.

PUERPERAL INSANITY.

Dr. John B. Chapin, of the Pennsylvania Hospital for the Insane, states that during the past ten years the number of patients admitted with puerperal insanity slightly exceeds 30. During a period of ten years preceding 1896, the number of such cases exceeded 90. Dr. Chapin attributes the reduction of cases of this disease during the past ten years to the adoption of the stricter antiseptic measures in obstetrical practice which have been applied during recent days. The great reduction of cases of puerperal insanity in recent years, under the improved practice, is an additional evidence of the septic origin of this disease.

GUAIACOL IN PUERPERAL ECLAMPSIA.

The following report of cases by J. F. R. Appleby, M. D., of Washington, D. C., is from the *Boston Medical and Surgical Journal*:—

"When guaiacol is poured upon the abdomen it is rapidly absorbed. Its physiologic effect is to cause rapid and marked lessening of arterial blood-pressure, lowering of temperature and free diaphoresis. These physiologic effects first led me to use it in case of nephritis attended with slight convulsions and a full, hard pulse. This patient was an adult male. Twenty five drops were poured upon the abdomen, and rubbed in with the tips of the fingers. Relief was certainly marked.

"Next I used guaiacol in two cases of puerperal eclampsia, with surprising and happy results. They were primiparæ. In the first, labor was progressing favorably, dilatation had been accomplished, and the occiput had begun to descend when convulsions came on, becoming more profound with each recurring seizure. As soon as practicable, chloroform was

administered, and the child, a large male, was delivered with the forceps. On the effect of the anæsthetic wearing off, the convulsions returned; wherupon I poured forty or fifty drops of guaiacol (the case seemed too urgent to take time to count the drops) upon the abdomen, and gently rubbed them in, as in the preceding case. In a few minutes the pulse became soft, free diaphoresis set in, and the convulsions died away.

"The second patient had been delivered by a midwife. Both baby and placenta had come away when convulsions set in. On arriving at the bedside, I found that the patient was enormously swollen over the whole body, and the pulse was full, hard and tumultuous. The convulsions were almost continuous. They were as powerful as, if not more powerful than, any I have seen in a practice extending over nearly thirty years. It looked like a hopeless case. As with other patients, I used forty or fifty drops of guaiacol and gave a hypodermatic injection of one-fourth of a grain of sulphate of morphia. In less than an hour the patient was sleeping quietly, and no more convulsions followed.

"Both of the above cases had albuminuria, and were much swollen, which symptoms demanded treatment for a few days. Both made good recoveries, and are now enjoying ordinary health.

"For guaiacol there may be claimed certainty of action, speedy relief of urgent symptoms, and ease of application, which renders it, perhaps, more desirable and less objectionable than any of the remedies heretofore used in eclampsia. In neither case did I find it necessary to make a second application, but would certainly have done so had it been necessary."

SYPHILIS AS A CAUSE OF ABORTION.

Dr. J. A. Ouimet, in an article on this subject (*La Clinique* III, No. 5., pp. 182-194), draws the following conclusions:

1. Syphilis is a powerful cause of abortion. The abortion is due to lesion of the fœtus itself or of its appendages.

2. It occurs usually toward the seventh month. The father alone, being syphilitic, can transmit the syphilis to the product of conception; the latter is more liable to occur the nearer the moment of conception is to the beginning of syphilis.

3. The mother may give birth to a syphilitic child while remaining free from syphilis.

4. When the father and mother are both syphilitic, the child rarely escapes infection.

5. The mother being syphilitic before pregnancy is the more liable to give birth to a healthy child the more ancient the syphilis.

6. The nearer the syphilis approaches the termination of pregnancy, the greater chance the child has to escape infection.

7. The child born of a syphilitic mother may come into the world presenting lesions manifestly syphilitic, or be born apparently healthy and only become syphilitic after some months or even years.

8. Syphilis imparts no particular characteristic to the course of confinement. Mercurial treatment instituted at the beginning of pregnancy in syphilitics permits the mother:

1. Often to carry gestation to term.

2. To give birth to a living, though sometimes syphilitic child.

3. In some cases to give birth to a living child and without lesions.

4. Sometimes the child, born healthy of syphilitic parents, remains free from syphilitic troubles, when the mother has been treated during pregnancy.

When, the father being syphilitic, the mother becomes pregnant and submits to mercurial treatment, there is much chance that gestation will terminate at term in the birth of a healthy child.

THE FORCEPS.

Dr. W. K. Evans, Pa. (*Med. and Surg. Rep.*) gives the following rules for the forceps. Indications for their use.

1. Deficient expulsive force as uterine or abdominal inertia or when acute or chronic diseases of the mother render the ordinary forces insufficient, as typhoid, heart disease, phthisis, etc.

2. Undue resistance as minor degrees of the contracted pelvis, abnormal rigidity, or large fœtal head.

3. Maternal life endangered, as in rupture of the uterus, hemorrhage, eclampsia and heart clot.

4. Fœtal life endangered, as sudden death of the mother, prolonged pressure on fœtal head, prematurely detached placenta, compression or prolapse of the cord, fœtal heart sounds less than 100 per minute.

5. When the head fails to recede after contraction of the uterus (in this condition undue pressure is being made on the soft parts of the pelvic canal).

6. As a general rule they should be applied when the head during the second stage of labour has been stationary for two hours (Hirst).

The contra-indications are:

1. Head not engaged in the superior strait.—Exception —to bring down the head as a tampon in marginal placenta prævia.

2. Undilated os.--Exception—when the fœtal or maternal life is threatened, it is allowable to apply them to the partially dilated os.

3. Unruptured and unretracted membranes have not retracted, they may be grasped by the forceps and placental detachment occur.

4. Should not be employed unless the head is of average size. (If the head is too large as in hydrocephalus, or too small, they are apt to slip and lacerate the soft parts.

5. Should not be applied to a decomposing fœtus or a perforated head. (The perforated head can be better handled with a cephalotribe.)

6. Should not be employed when the disproportion between the head and the canal is too great.

7. Should not be employed when there is any mechanical obstruction on the part of the pelvic canal, which will prevent delivery without unusual force being used.

8. Should not be employed in carcinoma of the cervix.

THE THERAPEUTIC APPLICATION OF CHLOROFORM IN LABOR.

John N. Apshur of Richmond (*Vir. Med.:* S. Monthly, March 12th, 1897) says that while the administration of chloroform in labor has become almost a matter of routine, and is generally considered safe, a careful observation for many years has tended to make him question its utility in many cases, and to convince him that in some cases it actually adds to the peril, and prolongs the suffering. It should be remembered that labor is a physiological function, becoming pathological only when abnormal conditions exist such as malformed pelves, bad positions, or deformities of the child, or when interference in behalf of the mother or child becomes necessary. Such cases belong to the domain of the surgeon, and the question of chloroform is simply the necessity for an anæsthetic. Or again, in cases where there is danger to the mother from convulsions, caused by systemic conditions. But the object of this article is not to concern itself with such cases, but with so-called normal labors. These questions naturally arise—in what cases should chloroform be administered? At what stage of labor? What dangers arise? And at what stage? What are the best means of combating them? and finally, *is it justifiable* to administer chloroform in natural labor progressing with satisfactory rapidity.

In order to answer these questions satisfactorily the nature and effect of all chloroform narcosis must be understood. Chloroform diminishes the excitability of the muscular system and its capacity for work. It interferes with

oxidation of the blood, and thus becomes toxic to the fœtus. In addition to the cases in which surgical interference is demanded, we may include cases in which the pains are nagging and exhausting, also cases of rigid os with great nervousness. As to the time of administration, it should never be given until the latter part of the second stage of labor, and should be discontinued as soon as the occiput has passed the ostium vagina. But the most serious question is the dangers arising from the use of chloroform. Diminution of muscular excitability renders the pains less potent, and there is greater danger of hemorrhage due to uterine inertia. Subinvolution with all the ills that follow in its train is almost inevitable. Not only so, but labor may be almost suspended, making an instrumental labor a necessity. The interference with the oxidation of the blood without doubt increases the number of still births. Nor are these the only dangers. Though few deaths are reported from chloroform in obstetric practice, yet undoubtedly many deaths occurring within forty-eight hours after delivery and reported as heart clot, etc., may be due to the depression following the administration of chloroform. In cases where the uterine contractions persist, and the woman holds her breath to more efficiently "bear down," she is in a favorable condition for the occurrences of the epileptiform syncope if chloroform is being administered. Without exception, whenever chloroform is used, a full dose of ergot should be given as soon as the head is delivered. It is also well to give ten grains of quinine at the beginning of the second stage of labor. Belladonna or nitro-glycerine may also be used. A hypodermic injection of atropine (gr. 1-120) or sulphate of strychnia (gr. 1-60) will add to the safety of the patient.

In view of the dangers above mentioned it is urged that chloroform should be placed upon the same platform as other drugs never to be given as a routine practice, or in response to the pleadings of the patient, and simply to diminish pain, but only when the indication in the case imperatively demands it.

THE

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All communications for the Journal, books for review, and exchanges, should be addressed to the Editor, Box 2174, Post Office, Montreal.

Editorial.

BRITISH MEDICAL ASSOCIATION.

65TH ANNUAL MEETING, MONTREAL, AUGUST 31 TO SEPTEMBER 4, 1897.

By the time this number reaches our readers all arrangements will have been completed for this meeting. Already the advance guard of the British members have arrived, and most of those coming will have started on their journey. A number of eminent members have at the last moment decided to come, making the Atlantic contingent larger than it was at one time anticipated it would be.

The list of papers and of those who will take part in the discussion has been considerably enlarged, and will appear in detail in the local guide and daily journal programme.

ANNUAL PATHOLOGICAL AND PHYSIOLOGICAL MUSEUM.—It is hoped that as many as possible will, without delay, indicate their intention of contributing specimens (Anatomical, Physiological and Pathological), apparatus, photographs of rare or well-marked conditions of disease, teaching models, etc., to the Annual Pathological Museum. These exhibits will be collected together in the large and well-lighted Pathological Laboratory at McGill College. It is

especially intended to make an extensive exhibition of photographs and micro-photographs. Those prepared to contribute to this department of the Annual Museum are requested to notify Dr. C. F. Martin, McGill College, giving the names and a short description of the specimens they exhibit for insertion in the Museum Catalogue.

The British Medical Association, which will meet in Montreal, August 31st, Sept. 1st, 2nd and 3rd, unfortunately comes at a time when the hotels, lodging-houses, restaurants, etc., in Montreal are taxed to their fullest capacity, owing to American tourists who select this particular season of the year for the St. Lawrence route.

The Reception Sub-Committee, of which Professor Ruttan, McGill College, is secretary, will be very glad to arrange for the accommodation of any Canadian members who will communicate with him, stating the kind of accommodation required. He writes us strongly to advise every one who purposes attending to secure rooms in advance. In addition to the hotels, lodgings have been arranged for in the neighborhood of McGill University, where rooms and breakfast may be obtained at moderate rates.

We are requested by the Honorary Secretary, Dr. J. A. Springle, to draw the attention of the Profession in Canada to the fact that all those who intend attending the Meeting of the British Medical Association here on the 31st of August next must be members of the Association. And, moreover, it is compulsory in all meetings, excursions, entertainments of any kind, that members must show their ticket of membership to entitle them to any of the foregoing privileges.

The half year of subscription to membership began on July 1st, from which date also the second volume of the Journal for the current year is issued.

It is particularly advisable that all those who intend to join should do so now, and not wait till the time of the Meeting, when in all probability their election to membership would be delayed and place an extra amount of work upon the officials who, at that time, will probably have more than they can comfortably accomplish.

REDUCTION IN FARE ON CERTIFICATE PLAN.

INSTRUCTIONS TO THOSE ATTENDING THE MEETING.

1. The reduction is granted to all guests attending the meeting from New England and from the territory covered by the Trunk Line Association, *i.e.*, from all points east of Chicago and the Mississippi.
2. The reduction is fare and a third on Association's certificate, conditional on there being an attendance at the meeting of not less than 100 persons holding certificates.
3. Each person availing himself of this reduction will pay full first-class fare going to the meeting and get a certificate filled in on one side by the agent of whom the ticket is purchased. Agents at important stations and coupon ticket offices are supplied with certificates.
4. CERTIFICATES ARE NOT KEPT AT ALL STATIONS. If, however, the ticket agent at a local station is not supplied with certificates and through tickets to place of meeting, he can inform the delegate of the nearest important station where they can be obtained. In such a case the delegate should purchase a local ticket to such station, and there take up his certificate and through ticket to place of meeting.
5. Tickets for going passage may be sold only within three days (not counting Sunday) prior to the agreed opening date of the meeting, or three days after (including) such opening date; except that, when meetings are held at distant points to which the authorized limit is greater than three days, tickets may be sold before the meeting in accordance with the limits shown in regular tariffs.
6. Deposit the certificate with the secretary or other proper officer of the organization at the meeting at the earliest opportunity for endorsement and visé of special agent.
7. Certificates are NOT TRANSFERABLE, and return tickets secured upon certificate are NOT TRANSFERABLE.
8. On presentation of the certificate, duly filled in on both sides, within three days (Sunday excepted) after the adjournment of the meeting, the ticket agent at the place of meeting will return the holder to starting-point, by the route over which the going journey was made, at

one-third the highest limited fare by such route. The return tickets will in all cases be closely limited to continuous passage to destination.

9. No refund of fare will be made on account of any person failing to obtain a certificate.

☞Delegates and others availing themselves of this reduction in fare must present themselves at the Ticket offices for certificates and tickets at least 30 minutes before departure of trains.

POSTAL AND PARCEL FACILITIES.

Members and guests can have their letters addressed to "British Medical Association, Montreal." These (upon application) will be delivered at the Post Office in the Reception Rooms.

Telegrams addressed to "British Medical Association, Montreal," or to "Britmed, Montreal," will be similarly delivered.

Baggage may be left and stored, and parcels directed to the Cloak Room, Reception Room, McGill University.

The following memoranda, being a resumé of much that has already appeared in the local journals, is being distributed in phamphlet form by the local Committee, and contains all necessary information required by those attending the Meeting.

MEMORANDA FOR MEMBERS AND GUESTS.

ATTENDANCE AT THE MEETING.

All those intending to be present at the meeting of the British Medical Association upon August 31st and the following days must be members of the Association or invited guests of the same.

MEMBERSHIP.

Membership in the Association is to be obtained upon terms which can be obtained from the Secretaries of the Branches throughout Canada.

All British subjects, members of the medical profession, are eligible for membership if duly nominated and approved by the local branches.

These applications can be made to Dr. J. A. Springle, Montreal; Dr. G. C. Jones, Halifax; Dr. W. B. Thistle, Toronto; Dr. E. Compton, Victoria; Dr. J. R. Jones, Winnipeg; Dr. C. P. Dewar, Ottawa; and Dr. A. Marois, Quebec; who are Secretaries of the various Canadian Branches.

The subscription to the Association is $5.00 per annum, together with an additional small sum for membership of the Branch, varying in the different Branches.

It is open to Members of the Profession to join on or after July 1st, and to pay the half subscription for the half year. Members receive a copy of the British Medical Journal weekly.

While it is possible for Members of the Profession who are British subjects to be elected Members of the Association at the time of the Meeting, it is most desirable that as few as possible seek election by this means. Election in Montreal will be by the General Council of the Association. At least twenty-four hours must elapse between arrival in Montreal and election, during which period the intending member will have no privileges, while in addition each application will place an extra amount of work upon officials who will at that time probably have more than they can comfortably accomplish.

So as to add to the success of the Meeting and to the proper entertainment of each individual Member, the Local Executive begs that all those who propose attending will immediately forward their names to the Hon. Secretaries (at 2204 St. Catherine St., Montreal).

TRANSPORT.

Canadian Members.

Members and their wives and children are given the privilege of travelling to Montreal for one half of one single first-class fare, or one first-class fare for the round trip. This advantage may be secured by the following methods:—

1. By buying a single first-class ticket to Montreal for each traveller and obtaining a certificate from the ticket agent, at the point of departure, stating that such purchase has been made. Any ticket agent will furnish such certificate on request. On presentation of this certificate at the Reception

Rooms in Montreal a free pass will be given for the return journey over the same line.

2. By obtaining a certificate from the Secretary of the Excursion Committee (Dr. H. S. Birkett, 2204 St. Catherine St., Montreal), and upon presentation of the same at any ticket office of any Canadian Railway the agent will sell bearer a ticket at the above reduced rates. In writing for the above certificate Members are requested to give name in full, as also the full name of wife and child. Each individual requires a special certificate.

Children from five to twelve years of age will be charged adult rates.

These privileges apply to Canadian Railways only, and are good from July 1st to Sept. 30th, 1897.

GUESTS OF THE ASSOCIATION.

The same privileges as are accorded to Members in the matter of Transport and Excursion in Canada will also be afforded to the invited guests of the Association.

Guests of the Association from points in the United States, east of the Mississippi River, can secure round trip tickets to Montreal for one single first-class fare and one-third.

To obtain this rate it is necessary to purchase at point of departure a single first-class ticket to Montreal, at the same time securing from ticket agent a certificate stating that said purchase has been made; then upon presentation of such certificate to the Secretary of the Association in Montreal, a return ticket will be issued over the same line at one-third first-class fare from August 27th to Sept. 7th, inclusive.

This arrangement holds good only for those arriving in Montreal on or after August 28th, and leaving Montreal not later than September 7th.

DELEGATES TO THE MEETING.

The National and State Medical Societies of the United States have been invited to be represented, each by one delegate.

These delegates are requested to be present at the opening meeting, at which special seats will be reserved for them, in order that they be personally introduced to the President and to the Association.

EXCURSIONS.

These same privileges, namely, of obtaining a ticket for a single journey at one half a first-class fare and a return journey at a single fare applies equally to excursions taken by Members and their families up to Sept. 30th, 1897.

It is to be noted that what is here stated concerning the railways on the St. Lawrence River applies also to many of the steamboat lines.—Niagara Falls Line, SS. Empress of India, Muskoka & G. B. Nav. Co., Bay of Quinte Ry. & Nav. Co. We would especially call attention to the fact that the Canadian Pacific Railway offers free passes over all their branch lines in Manitoba, North West Territories and British Columbia, and for all their steamboat lines in the Canadian North-West to all Members and guests of the Association who purchase tickets to Vancouver, B.C., and return. The fare for this trip is $70.45. Members desiring to visit any point in Canada, either before or after the meeting, from now until Sept. 30th, are privileged to obtain the above rates. Pullman and parlor cars are attached to each train.

We here note in somewhat fuller detail the excursions which may well be made and the approximate cost of the same.

The old city of Quebec is one hundred and seventy-two miles from Montreal; fare, $3.50. A very pleasant day can be spent in the old city visiting the different points of interest. From Quebec one can go down the St. Lawrence and up the Saguenay, thence to Lake St. John. Here there is a comfortable hostelry known as the Hotel Roberval, and good Ouananiche fishing can be obtained in Lake St. John. Boats and guides are always to be had. From Lake St. John to Quebec one can go by rail; distance, one hundred and ninety miles.

Montreal to Halifax, Nova Scotia, distance, seven hundred and fifty-six miles; single first-class fare, $16.50. From Halifax one can visit the Annapolis Valley, and the Bras d'Or Lakes. There are two main lines of railroad leading from Montreal to Halifax, passing through picturesque and fertile country.

Montreal to St. John, New Brunswick; distance, four

hundred and eighty-one miles; cost, $14.15, single fare first-class.

Montreal to Ottawa; distance, one hundred and twenty miles; single first-class fare, $3.50. The Parliament Buildings in Ottawa are very handsome and well worth seeing.

A very pleasant trip would be from Montreal to Kingston by rail and down the St. Lawrence through the Thousand Islands by steamer. Montreal to Kingston, one hundred and seventy-five miles; first-class single fare, $5.65.

Montreal to Toronto, three hundred and thirty-three miles, single first-class fare, $10.40. Toronto is a very convenient point from which to visit the Falls of Niagara; distance, sixty miles from Toronto. A very pleasant trip would be from Montreal to Toronto by rail, Toronto to Niagara and back to Montreal through the Thousand Islands and the different Rapids of the St. Lawrence by steamer.

Western trip, Montreal to Vancouver; distance, two thousand and nine hundred and ninety miles; time, five and a half days. The cost of a return ticket to members of the British Medical Association: first-class, $70.45, instead of the usual rate of $135.10. The sleeping car costs each way $20.00 for double berth. Meals in dining cars and restaurants, 75 cents each. This is a trip which we would advise all members and guests who can afford the time to take, as it will give them an impression of the vastness and resources of British North America that can be obtained in no other way. The trip is not tedious, and every day is thoroughly enjoyable. The cars are comfortable, the scenery constantly changing, and of very great interest. Stop-over privileges are allowed at all points, from some of which interesting side trips can be made. From Rat Portage, the new gold fields of the Lake of the Woods, Rainy Lake and Seine River can be reached by steamer. The Canadian Pacific Railway have kindly offered to give to each member and guest of the Association going to Vancouver over their line free passes over all their branch railway and steamboat lines in Manitoba, the Canadian Northwest Territories and British Columbia, thus enabling those who desire to visit Rossland and other points of interest an opportunity to do so. Those who intend to take this trip are asked

to apply early so that date and accommodation may be provided. By the payment of an extra $5.00 members may return by the Great Northern or Northern Pacific. In this way the Yellowstone Park may be visited. The Yellowstone Park is a National United States reservation, and requires five days to see it all. The expenses of the trip through the Park are not included in the railway fares. Members desiring to visit the Yellowstone disembark at Livingston on the Northern Pacific Railway. The trips from Livingston through the Yellowstone and return are as follows: Livingston to Mammoth Hot Springs and return, including transportation only $5.00; second, Livingston to Cinnabar by rail, thence by stage to the Mammoth Hot Springs, Norris, Lower and Upper Geyser Basins, Yellowstone Lake, Grand Canon and Falls of the Yellowstone, returning by the same route, including transportation and five and a half days board at the Park Association Hotels, $49.50. The date for closing the Park is October 1st. No charge will be made for passengers returning via Portal and the Soo Pacific route to St. Paul, thence to Sault St. Marie where the Canadian Pacific is again reached.

For those members who prefer to go from Owen Sound to Fort William through Lakes Huron and Superior by the Canadian Pacific steamers instead of north of Lake Superior by rail, an extra charge of $4.25 each way is made, which includes berths and meals. These steamers are large steel boats with all the comforts of ocean steamships. Members are recommended to go one way by these steamers.

This trip across the great prairies and the Canadian wheat fields will be at the time when the wheat is about ripe, and harvesting will be in progress. The scenery through the great lakes and the Rockies outrivals that of Switzerland. Banff Hotel and the Banff Hot Springs, four thousand five hundred feet high, are in the National Park. The great Glacier is said to contain more ice than all the Swiss Glaciers put together. The scenery along the Fraser River is of the wildest and most fascinating character.

The hotels at Banff, at Glacier, and at several other points, where members might care to stop, are thoroughly comfortable in every respect.

ACCOMMODATION IN MONTREAL.

Montreal is well supplied with hotels and lodging accommodation, and is thoroughly prepared for receiving the Association and its guests, but inasmuch as the meeting takes place at a time when there is a large influx of ordinary travellers into Montreal, and a liability for the best accommodation to be rapidly taken up, it is well that those intending to be present at the meeting secure their rooms beforehand, and we must strongly advise all such to communicate immediately with Dr. R. F. Ruttan, Secretary of the Reception Committee, 2204 St. Catherine street. Should, however, any member or guest fail to take this most advisable step, it is to be noted that the Reception Room at McGill University will be open from 9 a.m. upon Monday, August 30th, and those desirous will be able to obtain there full information concerning lodging and hotel accommodation.

HOTEL ACCOMMODATION.

By writing in advance, hotel accommodation can be secured at the following rates:

Windsor Hotel—Room with bath, $4.00 to $5.00; without bath, $3.50 to $4.00.

St. Lawrence Hall—Room with bath, $3.00 to $4.00; without, $3.00.

Balmoral Hotel—Rooms, $2.50 to $3.00.

Queen's Hotel—Rooms $2.50 to $3.00.

Richelieu Hotel—$2.50.

Turkish Bath Hotel—Room for single person, $1.75 to $2.75; double bedded rooms, $1.50 to $2.00 per person per diem; the bath rooms of the hotel and swimming baths are free.

Avenue Hotel—Single person, $1.50 to $2.00; double bedded rooms, $1.50 to $1.75 per person per diem. (These last two named are Temperance Hotels.)

All these prices are upon the American plan, and include meals as well as lodgings.

LODGINGS.

In the neighborhood of McGill College there are very numerous boarding and lodging houses, where rooms and

breakfast may be obtained at moderate rates. These vary from 75 cts. to $1.50 per person per diem, and in most cases breakfast can be obtained but no other meal. The list of the lodging houses recommended by the Reception Committee can be obtained on application to Dr. Ruttan, or preferably, if those writing will state the nature of the accommodation wanted, the Reception Committee will allot the best rooms available at a given price in order of priority.

MEALS.

The Local Executive will provide an excellent lunch in the Drawing rooms of the Engineering Building, supplied by the best caterer in Montreal, at the rate of 50 cents per head. Tickets admitting to luncheon will be procurable at the Reception Room and at the door of McDonald Engineering Building. This lunch will be of several courses, and the price paid will include lemonade, tea, coffee, etc. Beer and light wines will be obtainable, and will be charged extra. It is proposed that at an extra charge of $1.00 per party, special tables can be secured in advance in a separate room, so that members and guests can form special parties; the extra charge will be for special service, etc. Apart from this there are numerous cafés situated on St. Catherine street, half-way between McGill College, where the morning meeting will be held, and the Windsor Hall, where the general addresses will be given in the afternoon, The prices at these cafés are in general very moderate.

THE ARRANGEMENTS FOR THE MEETING.

Following upon precedent, the business of the meeting will consist of the work of the eleven sections, which will take place in the morning from 9.30 to 1, and the general meetings for the conduct of business and to hear general addresses in the afternoon. The Sectional meetings will take place in the various lecture theatres and halls in connection with McGill University, the business and general addresses will be conducted in the Windsor Hall upon Dominion Square each afternoon from 2.30 or 3.00 until 4.30. Local excursions and entertainments after 4 o'clock each afternoon. There will be each day a series of short excursions, receptions and garden parties; for each of these a limited num-

ber of tickets will be distributed. Among the more important of these may be mentioned Miss Roddick's reception at the Art Gallery on Tuesday, the 31st, a garden party at the Royal Victoria Hospital and the excursion by steamer down the river on Wednesday, the International Golf Match at Dixie, the excursion round the mountain and several garden parties on Thursday. The excursion down the Lachine Rapids and the laying of the foundation stone of the New Nurses Home at the General Hospital (it is to be hoped by Lord Lister) upon Friday.

Similarly each evening there will be one or more entertainments beginning with a smoking concert at the Masonic Hall on the Monday evening and including a reception at Laval University, reception by Baron Strathcona and Mount Royal, at 1157 Dorchester St., and a reception and evening garden party at McGill College on Friday evening.

Upon Saturday, September 4th, several excursions may be taken. A party of from three to four hundred will be entertained by the Mayor and Corporation of Ottawa, and there will be a large excursion open not only to members and guests but also to their friends to Lake Memphremagog.

Upon Thursday, September 2nd, the Mayor and Corporation of Montreal have invited the Association and its guests to a lunch upon the Mountain.

ARRANGEMENTS FOR LADIES ACCOMPANYING MEMBERS.

Members, as it has been already stated, can obtain for their wives or daughters travelling with them, the same privileges with regard to travelling and excursions as are granted to members themselves. The garden parties and other receptions, save in exceptional cases, are open to the ladies accompanying the members and guests as well as to the members and guests themselves. One of these exceptions is the Annual Dinner. The receptions at Baron Strathcona and Mount Royal and at the Laval and McGill Universities are for members and the ladies accompanying them. A Ladies' Committee has been called together, and is actively at work making arrangements for the ladies present at the meeting, more especially during the mornings when members and guests are engaged in the work of the various sections. The Redpath

Library at McGill, a very beautiful building, will be set apart especially for their convenience, and here arrangements are being made to hold a general concert upon at least one morning. Also afternoon teas will be provided, and ladies wishing to hold afternoon tea parties for their friends can, upon application, obtain comfortable private rooms. A matron will be placed in charge of the rooms set apart for these various purposes at the Redpath Library.

RECEPTION ROOMS.

A large tent and an extensive suite of rooms have been set apart in the Arts Building at McGill to form the Reception Rooms. Here members and guests must register and obtain their cards admitting them to the various sections and meetings, and here will be also post, telegraph and telephone offices, counters for the distribution of tickets and invitation cards for the various entertainments, cloak rooms, office for sale of railroad and steamboat tickets, smoking and retiring rooms, etc., etc. Here also will be distributed each morning the daily programme.

CONTRIBUTIONS TO THE BUSINESS OF THE MEETING.

It is open to all members, and indeed all guests of the Association, to offer papers to be read in the various sections, but, owing to a large amount of time taken up by the various discussions, it is probable that in several sections some at least of the papers, though accepted by the committee in charge of the work of those sections, will have to be read by title, although subsequently they can be published in full in the Journal of the Association (*British Medical Journal*). It is especially desirable that Canadian work be well represented.

Papers read before the Association must not exceed 15 minutes in delivery. When accepted they become the property of the Association, and must be published in the first place in the *British Medical Journal*. Those desirous of communicating papers are requested to notify the local Secretaries of the various sections of their desire and the title of their paper as soon as possible. The list of those local Secretaries

with their addresses will be found in any recent number of the *British Medical Journal*, where also will be found a programme of the work so far arranged in the various sections.

THE ANNUAL MUSEUM.

A leading feature of the coming Meeting will be the exhibition of medical and surgical apparatus, prepared foods, drugs, books, etc., in fact, of all that is of special interest to the medical man. This exhibition is an annual event in connection with the Meetings of the British Medical Association, but never before, not even at the London Meeting, will there have been so extensive and well-arranged an "Annual Museum." The Museum Committee under the Chairmanship of Dr. Perrigo has worked indefatigably, with the result that the spacious Victoria Skating Rink situated in the immediate neighbourhood of the Windsor Hall will be filled with interesting and important exhibits shown by the leading firms in this country, the States, Great Britain and by some of the best known firms in France and Germany. This will be open throughout the Meeting from 9 a. m. until 6.30 p. m. each day. Admission will be reserved until 3 o'clock each day for members of the medical profession, after that it will be open to the general public also.

NOTICE TO EXHIBITORS.

The same facilities for transport and travelling throughout Canada will be afforded to exhibitors as are granted to members and guests of the Association. The only additional requirement is that they present a certificate from Dr. James M. Jack (Secy. of the Museum Committee) when they apply in Montreal to obtain these privileges.

TRANSPORT OF EXHIBITS.

Nearly all the railroad companies in Canada and east of the Mississippi are granting passes permitting the free return transport of exhibits. Full information with regard to these privileges can be obtained on writing to Dr. James M. Jack. (2204 St. Catherine St., Montreal).

HONORARY DEGREES.

An interesting function in connection with the meeting will be the conferring of the honorary degree of M.D., by McGill University, upon several of the distinguished visitors. The list of names has not yet received the formal approval of Corporation, but we understand that the following gentlemen, if present, will be thus honored :—Lord Lister; Sir William Turner, Professor of Anatomy at Edinburgh; Sir W. B. Foster, M.P., of Birmingham; Professor Michael Foster, Secretary of the Royal Society, and Professor of Physiology at Cambridge University; Professor Alexander Macalister, the celebrated Professor of Anatomy, also of Cambridge, and formerly of Trinity College, Dublin; Dr. Henry Barnes, retiring President of the Association; Mr. Claud Wheelhouse, the well-known Yorkshire surgeon, who has done very good work in connection with the Association; Dr. Robert Saundby, of Birmingham, President of the Council; Mr. Christopher Heath, one of the best known London surgeons, and the author of standard surgical works; he is also an ex-president of the Royal College of Surgeons. In order to enable Baron Strathcona and Mount Royal, the Chancellor of the University, to be present when the degrees are conferred, the time has been altered to Wednesday, and the ceremony will take place at the Windsor Hall, instead of at McGill, as originally intended.

PRELIMINARY PROGRAMME.

(Subject to alteration.)

For the Week beginning Monday, August 30th.

Monday, August 30th.

Afternoon—Meeting of the Canadian Medical Association and Address of the President, Dr. V. H. Moore, Brockville, Ont.

Evening—9.00. Smoking Concert at the Masonic Hall.

Tuesday, August 31st.

Morning—9.30. Meeting of the Canadian Medical Association at the Synod Hall (to discuss the subject of Interprovincial Registration of the Medical Profession in Canada).

11.00. Opening Service of the British Medical Association at the English Cathedral.

Afternoon—2.30. Opening Ceremonies at the Windsor Hall and Address by the President. Addresses of welcome by the Governor General, Lieutenant Governor Sir A. Chapleau and Mayor of Montreal. Introduction of delegates to the Association.

4.30. Drive through the city on electric cars.

5.00. Afternoon tea and reception at the Art Gallery by Miss Roddick.

6.45. Dinner given to Lord Lister and presentation of address by the Montreal Medico-Chirurgical Society.

9.30. Reception and Conversazione at Laval University; Address by Professor Charles Richet, Official Delegate of the French Government.

Wednesday, September 1st.

Morning—9.30 to 1.00. Sectional Meetings (11 in number) in the various lecture theatres at McGill College, Presbyterian and Diocesan Colleges, etc.

Afternoon—3.00. Address in Medicine at the Windsor Hall by Dr. Wm. Osler, of Baltimore; conferring of honorary degrees at the same place by Baron Strathcona and Mount Royal, Chancellor of McGill University.

4.15. Excursion to Lachine by special train and down the Lachine Rapids by the steel steamer "Sovereign."

4.30 Garden Party in the grounds of the Royal Victoria Hospital.

Evening—9.00. Reception at 1157 Dorchester street by Baron Strathcona and Mount Royal.

Thursday, Sept. 2nd.

Morning—Sectional Meetings.

Afternoon—1.00. Lunch upon the Mountain given to the Association and its guests by the Mayor and Corporation of Montreal.

3.00. Address in Surgery by William Mitchell Banks, F.R.C.S., of Liverpool.

4.00. International Golf Match and reception at the Montreal Golf Club, Dixie. Garden parties, afternoon teas, etc.

4.30. Laying of the foundation stone of the Jubilee Nurses' Home at the Montreal General Hospital by Lord Lister.

Evening—7.45. Annual Dinner of the Association at the Windsor Hotel.

Friday, Sept. 3rd.

Morning—Sectional Meetings at McGill College.

Afternoon—3.00. Address in Public Medicine at the Windsor Hall, by Dr. Herman Biggs, of New York. Concluding business of the Meeting.

4.15. Excursion to Lachine, Lake St. Louis, and down the Lachine Rapids.

9.00. Conversazione at McGill University in the University Buildings and grounds.

Saturday, Sept. 4th.

Excursions to Ottawa, Lake Memphremagog, Saranac, etc., etc.

Besides the above, it is understood that His Excellency the Governor General will hold a reception at Laval, and His Excellency has informed the secretaries that he will be present during the greater part of the meeting.

A dinner will be given by Dr. Roddick, the president-elect, at the St. James Club to a large number of the leading officers and guests of the Association upon Monday evening, the 30th August.

CANADIAN MEDICAL ASSOCIATION.

THIRTIETH ANNUAL MEETING.

MONDAY AND TUESDAY, AUGUST 30TH AND 31ST, 1897, IN SYNOD HALL

HOW TO GET THERE.

Purchase a ticket for Montreal from the agent at the place of departure, and get from him a standard certificate (which is a receipt for one full single fare). When registering at the meeting leave the certificate with the Treasurer, and it will be returned, signed by the Secretary, on the morning of August 31st.

This certificate, when presented to the station agent at Montreal, will entitle the bearer to a ticket to his destination free of charge.

N.B. No. 1.—These rates refer to members, delegates and their wives travelling from points East of Fort William.

N.B. No. 2.—Delegates West of Fort William will communicate with Robt. Kerr, C.P.R., Winnipeg.

MEMBERSHIP.

The fee for membership is two ($2) dollars, and may be paid to the treasurer, H. B. Small, of Ottawa, at the opening of the meeting. The Secretary will be pleased to furnish application forms to members of the profession desiring to become members of the Association who may hand in their names with the names of the mover and seconder at any time during the meeting.

GENERAL INFORMATION.

The Synod Hall is in the rear of Christ Church Cathedral, No. 75 University Street, cor. Burnside. This is easily reached by the St. Catherine st. car.

The opening exercises in connection with the British Medical Association will be held in the Cathedral about noon, on Tuesday, August 31st.

Letters, telegrams, etc., may be addressed in the care of the General Secretary, at the meeting.

PROVISIONAL PROGRAMME.

Monday, August 30th, 1897.

1 p.m.—Clinical Demonstration. Montreal General Hospital.

3 p.m.—General Session. (Synod Hall, No. 75 University st., cor. Burnside.)

Address by Chairman of Local Committee.

The Reception of Visitors.

Election of Members.

Notices of Motion:

(1) That the number comprising the Nominating Committee be increased from 10 (as formerly decided by By-law) to 15, the latter permitting of a more general representation.

T. G. Roddick, Montreal.

(2) That the By-law relating to the Nominating Committee be ammended to read: "That the Nominating Committee be elected by the Association, on the first day of each annual meeting by ballot after nomination."

R. W. Powell, Ottawa.

4 p.m.—President's Address, V. H. Moore, Brockville, Ont.

4.30 p.m.—Address by W. Watson Cheyne, London, Eng.

Appointing of Nominating Committee.

Appointing of other Committees.

General Business.

8 p.m.—Smoking Concert in Windsor Hall.

Tuesday, August 31st, 1897.

9.30 a.m.—General Session, Synod Hall.

Report of Committee on Inter-Provincial Registration.

Report of Nominating Committee.

Reports of other Committees.

General Business.

For further particulars address F. N. G. STARR, 471 College Street, Toronto.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The next meeting of the Mississippi Valley Medical Association will be held in Louisville on Oct. 5, 6, 7 and 8, 1897.

All railroads will offer reduced rates.

The President, Dr. Thos. Hunt Stucky, and the Chairman of the Committee of Arrangements, Dr. H. Horace Grant, promise that the meeting will be the most successful in the history of the Association, and this promise is warranted by the well-known hospitality of Louisville and Kentucky doctors.

Titles of papers should be sent to the Secretary, DR. H. W. LOEB, 3559 Olive Street, St. Louis.

THE DAILY LANCET.

The *Daily Lancet* is now published by the Bailey & Fairchild Company at New York, and its general character will be changed to conform more closely to the newspaper idea.

Correspondence.

To The Editor CANADA MEDICAL RECORD.

DEAR SIR,

I beg to bring the following facts to your attention and the readers of the RECORD which I understand represents the interests of the Medical Faculty of Bishop's College. In 1887, on my arrival in the colony of British Guiana, my native country, after graduation at Montreal, I found a new ordinance in force prohibiting colonial and foreign graduates from registration. I applied to the Surgeon General for a license to practice in the ordinary way, but was refused. I told him I thought I was entitled to exemption as the new ordinance was introduced into the court of policy about seven months and put into operation only two months before my graduation, and I thought it unjust to apply the new law in my case. I offered to go to Britain for triple qualification if that would enable me to get an appointment in the Government Medical Service. I was told in reply that age and other disabilities were against me, and that I ought to practice in some other country. Hoping in time to remove these disabilities, I began the practice of my profession. It was made evident to me and my patients, however, that I was constantly under police surveillance, for any deaths occurring in my practice were subjected at once to coroner's inquest, police inquiry and chemical analysis of medicines prescribed by me, to detect if possible any error whereby I might be further persecuted. Finally, a memorial with over 1,800 signatures was sent by influential people to the Secretary of State for the Colonies in England, stating the facts and praying that I might be relieved of the hardships under which I labored. This prayer was granted, and an ordinance was passed exempting me from the requirement of the ordinance of 1886. In the face of this ordinance the police still continued to interfere in my practice. It is difficult for a practitioner to perform major operations in the houses of private patients owing to bad hygenic surroundings, etc. I, therefore, started a private hospital for such work, but that was defamed in

very strong language by the Surgeon General. He called it a sham institution; and advised all other medical men not to be associated with it; otherwise, they must not be surprised at being classed as charlatans. After finding the working of my hospital becoming a success, he advised three graduates of the United Kingdom to open a dispensary, which succeeded, but did not injure me. He then got three others to open a private hospital, at the opening ceremony of which he presided, and recommended it to the community, giving reduced rates of charges, and denouncing all other such institutions. This I must say has done me very great injury.

The medical men generally in British Guiana are afraid to oppose the Surgeon General, owing to his orders carrying the weight of Government backing, and I am compelled to seek redress elsewhere than in my native country. These facts I can substantiate readily, and now place the matter before my Alma Mater, hoping for such redress as the Faculty of Bishop's College can procure. The question of Ethics is one with which the British Medical Association can deal, and, as a member of that Association in good standing, I beg that their influence be brought to bear on the unprofessional conduct of the Surgeon General of British Guiana, or, in default of this, that representation be made to the Secretary of State for the Colonies, Mr. J. Chamberlain.

Your obedient servant,

J. M. ROHLEHR, M.D.

PUBLISHERS DEPARTMENT.

GENERAL HARRISON'S BOOK.

The Indianapolis *Journal* prints this interesting story concerning ex-President Harrison's forthcoming book: General Harrison has just completed the revision of his articles which have appeared in *The Ladies' Home Journal*, making extended notes and additions to them. There is a little story in connection with both articles and publication. When the arrangement for the articles was made with General Harrison by Edward W. Bok, editor of *The Ladies' Home Journal*, the General was paid for them, with the understanding that when they were put into book form the magazine was to share the royalties accruing therefrom. Mr. Bok, however, of his own accord, generously released General Harrison from paying him any royalty, for the reason, as he states, that, by the publication of the articles by General Harrison, the subscription list of his magazine was enlarged many thousands. The profits to *The Ladies' Home Journal* were more than the publishers anticipated, and in view of this Mr. Bok asks nothing further. General Harrison placed the disposition of his book in Mr. Bok's hands. The best offer came to the editor from the Scribners, and to them Mr. Bok gave the book for his distinguished contributor. General Harrison's revision of the book has just been completed, and the volume will appear in the autumn.

"Intelligence" for August is an especially attractive number of this popular magazine. Among a number of very interesting articles is one on Richard Wagner, his early history, family relationships, musical education, growth and development, by Prof. Albert Ross Parsons, which every lover of music and musical lore should read. It is entitled "A Nineteenth Century Musical Mystic—The Secret of Wagner's Genius."

A special feature of general interest to all who have the welfare of our country at heart is AN ASTROLOGICAL PREDICTION ON PRESIDENT MCKINLEY'S ADMINISTRATION, made at the time of his inauguration, and a copy of which was deposited in the copyright office at Washington, D. C., March 8th, 1897, making it an *absolute prediction* to be judged by events as they take place during the next four years.

The attempt to forecast events by the positions of the planets is to the most of us unique, and in this day, when so little is known of these matters, a public prognostication under copyright is daring, to say the least.

"Intelligence" is published in New York, at 503 Fifth Avenue, at 10 cents a number.

The use of the THYROID GLAND IN MEDICINE is of special and peculiar interest, because, instead of having been deduced empirically like most other features in medical practice, it has been adopted as a logical conclusion from adequate premises. It will be described in the August number of Appletons' Popular Science Monthly by Dr. Pearce Bailey.

SEPTEMBER LADIES' HOME JOURNAL.

The September *Ladies' Home Journal*, in the variety, interest and timeliness of its articles, and in the beauty of its illustrations, is a notable number of that magazine. A spirited article by John F. Coyle, "When Henry Clay said farewell to the Senate," describes the most impressive and dramatic scene ever enacted in Congress, and another, by Clifford Howard, tells of "Destroying a Million Dollars a Day," the task of the redemption division of our Treasury. Elizabeth Bisland, in "The Difference between Mrs. A. and Mrs. B," defines the exactions that "The Four Hundred," or the dominating social circle of communities, imposes on an aspirant for admission to its ranks.

The second part of Hamlin Garland's serial, "The Spirit of Sweetwater," will appeal to every reader of romance; and the first of Mrs. Mark Morrison's "The Pixies and the Elaines" series will charm every child who may follow the adventures of those winsome fairies. A composition for the piano, "Golden Vineyard Waltzes," the musical feature of the magazine, is regarded by its famous composer, Edward Jakobowski, as one of his best. Edward W. Bok, with characteristic directness, discusses "On being Old-Fashioned," and other topics of especial concern to women. William Martin Johnson describes and pictures "Floral Effects for Home Weddings," and Walter Germain tells of "The Groom's Part in the Wedding." Other articles that have a special practical value detail how photography can be successfully pursued as a profession by women, tell of "The Best Shade Trees for Small Gardens," give advice in nursing the sick, explain and picture some striking household decorations, etc.

Mrs. Rorer's cooking lesson treats of "Making Bread and Rolls," and she also points out "Small Leakages of a Household," and how to prevent them. The fashion articles on winter gowns, hats, coats and jackets, by Isabel A. Mallon, have the value of being profusely illustrated by photographs from the latest Paris designs. There are also poems, various short sketches, and the departments; so there is nothing lacking to make the September *Journal* a complete family magazine. By The Curtis Publishing Company, Philadelphia; ten cents per copy; one dollar per year.

CANADA
MEDICAL RECORD

SEPTEMBER, 1897.

OPENING ADDRESS AT THE 65th ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, MONTREAL, 1897.

By T. G. RODDICK, M.D., M.P., President.

Professor of Surgery, McGill University.

You have been welcomed to the Dominion of Canada by the Noble Earl who is the worthy representative of our beloved Queen; you have been welcomed to the Province of Quebec, to which this city belongs, by our eloquent and justly-esteemed Lieutenant-Governor; the Chief Magistrate of our city has given you "*Caed mille failthe*" in a manner in which only an Irishman with such a great sympathetic heart as he possesses can give; and now I rise to welcome you on behalf of the medical profession in Canada, and to thank you for the honor conferred on this city and country by your presence here to-day. Would that I could find suitable language in which to thank you also for the high honor you have done me in electing me to preside at this great meeting of the British Medical Association, an honor which is appreciated none the less by the consciousness that it is not a personal matter but a compliment to Canadian medicine.

This meeting of the British Medical Association in Canada is an event which will serve still more to impress upon the memory of our people the year 1897, the year of the Diamond Jubilee of our beloved Sovereign, Queen Victoria. In no part of her vast Empire —not even in its very heart—did her subjects celebrate the great event with more enthusiastic loyalty and devotion than in Canada, especially in this province, the home of the French-Canadians. We Canadians of both tongues love and honor our Queen. Long may she live! Deeply, too, have we appreciated here the splendid reception accorded in the old home to our Premier, the Right Hon. Sir Wilfrid Laurier, whose distinguished bearing and grace of manner eminently fitted him for the important part it was his peculiar privilege to play in the magnificent ceremonies of the Jubilee. A French-Canadian, Sir Wilfrid's presence in England as the chosen representative of the Dominion was an object lesson to the Empire and to the world in the harmony existing between the two nationalities which comprise the Canadian people.

And here let me express on behalf of every representative from the British Isles, and on behalf of every Canadian present, the genuine pleasure we feel in having among us on this memorable occasion so many of our brethren from the United States. This only proves the cosmopolitan character of our profession; this is only another recognition of the unity of medicine. Legislators may squabble, the air may be filled with wild alarms, and war may appear imminent day by day, but our relations are not disturbed in the slightest degree; our interests are common—we are kinsmen in science; we go forward hand in hand, irrespective of race or creed or color, having one intent only,—the advancement of our noble profession, and through that the amelioration of the ills of mankind.

It is my privilege also to welcome the representative of another Republic, La Belle France, to whose gifted men of science our profession is so greatly indebted. This gentleman, who bears the credentials of his Government, and officially represents the great nation of which he is so bright an ornament, is known far and wide as the Professor of Physiology in the University of France, Dr. Charles Richet. In coming to Canada it cannot be said, nor will he feel, that he comes to a foreign country, for in the Province of Quebec he will find another France, with a delightful mingling of the old and the new: his own beautiful language spoken with all the grace and purity of the old *régime*.

But we are further honored by the presence among us to-day of the most illustrious surgeon of our generation, Lord Lister, who stands for the rise and zenith of modern surgery. It has been well and truly said that as long as surgery is scientifically discussed Lord Lister's name cannot fail to be mentioned. We have only to compare the surgery of the time before 1873 with the surgery as practised to-day to appreciate all that he has done for the science. Can it be for a moment questioned that Lord Lister has made operative proceedings possible which only twenty-five years ago would have been considered criminal? Undoubtedly, the most powerful agency in the development of surgery in this century has been the introduction of the antiseptic and aseptic methods of wound treatment which he initiated. It is due to his efforts that surgical wards have been freed from pyæmia, and the mortality of lying-in hospitals reduced to the limits of normal parturition. For the past twenty years honors many and great have been showered upon him. Oxford, Cambridge, Edinburgh, Glasgow, Dublin, Toronto, and now McGill, have vied with one another in hastening to do him homage. Our Sovereign, in conferring upon him the richly deserved distinctions which he bears with such gracious dignity, only gives expression to the general feeling of his countrymen throughout the Empire and his admirers the world over. We are glad, I say, to have him with us to-day; his presence is an intellectual stimulus and an energizing force in our deliberations.

It is, I understand, an unwritten law of the Association that the President shall not in his address encroach upon the topics which belong by right and usage to the readers of the main addresses and to the presidents of the various sections. I have observed that the majority of my predecessors have contented themselves with discoursing on objects and circumstances of local in-

terest: they describe the town or city in which the meeting is held or perhaps they discuss questions of a public character. In the absence of an address on public medicine, others have taken that for their theme. It has been my unhappy lot to select and consider subjects only to find in quick succession that they had already been appropriated either by the Association Journal, in describing so fully Montreal and its surroundings, or by the editors of the Official Guide or Souvenir, who have given a very comprehensive description of Canada, or by some of the gentlemen who preside over the sections, who, I have been led to understand, purpose discussing questions of medical education. I fear, therefore, that what I have to say this afternoon will fall far short of the brilliant presidential addresses which members of this Association have been accustomed to in other years. Indeed when I look at the long roll of eminent men who have been my predecessors in this high office—men oftentimes distinguished for their literary gifts as well as for their exalted position in the medical world—I confess that I marvel at my temerity in accepting so great a responsibility. In speaking of my predecessors allow me especially to refer to the retiring President, Dr. Henry Barnes, whose courteous and kindly manners, together with his sterling ability, makes us all glad to know that his election as a Vice-President for life insures his continued official and active connection with the Association. Here might I also be permitted to say how greatly I appreciated the many kindnesses and courtesies extended to me by the President (Dr. Saundby) and members of the Council when in London last winter, making the initial arrangements for this meeting.

With respect to the other addresses, which it is customary to deliver on these occasions, medicine will be dealt with by one whose reputation is now world-wide—by our Osler—whose professional education was in great part received in this city, and who, I am happy to say, is still a Canadian. How he has been able to escape the alien law is a puzzle to many; but he has really only been borrowed for a time: he is merely passing through the United States in bond. We are only waiting until we can find a place large enough to hold him, when we shall coax him back. Sorry am I that his old colleagues in his own department of medicine, Howard and Ross and Macdonnell, are not here to share with us the genuine pleasure we experience in finding him in the position which he occupies to-day. One of these, the late lamented Howard, had much to do with moulding his career and setting him to the task which he has so ably accomplished.

You will hear addresses in Surgery and Public Medicine, delivered by gentlemen who have devoted their lives to their special subjects.

Before proceeding further, however, allow me, for the benefit of those who may not be acquainted with the work of the British Medical Association, to give in as few words as possible a general idea of its organization.

The British Medical Association.

When, in 1832, Sir Charles Hastings, of Worcester, communicated to a few of his personal friends the idea he had conceived of a medical association which should bring the whole provincial profes-

sion of England into a common brotherhood, it may be safely affirmed that he did not dream that he was laying the foundation of an association which would ultimately not only embrace the whole of the British Isles, but extend to that Greater Britain beyond the seas, and become an association of imperial magnitude and of imperial importance and significance. I have no hesitation in expressing my belief that the British Medical Association will be an important factor in bringing to a successful issue that great scheme of Imperial Federation which now exercises the minds, and, let me add, the hearts, of the leading statesmen of the Empire. Sir Charles Hastings' aim was to bring town into professional union with town, county with county; now it has become the aim of the Society he called into being to add State to State—and may I not say continent to continent?—until all the nations and peoples who live under the British flag are brought within the beneficent influence of the Association.

With respect to the objects of the Association, as set forth on its foundation, they may briefly be stated to be:

1st. The collection of speculative and practical information through essays, hospital reports, infirmaries, dispensaries, or private practice.

2nd. Increase of knowledge of the medical topography of England through statistical, meteorological, geological, and botanical inquiries; the investigation of the modification of endemic and epidemic diseases in different situations and at various periods, so as to trace, as far as the recent state of the art would permit, their connection with peculiarities of soil and climate or with the localities, habits, and occupations of the people.

3rd. The advancement of medico-legal science through succinct reports of cases occurring in courts of judicature.

4th. The maintenance of the honor and respectability of the profession genera ly in the provinces by promoting friendly intercourse and free communication of its members and by establishing among them the harmony and good feeling which ought ever to characterize a liberal profession.

During its earliest years the movements and proceedings of the Association were quiet and unostentatious, the meetings simple in their arrangements; but it was not long before medical societies began to join the newer body, and towns in all parts of the Kingdom soon came to regard it as an honor to entertain the Association. Gradually the best men of each district enrolled their names, and the membership increased so greatly that subdivisions into branches became a necessity. Each branch, with its own ordinary and annual meetings, was practically a replica of the parent society, possessing its own president, vice-president, secretary, treasurer, council, and by-laws, subject to the approval of the Council of the Association, to which, besides, each branch sent representatives according to its numerical strength. In 1837, five years after the foundation of the Association, there were three of these branches formed, namely, the East Anglian, the Bath and Bristol, and the Lancashire and Cheshire. By the end of 1878 the Association had spread over the whole United Kingdom, the total number of branches at that date being 30—one of the 30, it is interesting to note, being Jamaica, the first Colonial branch to be formed. It was organized in 1878.

Two years later we find that Australia appears for the first time, contributing three branches to the Association. Since then 36 more branches have been added, making a grand total of 65, with a collective membership of nearly 17,000. Of the branches 27 are Indian and Colonial. Doubtless before long those portions of Africa which are now becoming rapidly civilized will also add their quota, so that it is possible that within the lifetime of all present the British Medical Association will be represented wherever the British flag flies. As Nova Scotia is always to the fore in matters intellectual, it is not surprising that the first Canadian branch of the Association should have been formed in Halifax. It was started in 1887, four years ahead of Montreal, Toronto, Manitoba and British Columbia. Canada has now seven branches, the Ottawa and Quebec branches having been formed within the last year. The formation of the Manitoba, Toronto and Montreal branches was the immediate result of the visit to this country of Mr. Ernest Hart. In 1891, Mr. Hart, who has been editor of the *British Medical Journal* since 1867, and who has been well and truly described as the pivot on which the machinery of the whole Association revolves, passed through Canada in that year, and addressed *en route* the members of the profession in Winnipeg, Toronto and Montreal. Of the Manitoba branch, which began with 25 members, Dr. Ferguson was nominated as president, and Drs. Thornton and Lamont as vice-presidents. In Toronto the branch also began with 25 members, Dr. Macallum being nominated president, and Dr. Thistle, honorary secretary. In Montreal the meeting was largely representative in spite of the short notice given, and 26 members of the profession at once signed applications for membership. The officers nominated were : President, Dr. (now Sir William) Hingston ; first vice-president, the late Dr. George Ross ; second vice-president, Dr. Jas. Perrigo. The members of the Council were : Drs. Roddick, F. W. Campbell, and Geo. Wilkins. In the course of a very happy speech made on this occasion by Mr. Hart, he remarked that he looked forward to the time when the Canadian membership would be large enough to invite the Association to hold a meeting in Canada ; and he hoped that the first meeting held outside the limits of the British Isles might be held in this country. Little did we think at the time that Mr. Hart's hopes would be so quickly realized. But the idea has ever been present with us, and those who subsequently attended meetings of the British Medical Association in England have lost no opportunity of advocating the claims of Canada, and especially of this the metropolitan city of Canada, as a place of meeting for the Association.

One of the secrets of success of the British Medical Association is that it makes no distinction in the treatment of its members. Colonial members have all the privileges of the British members, and are always warmly welcomed at the headquarters in the Strand, and at the annual meetings. The Association has a large reserve fund of £40,000 sterling, which is the joint property of the members, to be used for public or professional purposes, and any suitable applications for grants for medical research, whether from British or Colonial members, always receive attention.

A gentleman to whom the Association is greatly indebted is Mr. Francis Fowke, who was appointed Secretary and General Manager

in 1872. At that time the Association was in rather a precarious condition financially, owing to its deficient organization; but shortly after Mr. Fowke took up the reins of office, matters were found to improve. About the time he was appointed the subscriptions amounted to £4,677. Ten years later they had nearly doubled, the amount being £9,147; and in 1891 they had reached the very respectable sum of £14,759. It is interesting to note how closely the advertisements in the *Journal* kept pace with the increase in membership. In 1871 the amount received for advertisements was £1,992; in 1881, £6,089; and in 1891, £14,568. The head office, which had been in Birmingham, was moved to London in 1872, where, after two removals, the present commodious premises in the Strand were taken. In 1879 the Association began the printing as well as the publishing of its *Journal*. The library, which now contains 10,000 volumes, and which includes nearly every modern medical work of note, and many valuable books of reference, has developed in that time. That the British Medical Association is the largest and most influential guild in the world cannot be questioned. Moreover the good it accomplishes increases from year to year, and more than keeps pace with the expansion of the Association. Imagine the mighty power of the collective action of 17,000 earnest men pitted against false dogmas and ever battling for the truth! It is not, however, by greatness of numbers that the Association will be judged—it is by the diversity and quality of results. It is impossible to imagine any combination of circumstances which would render this great Association any less necessary or useful than it is to-day. It will undoubtedly continue to grow in numbers, to increase in importance, and to be ever more and more an influence making for the amelioration and elevation of mankind.

The Canadian people, and especially the citizens of Montreal, are highly flattered and gratified that Canada should be the first country without the United Kingdom to be honored by a meeting of the British Medical Association; and while they hope that it will not be long before the honor is repeated. our people are not insensible to the claims of other portions of the Empire, more especially the great island continent of the Antipodes, Australia. Either Sydney or Melbourne would be a fit meeting place for such an imperial organization as this; and should the next meeting which is held outside the British Isles be held under the Southern Cross, our hospitable Australian kinsmen may count on a large contingent from the Dominion of Canada.

Climatic Conditions.

As it may be presumed that to the majority of those present here to-day Canada is almost an unknown country, I have thought that among one or two other subjects a few remarks on the atmospheric conditions and health resorts of the Dominion would not be without interest.

The best way to understand the atmospheric conditions of a country is first to understand its physical features. The physical features of Canada are very remarkable. Broadly speaking, the country is separable by climatic and physical conditions into three great regions, the Eastern, Central and Western Regions, which approximately run north and south in the general trend of the con-

tinent. The Eastern Region, which includes the older provinces of the Dominion, Ontario, Quebec, Nova Scotia, New Brunswick, and Prince Edward Island, besides the great fur territory stretching far to the east and northeast of James' Bay, extends from the Atlantic to Lake Superior and the chain of Great Lakes running in a northerly direction from Lake Superior to the Arctic Ocean. Between this great chain of lakes and the eastern base of the Rocky Mountains is the immense interior continental plain which constitutes the Central Region of Canada, its southern part consisting of open prairie, its northern part of forest lands. The third part of the division, the Western Region, is naturally very well defined, consisting of the wide and wild mountainous border of the Continent on the Pacific side—the Rocky, Selkirk, and Gold Ranges which form the great Cordilleran belt, whose average width in Canada is 400 miles.

Eastern Canada, our first and largest region, is geologically of very ancient origin. Here geologists have placed the nucleus of the continent—the broad belt of crystalline rock of great antiquity called the Laurentian Plateau. This region is remarkable for its immense number of lakes, large and small, and for its irregular and winding rivers with numerous rapids and falls. Between the Laurentian Plateau on the north and the Appalachian mountain system on the south, lies the great Valley of the River St. Lawrence. The basin of this majestic river covers 530,000 square miles, of which 460,000 are in Canada. Above the city of Quebec, the base of the Laurentian highlands and the ridges of the Appalachian system diverge, and the mighty river flows through an extensive low country of notable fertility, in earlier days the great granary of Canada.

It may be added *en passant* that Mount Royal, which gives such distinction and character to our city, represents the basal remnants of a volcanic vent of great antiquity. From its picturesque summit may be seen similar abrupt elevations far off towards the east and south—Montarville, Belœil or St. Hilaire, Mt. Rougemont, with Mt. Yamaska behind it, Mt. Shefford, and the conical Mt. Johnson or Monnoir. The Adirondacks are visible in the distance to the south-west, and the Green Mountains to the south-east.

Included in the Eastern Region is one of the most remarkable geographical features of Canada—the great fresh-water lakes or inland seas, Superior, Huron, Erie and Ontario, which form the perennial reservoirs of the St. Lawrence. Together with Michigan, which is wholly in the United States, they have an aggregate area of 94,750 square miles, an area larger than that of Great Britain. They stand at four distinct levels above the sea—Ontario 247 feet, Erie 573, Huron 581, and Superior 602. The Niagara Falls, the greatest and most impressive of the natural wonders of our continent, are the direct result of the great height of Lake Erie above Lake Ontario, the river connecting the lakes being only a few miles long. Besides the St. Lawrence, Eastern Canada has several other great rivers, notably the Ottawa, which has a course of 1,800 miles, and a basin of nearly 1,000,000 square miles, the St. Maurice, the Saguenay, and the St. John, the glory of New Brunswick, which, together with the Atlantic Slope, has a basin of 50,214 square miles. The Central and Western Regions also have their abundant share of large and small lakes and great rivers, an

account of which would fill reams of paper. It should be noted that the Canadian rivers and lakes collectively cover an area of 130,000 square miles, and contain one-half the fresh water on the globe.

I draw special attention to this series of vast lakes and rivers because it exerts an immense and beneficent influence on the climate of Canada. It preserves the mean temperature while the land experiences the extremes. In summer the water is cooler and in winter warmer than the land conditions, which tend to modify the differences, and to favor uniformity of climate. Without these waters, too, we should have vast regions of comparatively little value, as in Africa, Asia, and in the United States west of the Mississippi River, where large tracts of land far from water are nothing more than arid wastes. Our climate is more uniform than that of Europe; the meteorological differences are produced by position alone, but Europe has a higher mean temperature, and the extremes there are not so marked or so wide apart as in Canada. Owing to the great area of Canada, extending over 20° of latitude, or from the latitude of Constantinople to that of North Cape in Norway, the range of temperature is naturally very wide. The southern boundary stretches over fully 4,000 miles, along which line we find that Southern Ontario has the latitude of Central Italy, Nova Scotia that of Northern Italy, Manitoba and Vancouver that of Central Germany. Speaking generally, the Canadian summer may be stated at 60° F. to 70° F.

From its vast and varied extent, Canada may be said to be the possessor of several climates. Taking Solly's classification as to position, we have in Canada all the three land climates, the low, the medium, and the high. The first has an elevation up to 2,500 feet, the second up to 4,500, and the third from 4,500 upwards. As to temperature and humidity, Canada comes under the category of "cold, moderate and dry."

Health Resorts.

In the eastern region of the Dominion there are at least two localities which have been proved to possess many of the qualities which constitute a climate for convalescents from fevers and other depressing diseases, and also for consumption in the incipient stage. I refer to the region in the Province of Quebec among the Laurentians north of this city, of which the village of Ste. Agathe is the centre; the other being the Muskoka District, in Ontario.

The first has been called the Adirondacks of Canada, having many of the features, physical and climatic, of that now celebrated plateau situated in the north-eastern part of New York State, and stretching from the Mohawk Valley in the south 150 miles north, almost to the frontier line. The average elevation of the two regions is about the same, being from 1,600 to 1,800 feet. The immense pine forests, together with the moderate temperature, constitute the chief characteristic of the Canadian district, from the medical point of view. No very systematic meteorological observations have yet been taken of the Ste. Agathe region, but the indications will probably prove to be very similar to those of the American resort. It is in contemplation to erect a Sanitarium on Trembling Mountain, overlooking the village of Ste. Agathe, which

will doubtless in time rival the Adirondack Cottage Sanitarium near Saranac Lake Village, which has proved such a marked success under the able management of Dr. E. L. Trudeau. The elevation of the Sanitarium will be 2,500 feet, thus having an altitude of nearly 700 feet greater than the establishment at Saranac. It is the intention of the Quebec Government to set apart a sufficient portion of the Crown Lands to form a natural park in that part of the Province. It will be called the Trembling Mountain Park, and will cover an area of 100,000 acres of land, in which are several beautiful lakes. Within the boundaries of this park the Sanitarium will be constructed. There is, therefore, no reason to doubt that we will shortly have within our own lines a health resort possessing all the advantages of the Adirondacks region, and capable of affecting for good the same class of patients now so decidedly benefited by a residence in those mountains.

One hundred miles north of Toronto, in the highlands of Ontario, is the Muskoka Lake region, an area of about 10,000 square miles, perhaps the most picturesque portion of the whole Province. Within this district, which has a mean altitude above the sea of about 800 feet (200 feet above Lake Huron), there are nearly a thousand lakes and ponds, connected by innumerable streams. The chief lakes are Muskoka, Rosseau and Joseph. These contain about 400 islands. It is a region abounding in pine forests; the climate is dry, and the air pure and invigorating. The Muskoka region has been found undoubtedly to possess remarkable advantages for those with phthisical tendencies. The death rate from phthisis in this section of Ontario is proved to be less than one-tenth the rate which obtains in other parts of the Province. At Gravenhurst the Muskoka Cottage Sanitarium for the cure of incipient phthisis has recently been founded, under the best auspices, with accommodation for forty patients. The present Sanitarium consists of a large and well-planned main building, surrounded within easy distance by a number of small cottages. The grounds, which embrace seventy-five acres, are situated on Lake Muskoka. Pine forests and rocky ridges protect the buildings on the north and west sides, whence come the colder winds in winter. Like the Adirondacks Sanitarium, the intention is to occupy it all the year round. The progress of this institution, at present in the experimental stage, will be watched with much interest.

In the Central Region of Canada, that section of the Northwest Territories known as Southern Alberta—the home of the cowboy—has much to recommend it as a health resort. This strip of prairie and hill country is bounded on the north by the Canadian Pacific Railway, and on the south by the International boundary line; its eastern boundary extends as far as Medicine Hat; its western boundary to the summit line of the Rockies and British Columbia, comprising in all an area of about 20,000 square miles. The plain here has an elevation above sea-level of 2,700 feet, which gradually increases up to the entrance of the Crow's Nest Pass, where the elevation is 4,500 feet. Calgary, the capital of Alberta, is itself 3,500 feet above sea-level. With this gradual incline from a low to a high level altitude, the patient can choose the locality which suits his particular case. In a long experience Kennedy knows of only two cases of phthisis originating in that country—one of acute

tuberculosis with a hereditary tait, which proved fatal; the other, of the ordinary type, recovered without leaving the place. He claims for the climate of Southern Alberta a dry aseptic atmosphere and a dry soil, the greatest possible number of sunshiny days (90 per cent.), with cool nights. Patients can live there all the year round, and with the exception of an occasional snowstorm, which may cover the prairie to a varying depth, nothing need interfere with their practically living in the saddle. The so-called Chinook wind has a remarkable influence over all this western section of Canada. It is a warm wind which blows with varying intensity from west to southwest. McCaul, who describes it very graphically, speaks of its approach being heralded by the massing of dark clouds above the mountain tops, and a distinct wailing and rumbling from the passes and gorges. Its effect in winter is little short of miraculous. When the real Chinook blows the temperature often rises in a few hours from 20° below to 40° above zero. The snow, which in the morning may have been a foot deep, disappears, and before night everything is dripping. But in the space of a single day all the water is lapped up by the thirsty wind, and the prairie is so dry that a horse's hoof hardly makes an impression.

The cases which have been most especially benefited by Alberta's climate are pulmonary tuberculosis in the earliest stage, although neurasthenics and anæmic women are likewise favorably affected to a marked degree. It is well-known that delicate lads sent from the British Isles to this section of the Northwest to work on the cattle ranches become in a year or two healthy and vigorous men, and are scarcely recognized on their return.

Still further west, and nearly midway between Calgary and the Pacific Coast, is the beautiful Valley of Kamloops, another all-the-year-round resort which has much to commend it to those suffering from many forms of tubercular disease. This picturesque valley, which lies between the Rocky Mountains and the Cascade Range, has a low altitude climate of 1,100 feet, but is exceedingly dry, showing an annual rainfall of only 11.05 inches, with an average of about 75 rainy days in the year. The rain soon disappears, the soil being light and gravelly. In this region we have an illustration of the local variability of climate recently pointed out by Bryce, who, in referring to the two not very distant localities of Vancouver and Kamloops, showed that whereas the former has an annual rainfall of 35 inches, the latter records but 11 inches and a decimal. The mean annual temperature of the Valley of Kamloops is 46.03° F., the annual range being only 22.8. The tuberculous patients who appear to be most benefited by a residence in Kamloops are those in whom there is a tendency to chronic congestion. Cases of bronchitis are likewise said to do well there. The climate can also be recommended for consumptives where cardiac disease exists as a complication.

That Canada is an exceptionally healthful country is the general testimony of the army and navy surgeons who have been stationed in Canada with the different regiments from the time of the conquest to the present day. Crawford, who was attached to one of the regiments stationed in Montreal many years ago, and who subsequently left the army and practised in this city, published elabor-

ate and carefully collected statistics to prove that few portions of the British Empire have a climate equal to that of Canada. In fact his statistics prove conclusively that out of every 1,000 of the troops stationed at the various garrisons throughout the Empire, the percentage constantly ineffective from sickness was smaller in this country by 7 per cent. than at Gibraltar, which was then taken as the type. I think it can be satisfactorily proved that Canada is expressly fitted to develop a hardy race capable of great endurance. The races of the British Isles and the French race have certainly not degenerated here. Hingston proved this very conclusively some years ago by observations made upon the medical students attending the various schools in this city. He found that the lumbar strength of the British Canadian of the third generation exceeded by 20 lbs. that of the recently arrived English and Scotch students. But the French Canadian of the tenth generation did better than all by nearly 30 lbs. Not only has the French Canadian increased in strength but also in height and weight over the original Normandy stock.

Has the intellectual improvement in our people kept pace with the physical? We are a modest people, but I think we can say it has. We have a very respectable literature of our own, but the best intellect of the country is as yet absorbed in the practical affairs of life, and has too seldom found expression in art and literature. It is not very long since a distinguished American litterateur, Charles Dudley Warner, gravely attributed what he called the literary inactivity of Canada to the coldness of the climate. He said, in short, that the cold benumbed our intellectual faculties, and we had to spend so much of our energy in trying to keep warm that none was left for any other purpose. It must be admitted that if we measure the intellectual capacity of our people by the number of books produced in Canada the result is not all we might desire; but the climate is not to blame. Especially it is not the cold, for the winter is the season devoted pre-eminently to intellectual effort and intellectual amusements. If Mr. Warner had said that the heat of our summer was an unfavorable factor in our intellectual life he would not have shot quite so wide of the mark; he would not have been right, but he would not have been quite so wrong. The very vicissitudes of our climate, by training the system to endure severe physical conditions, must react favorably upon the mental attitude.

Canadian Spas.

We have in Canada several mineral springs of undoubted therapeutic value, and they are pretty generally distributed all over the Dominion, although differing materially in temperature and composition. The best known Canadian spas are the Caledonia, the St. Leon and the Plantagenet Springs, in the Province of Quebec, and the Banff Springs, in Alberta. Other springs in the Province of Quebec are the Abenakis and the Caxton. Besides these there are at least three or four artesian wells or springs. Of these the chief are the Laurentian Spring in the east end of this city (a mild alkaline water with sodium bicarbonate as its predominating ingredient), and the Radnor, a well of some considerable repute situated in the County of Champlain. This was discovered a very few

years ago when boring for water to supply the workpeople engaged at the well known Radnor Forges. It has been likened to the German Seltzer, many of the properties being alike. It bids fair to become a rival in time of the celebrated Apollinaris water, to which it is preferred by many. The well is over 400 feet in depth. In the Province of Ontario the chief springs are the Winchester and the Preston, and those in the town of St. Catharines, near Niagara Falls. The best known and the most popular are the Caledonia Springs, situated on the line of the Canadian Pacific Railway about midway between Montreal and Ottawa, and about 9 miles from the Ottawa River. They consist of four springs—the gas, the saline, the white sulphur, and the intermitting or Duncan spring. The first three are situated within a distance of three or four rods of each other, and the mouths of the latter two are not more than four feet apart. The intermitting spring is situated about two miles from the others. This is so named because the discharge of gas is not regular, some minutes elapsing between the periods of quiescence and disturbance. The average temperature of these springs is about 46° F. The intermitting spring has the largest percentage of chloride of sodium, and differs from all the others in possessing a greater portion of chlorides of calcium and magnesium. It has also nearly twice the proportion of carbonate of magnesium that the others contain. It has been found that taken judiciously and under advice these waters have a remarkable effect in subacute and chronic rheumatic conditions. People suffering thus are found flocking to Caledonia from all parts of this continent and even South America, especially during the months of July and August. Gouty conditions depending upon liver disturbances also yield very readily to these waters. The waters of St. Leon and Plantagenet are similar in many respects to those just described, and as a rule suit the same class of patients.

All the springs so far mentioned yield cold waters. But Canada also possesses the most famous thermal springs on this continent.

Banff, now a picturesque town magnificently situated in the heart of the Rocky Mountains, yet within the limits of that division of the Northwest Territories known as Alberta, has become one of the noted health resorts, although frequented more on account of its remarkable thermal springs than for its climatic advantages. The town is built on the banks of the Bow and Spray rivers, two large glacier streams, and is surrounded by mountains towering many thousands of feet above the level of the sea. The winter is short, beginning in December and ending in February, and is much milder than Ontario. Very little rain falls, and the days as a rule are bright and cloudless. Prolonged periods of warm weather are experienced during winter. March and April are variable; May is warm and bright; June is the month in which the greatest rainfall occurs; July, August, September, and October are very warm and very dry with cool nights. At all seasons, with the exception perhaps of June, the air is dry and notably aseptic. It is positively stated that no case of malaria or tuberculosis has ever been known to originate at Banff. Independently of the springs, then, Banff has much to recommend it from a climatological standpoint.

The far-famed Thermal Springs of Banff were only discovered

some 15 years ago during the construction of the Canadian Pacific Railway. At its source in the mountain side it has a temperature of 127° F, and the air is charged for some distance around with the steam emitted from the pool to which the water flows. The most recent analysis shows it to contain the following ingredients :—

Calcium sulphate	56.85
Magnesium sulphate	12.39
Calcium carbonate	3.29
Sodium sulphate	15.60
Sodium carbonate	35.73
Silica	traces.
Organic matter	traces.

The waters of Banff have been used with great benefit in rheumatism, gout, sciatica, and glandular affections, in certain forms of skin disease, and especially, it is thought, in tubercular affections of the skin and mucous membrane. Aided by the admirable climatic conditions the waters have also been found to benefit in a marked manner functional diseases of the liver, stomach and kidneys, and tubercular joint affections. In debilitated constitutions from any cause the activity of the skin is noticed to be increased, the heart and vascular system strengthened and the muscular and nervous systems much improved in tone. Rachitic and delicate children are much benefited by the Thermal Springs. This seems a large order; but the therapeutic effects of these springs have been carefully studied by competent medical men who have been stationed there for some years. The climate doubtless assists materially the action of the waters in very many cases.

I doubt if the Canadian profession sets a sufficiently high value on the therapeutic properties of our own mineral springs. When visiting the Spas of Great Britain and Europe, one is impressed by the caution exercised by patients in the method of using the waters which have been prescribed. There, competent local medical men are always to be found, who can give the proper advice regarding the water to be taken for the ailment from which the patient suffers, and the judicious use of baths. Here, unfortunately, in many places no professional advice is available, and the patient consequently does very much as he pleases, or as the hotel proprietor may advise, and in consequence more harm than good constantly follows the use of the waters.

Medical Education in Canada.

The general question of medical education is one of great importance and of unceasing interest, nor is this interest confined to the profession : it is becoming universal. The needs of medical education are fortunately being more fully realized by those who, on account of their wealth and influence, are in a position to render that substantial assistance which is so requisite. The time was when every medical school was a purely proprietary concern "run" for the money that was in it. We feel in Canada, and I think I can speak for the profession in the neighboring Republic, that this day is passed, that high-minded philanthropists like the Right Hon. Lord Strathcona and Mount Royal, the late John Henry Molson, the McDonalds, the Drakes, and others with us, and the Johns

Hopkins, the Stanfords, the Vanderbilts, the Rockefellers, the Miss Garretts, and others with them are beginning to realize that unendowed instruction in medicine must lead to imperfect results, and that private endowment, in the absence of State aid, has become an absolute necessity to a proper medical training. I am not an advocate for State aid to universities, and I rejoice that the university to which I have the honor to belong is not so dependent, as it might thus be deprived of those gifts of private munificence to which I have just referred. All honor to those far-seeing, open-handed men and women who are giving of their abundance in order to elevate the standard of medical education, and by so doing benefit their kind. As Gould very tersely puts it in one of his clever articles: "I think our reliance must be upon private bequests, and these can be secured only as we interest the rich. We must never weary showing the neglect of the greatest, most palpable, most certain means of doing good. There is a strange fatality in men, an unaccountable inability of seeing the need that lies nearest the good that is dearest. There is more money to-day devoted to astronomy than to the prevention of disease. It is positively wonderful to think that men should be more interested in stars and constellations that in their bodies and their physiological life."

A question which is now-a-days agitating the minds of those especially interested in medical education is the kind of groundwork which is likely to bear the most direct relation to the future studies of the medical student. I think it is now conceded by all that he is placed at a greater advantage who first passes through an Arts or a Science course. I am happy to be able to report that from 15 to 20 per cent. of those who are studying medicine in this country to-day have had a collegiate training in either Arts or Science. Which of the two should the parent or guardian choose? Had I a son whose instincts were in the direction of Medicine, I think I should choose for him the Science course. The late Professor Huxley thought it was a most self-evident proposition that the educational training for persons who proposed to enter the medical profession should be largely scientific; not merely or even principally because an acquaintance with the elements of physical and biological science is absolutely essential to the comprehension of human physiology and pathology, but still more because of the value of the discipline afforded by practical work in these departments in the process of observation and experiment, in inductive reasoning and in manipulation.

The subjects in the Science curriculum might be specially selected for the future medical student. Of course it may be said in favor of the Arts course that many of the subjects such as physics and chemistry constitute part of the curriculum; but then calculate the loss to the future surgeon of that training of the hand and eye which would lead him up to be a skilled operator; or to the scientific physician whose complicated instruments of precision employed in the diagnosis of disease need some mechanical knowledge for both their use and repair. Besides, the number of those has been increasing in number and complexity with the increase of scientific knowledge.

But can we not make a new departure; can we not urge that a special scientific education be arranged by the universities for those

who desire to enter the medical profession? Such a course would embrace elementary Latin and Greek, French and German, physics, chemistry, biology, psychology, elementary mechanics, a practical laboratory course on electricity and drawing. After two years' study this might entitle the successful candidate to the degree of Licentiate in Science.

Something of this kind has been recently attempted in the University of McGill. By a special arrangement with the Faculty of Arts it is now possible for students to obtain the degree of B.A. along with M.D., C.M., after only six years of study. It has been decided to allow the primary subjects (anatomy, physiology, and chemistry) in Medicine to count as subjects of the third and fourth years in Arts. It follows, then, that at the end of four years' study a student may obtain his B.A. degree and have two years of his medical course completed. The last two years of study are of course devoted to the third and fourth year subjects in medicine. A certificate of Licentiate in Arts will be given along with the professional degree in medicine to those who previous to entrance upon their professional studies proper have completed two years in the Faculty of Arts, and have fully passed the prescribed examinations therein. By this plan also during the first two years of the Arts course the medical student practically completes his studies in physics, chemistry, botany, and elementary psychology. This scheme is still in the experimental stage, but there is every reason to believe that it will result satisfactorily. What deters so many from taking a full course in Arts or Science before entering Medicine is the length of time consumed before the doctorate degree is reached, although I hope the time is not far distant when every graduate in Medicine in Canada shall of necessity be also a graduate in Arts or Science. I might state that the standard for the ordinary matriculation examination for entrance to Medicine exacted by all universites and licensing boards in this country is, with one or two exceptions, very high. I doubt if the requirements in this way of the Medical Council of Great Britain are any higher.

Now as to the purely professional portion of Medicine, I might state that we have in the Dominion of Canada no fewer than 11 medical schools, including one for women only, all having the power of granting degrees, and all connected directly or by affiliation with university bodies. To enumerate them: Beginning with the Atlantic Provinces, we have in Halifax the medical school attached to Dalhousie University, the only medical school in the Maritime Provinces; in this province there are four schools, Laval in Quebec, Laval in Montreal, McGill and Bishop's in Montreal; in Ontario, four schools, namely, the Royal College of Physicians and Surgeons, Kingston; the University of Toronto Medical Faculty, Trinity Medical College, and the Ontario Women's Medical College, in Toronto; in London, Ontario, the Western University Medical Faculty; and lastly, in Winnipeg, the Manitoba University Faculty of Medicine. All told, we had in Canada, during the last winter sessions, 286 teachers, including professors, lecturers, and demonstrators, and 1736 students. The tendency for the past two years has been to increase the teaching staff quite out of proportion to the increased number of students. Taking McGill we find that there are in the present year 53 teachers

for 388 students, being a proportion of nearly one to eight. Laval, in Montreal, has 36 teachers and 197 students, a still greater proportion. The Toronto School of Medicine had during the past year 41 teachers and 293 students. We find that this proportion compares well with the larger schools in the United States; thus, in 1893, there were in Havard Medical School 71 teachers to look after 471 students; at the Columbia Medical College in New York with 661 students there were 105 teachers (1 to 6); in the University of Pennsylvania the teaching staff in the same year comprised only 84 members with 825 students, being a little over 1 to 10. What does this mean? Ten years ago when McGill had 237 students, a staff of 23 professors and demonstrators was considered sufficient. Why are so many more thought necessary now-a-days? The number of subjects taught has not increased very much. The answer is that the subjects are differently taught, the old-fashioned daily didactic lectures are now given two or three times a week only; although I should be sorry to see them further reduced in number, I believe that so many are absolutely necessary. It is in the dissecting room, the chemical, physiological, therapeutical and pathological laboratories that we see the change. These which before were for the most part only "side shows" are now made to hum with the practical work which is done within them, while demonstrators are moving about busily, engaged in examining and instructing.

In clinical teaching also we have made marked advances. A creation of the last few years is the clinical demonstrator, who takes small classes of students into the wards or the out-door department of our hospitals, and gives them that "bedside instruction" which is so essential, leaving the clinical professor to deal with the full classes in the lecture or operating room. Thus each student is enabled personally to examine the case, to study the physiognomy of disease, and to make deliberate, thorough and systematic examinations. He thus learns to use his special senses, and gets into careful habits of observation which once thoroughly acquired will be found to contribute largely to future success. With this in view we encourage students to attend the out-patient department of the hospital as early as the second year.

In order to make the clinical instruction more complete and more thorough, chemical and bacteriological laboratories have been added to the pathological departments of our hospitals. Thus it will be seen that laboratory methods everywhere prevail, all with the idea of developing the scientific spirit in students and of cultivating methods of thought with observation.

The question sometimes arises, however, may the student not be getting too much of a good thing? Is it not possible that laboratory teaching may be overdone? because, as Welsh very truly says, "The student whose knowledge of a subject is derived exclusively from laboratory courses is likely to lose his perspective in details, to acquire only a fragmentary knowledge of the subject, to fail to comprehend the general bearing of observed facts, and not to acquire the general principles and systematic conceptions which are essential. Laboratory work should be accompanied and supplemented by the reading of text-books and by lectures." I am convinced that with us in Canada laboratory work is not overdone,

but on the contrary, in some departments needs and deserves further encouragement. I hope every laboratory teacher in the country realizes that the object of a college is to give a good general education, and not to make experts in various branches. I have long felt myself, however, that the didactic lectures were being unfairly dealt with. There is a feeling abroad that they should be practically elbowed out of sight. I think the didactic lecture has its place in the medical course; and while I quite feel that the old plan of compelling students to listen to five didactic lectures a week in all of the great subjects was a mistake, I still feel that a good lecturer can teach in this way a certain something which cannot be imparted by practical instruction or by recitations. The personal influence of a good lecturer very often makes an impression which nothing else can make; and if such lectures are made also demonstrative, as by the use of diagrams, the lantern, experiments, etc., they must of necessity fill a very important place in the medical course.

Hygiene is at last receiving in this country the attention which its importance demands; all medical schools in Canada have facilities for teaching it. In McGill University the scope of the teaching of hygiene has been vastly extended, thanks to the generous endowment of that department recently by the Chancellor, the Right Hon. Lord Strathcona and Mount Royal. The subject can now be taught in a scientific and, at the same time, eminently practical manner. There will be three teachers associated with the professor himself, viz., the heads of the Departments of Practical Chemistry, of Pathology, and of Bacteriology. This is following very much the German system, also adopted by the University of Pennsylvania, the chemical and bacteriological aspects of the subject being really regarded as the most important. An extensive working museum, with sanitary apparatus of every kind, forms part of the scheme, and will doubtless add greatly to the efficiency of the course when it is completed. Should the experiment succeed, you will be rejoiced to hear at no distant date that the other schools in Canada have followed the lead of their elder sister.

I fear I have given you a very imperfect idea of medical education in Canada; and it may be charged against me that I have been partial in my description to my own University; but I assure you that such was furthest from my thoughts. The Medical Faculty of McGill University has the right of seniority, and might fairly, I think, be taken as a type of Canadian Medical Schools. Be assured there is no mean spirit of rivalry abroad. We are all working with one object only, the advancement of medicine in Canada. The teaching facilities of some medical schools in this country may be and are actually greater than others, owing to the munificence of citizens, and the school attached to McGill is, I am happy to say, in that position; but although assistance has been rendered in a general way, with two exceptions, the chairs are still unendowed. Yet we have great expectations which we hope will be realized in the near future. Let us hope that our sister universities throughout Canada will be equally fortunate; so that before long we shall be able to report that we are all marching abreast equally equipped.

The facilities for clinical teaching in the larger cities of Canada

are admirable. Speaking for the city of Montreal, we have in the five general hospitals, the Hotel Dieu, Montreal General, Notre Dame, Royal Victoria and Western Hospitals, nearly 800 beds. The number of students attending the three medical schools was last session 646 ; and considering that only about half—those of the third and fourth years—have access to the wards, there will be at least two beds for each student. The number of outdoor patients attending the five hospitals daily would aggregate at least 300, so that there could be no possible cause for complaint regarding both the quantity and quality of clinical material available in this city.

While on the subject of hospitals, I would take this opportunity of saying that the training schools attached to the large English hospitals are in a very flourishing condition, and are found to contribute not a little towards the thoroughness of the practical teaching. It was my intention to have referred at some length to the whole question of Nurses and Nursing, but the limits of this address forbid. I might say, however, while as a profession we feel the absolute necessity for the training school, and thoroughly appreciate the services of the well trained nurse, both in hospital and in private practice, there is the fear that the supply may exceed the demand. A project is on foot now, however, which may delay, if not actually prevent, such a result. I refer to the recent establishment by that most estimable and charitable woman, the Countess of Aberdeen, of the Victorian Order of Nurses—another outcome of the jubilee of our beloved Queen. Her Excellency's idea in establishing this Order is to supply the sparsely settled parts of our great Northwest, the outlying districts of Canada generally, and the poor in towns and cities with nursing aid. In this great work hundreds of nurses will in time be employed. The scheme, which is purely non-sectarian, and appeals to all, irrespective of nationality, when thoroughly worked out and more generally understood will become one of our national institutions. Let us wish it every success.

Medical Legislation in Canada.

Time will not permit of my discussing the subject of medical legislation in Canada at any length ; and, besides, you will find it very fully treated in the excellent Official Guide and Souvenir, prepared for you by the Executive Committee. In addition I might explain, however, that when the British American provinces became confederated in 1867, under the British North America Act, the governance of educational matters was taken away from the Federal authorities and handed over to the provinces, each to look after them in its own way. In consequence we have since had a curious complexity of Medical Legislation, there being practically no uniformity among the provinces in regard to standard of study or qualification for practice. Each province has its own medical board or medical council, as the case may be, which has the power to grant a licence to practise either after examination or on simply presenting the diploma of certain recognized universities. In the provinces of Ontario and British Columbia an examination is exacted ; in the others the licence is given under certain restrictions on presentation of the degree, although in the Maritime Provinces an examin-

ing board is now about to be established. In this way, as can readily be seen, a Chinese wall is built round each province, and the frontier is carefully guarded, so that it is unsafe for a medical man to pass from one to the other unarmed with a licence, because of the risk of fine or even imprisonment. Such a condition of affairs is hardly credible, and probably exists nowhere else to the same extent. What is the remedy? Two remedies have been suggested—either the establishment of a central examining board in each province, with a uniform standard of matriculation and a uniformly high standard of curriculum which shall in time lead up to a general scheme of reciprocity; or secondly, a Dominion Examining Board. The first scheme is at present under serious consideration, although there are many difficulties in the way of its accomplishment, none of which is insuperable, however, providing a spirit of conciliation prevails. The second alternative (a Dominion Examining Board) would in many respects be more desirable, because not only could the licentiate practise in any part of the Dominion, but he could register in Great Britain, and thus receive recognition all over the Empire. As you are doubtless aware, we as a profession suffer in this country from being inhabitants of provinces which are confederated. In an enactment, now of some twelve years' standing, the British Medical Council decided, in effect, to recognize the degrees of universities situated in autonomous provinces only. As a consequence, Australians obtain privileges which are denied to us, being permitted to register in Great Britain without examination. We are being punished for belonging to a colony whose form of Government is recognized to be in advance of theirs and likely to be imitated by them. Let us give our Australian brethren a hint: if the confederation of your provinces be in contemplation, see to it that all matters of professional education are left in the hands of the Central Government, at least as far as qualification for registration is concerned. By so doing you will avoid the almost inextricable tangle in which we in Canada find ourselves. Let common school education go to the various provinces if you will, but for the profession of Medicine (and doubtless Law also) there should be a uniform standard of matriculation, a uniform curriculum of medical studies, and one Central Examining and Registering Board composed of the best men from all the universities. We hope in Canada to reach that ideal at no distant date; in fact I have the very best authority for stating that it is not impossible of accomplishment. Some scheme of reciprocity first arranged would doubtless make the task less difficult; but failing that, our duty is to arrange for some legislation which shall give our better and more ambitious students an opportunity of passing a Dominion Licensing Board (or whatever it may be called), which shall give the privilege of practising their profession not only in any part of their native country, but in any part of the world over which the British flag flies. Such a scheme need not interfere in any way with the autonomy of the provinces. Each may still retain its Provincial Board for the purpose of examining and issuing licences to those candidates who are satisfied to practise their profession in the limited sphere of their own provinces. I think the legislators of this country will some day (and not far distant either) be induced to see that the system which at present obtains is unworthy of a great and growing country.

In conclusion, allow me to express the hope that the arrangements made by the Executive Committee for the entertainment of our guests may meet with appreciation and approval, and that the memories of the brief sojourn here may be all that is bright and happy. The loyalty and unanimity with which the profession throughout the Dominion has co-operated with us in Montreal to make this meeting of the British Medical Association a success from every point of view, deserves and receives our heartiest thanks. We are also greatly indebted for the kind and ready assistance of the Dominion Government, the Quebec Government, and the Civic Government of Montreal. Our hands have been strengthened, and the cause we have so much at heart has been furthered by the active good-will of the country's official representatives.

One word more: It is a good thing to be here to-day, in the midst of this great gathering so full of power and vigor. The fruits of such a gathering should be tangible, enduring, not ephemeral, not for to-day, but for all time. To our kinsmen from beyond the great seas, let me express the earnest hope that in the future our kinship will be a more real and living thing than in the past. We are members of one great family, members one of another, in a peculiar and very real sense. Let that once be recognized, and the statesman's task will be an easy one. In more than words has Canada shown herself worthy of her high heritage, worthy of a part in the Empire, worthy to share in its trials and its triumphs. We, who know her history, can say with well-founded confidence:

> So in the long hereafter this Canada shall be
> The worthy heir of British power and British liberty,
> Spreading the blessings of her sway to her remotest bounds,
> While with the fame of her fair name a continent resounds,
> True to her high traditions, to Britain's ancient glory,
> Of patient saint and martyr, alive in deathless story;
> Strong in their liberty and truth to shed from shore to shore
> A light among the nations till nations are no more.

ADDRESS IN MEDICINE

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BRITISH MEDICINE IN GREATER BRITAIN.

To trace successfully the evolution of any one of the learned professions would require the hand of a master, of one who, like Darwin could combine the capacity for patient observation with philosophic vision. In the case of Medicine the difficulties are enormously increased by the extraordinary development which belongs to the history of the present century. The rate of progress has been too, rapid for us to appreciate, and we stand bewildered and, as it were, in a state of intellectual giddiness, when we attempt to obtain a broad, comprehensive view of the subject. In a safer "middle flight," it is my purpose to dwell on certain of the factors which have moulded the profession in English-speaking lands beyond the narrow seas,—of British medicine in Greater Britain. Even for this lesser task (though my affiliations are wide and my sympathies deep), I recognize the limitations of my fitness, and am not unaware that in

my ignorance I shall overlook much which might have rendered less sketchy a sketch necessarily imperfect.

Evolution advances by such slow and imperceptible degrees that to those who are part of it the finger of time scarcely seems to move. Even the great epochs are seldom apparent to the participators. During the last century neither the colonists nor the mother country appreciated the thrilling interest of the long fought duel for the possession of this continent. The acts and scenes of the drama, to them detached, isolated and independent, now glide like dissolving views into each other, and in the vitascope of history we can see the true sequence of events. That we can meet here to-day, Britons on British soil in a French province, is one of the far-off results of that struggle. This was but a prelude to the other great event of the eighteenth century, the revolt of the colonies and the founding of a second great English-speaking nation, in the words of Bishop Berkeley's prophecy—

"Time's noblest offspring."

Surely a unique spectacle that a century later descendants of the actors of these two great dramas should meet in an English city in New France! Here the American may forget Yorktown in Louisburg, the Englishman Bunker Hill in Quebec, and the Frenchman both Louisburg and Quebec in Chateauguay; while we Canadians, English and French, in a forgiving spirit, overlooking your unseemly quarrels, are only too happy to welcome you to our country, this land on which and for which you have so often fought.

Once, and only once, before in the history of the world could such a gathering as this have taken place. Divided though the Greeks were, a Hellenic sentiment of extraordinary strength united them in certain assemblies and festivals. No great flight of imagination is required to picture a notable representation of our profession in the fifth century, B.C., meeting in such a colonial town as Agrigentum under the presidency of Empedocles. Delegates from the mother cities, brilliant predecessors of Hippocrates of the stamp of Damocedes and Herodicus, delegates from the sister colonies of Syracuse and other Sicilian towns, from neighboring Italy, from far distant Massilia, and from still more distant Panticapaeum and Istria. And in such an assemblage there would have been men capable of discussing problems of life and mind more brilliantly than in many subsequent periods, in proportion as the pre-Hippocratic philosophers in things medical had thought more deeply than many of those who came after them.

We English are the Modern Greeks, and we alone have colonized as they did, as free people. There have been other great colonial empires, Phœnician, Roman, Spanish, Dutch and French, but in civil liberty and in intellectual freedom Magna Græcia and Greater Britain stand alone. The parallel so often drawn between them is of particular interest with reference to the similarity between the Greek settlements in Sicily and the English plantations on the Atlantic coast. Indeed, Freeman says, "I can never think of America without something suggesting Sicily, or of Sicily without something suggesting America." I wish to use the parallel only to emphasize two points, one of difference and one of resemblance. The Greek colonist took

Greece with him. Hellas had no geographical bounds. "Massilia and Olbia were cities of Hellas in as full a sense as Athens or Sparta." While the emigrant Britons changed their sky, not their character, in crossing the great sea, yet the home stayers had never the same feeling towards the plantations as the Greeks had towards the colonial cities of Magna Græcia. If, as has been shrewdly surmised, Professor Seely was Herodotus reincarnate, how grieved the spirit of the "father of History" must have been to say of Englishmen: "Nor have we even now ceased to think of ourselves as simply a race inhabiting an island off the northern coast of continent of Europe." The assumption of gracious superiority which, unless carefully cloaked, smacks just a little of our national arrogance, is apt to jar on sensitive colonial nerves. With the expansion of the Empire and the supplanting of a national by an imperial spirit, this will become impossible. That this sentiment never prevailed in Hellas as it did later in the Roman Empire, was due largely to the fact that in literature, in sience and in art the colonial cities of Greece early overshadowed the mother cities. It may be because the settlements of Greater Britain were things of slower growth, that it took several generations and several bitter trials to teach a lesson the Greeks never had to learn.

The Greek spirit was the leaven of the old world, the workings of which no nationality could resist. Thrice it saved Western civilization, for it had the magic power of leading captivity captive, and making even captive conquerors the missionaries of its culture. What modern medicine owes to it will appear later. "The love of science, the love of art, the love of freedom—vitally correlated to each other and brought into organic union," were the essential attributes of the Greek genius (Butcher). While we cannot claim for the Anglo-Saxon race all of these distinctions, it has in a high degree that one which in practical life is the most valuable, and which has been the most precious gift of the race to the world—the love of freedom.

> "Of freedom in her regal seat
> Of England."

It would carry one too far afield to discuss the differences between the native Briton and his children scattered so widely up and down the earth. In Canada, South Africa, Australia and New Zealand types of the Anglo-Saxon race are developing which will differ as much from each other, and from the English, as the American does to-day from the original stock; but amid these differences can everywhere be seen those race qualities which have made us what we are—"courage, national integrity, steady good sense, and energy in work." At a future meeting of the Association, perhaps in Australia, a professional Sir Charles Dilke, with a firm grasp on the subject, may deal with the medical problems of Greater Britain in a manner worthy of the Address in Medicine. My task, as I mentioned at the outset, is much less ambitious.

Could some one with full knowledge patiently analyze the characteristics of British medicine, he would find certain national traits sufficiently distinct for recognition. Three centuries cannot do very much (and that period has only just passed since the revival of medicine in England), but the local conditions of isolation,

which have been singularly favorable to the development of special peculiarities in the national character, have not been without effect on the medical profession. I cannot do more than touch upon a few features, not distinctive but illustrative, features which may be useful as indicating the sources of influence upon Greater Britain in the past, and which may, perhaps, be suggestive as to lines of progress in the future.

Above the fireplace in Sir Henry Acland's study are three panelled portraits of Linacre, Sydenham and Harvey; the scroll upon them reads, *Literae*, *Praxis*, *Scientia*. To this great triumvirate, as to the fountain heads, we may trace the streams of inspiration which have made British medicine what it is to-day.

Linacre, the type of the literary physician, must ever hold a unique place in the annals of our profession. To him was due in great measure the revival of Greek thought in the sixteenth century in England, and in the last Harveian Oration Dr. Payne has pointed out his importance as a forerunner of Harvey. He made Greek methods available; through him the art of Hippocrates and the science of Galen became once more the subject of careful, first-hand study. Linacre, as Dr. Payne remarks, "was possessed from his youth till his death by the enthusiasm of learning. He was an idealist, devoted to objects which the world thought of little use." Painstaking, accurate, critical, hypercritical, perhaps, he remains to-day the chief literary representative of British medicine. Neither in Britain nor in Greater Britain have we maintained the place in the world of letters created for us by Linacre's noble start. It is true that in no generation since has the profession lacked a man who might stand unabashed in the temple at Delos, but judged by the fruits of learning, scholars of his type have been more common in France and Germany. Nor is it to our credit that so little provision is made for the encouragement of these studies. For years the reputation of Great Britain in this matter was sustained almost alone by the great Deeside scholar, the Surgeon of Banchory, Francis Adams, the interpreter of Hippocrates to English students. In this century he and Greenhill have well maintained the traditions of Linacre. Their work, and that of a few of our contemporaries, among whom Ogle must be specially mentioned, has kept us in touch with the ancients. But by the neglect of the study of the humanities, which has been far too general, the profession loses a very precious quality.

While in critical scholarship and in accurate historical studies British medicine must take a second place, the influence of Linacre, exerted through the Royal College of Physicians and the old Universities, has given to the humanities an important part in education, so that they have moulded a larger section of the profession than in any other country. A physician may possess the science of Harvey and the art of Sydenham, and yet there may be lacking in him those finer qualities of heart and head which count for so much in life. Pasture is not everything, and that indefinable, though well understood, something which we know as breeding is not always an accompaniment of great professional skill. Medicine is seen at its best in men whose faculties have had the highest and most harmonious culture. The Lathams, the Watsons, the Pagets, the Jenners and the Gairdners have influenced the profession less by their special work than by exemplifying those graces of life, and refine-

ments of heart, which make up character. And the men of this stamp in Greater Britain have left the most enduring mark—Beaumont, Bovell and Hodder in Toronto; Holmes, Campbell and Howard in this city; the Warrens, the Jacksons, the Bigelows, the Bowditchs and the Shattucks in Boston; Bard, Hossack, Francis, Clark and Flint in New York; Morgan, Shippen, Redman, Rush, the elder Wood, the elder Pepper and the elder Mitchell of Philadelphia—Brahmins all, in the language of the greatest Brahmin among them, Oliver Wendell Holmes,—these, and men like unto them, have been the leaven which has raised our profession above the dead level of a business.

The *literae humaniores*, represented by Linacre, revived Greek methods, but the Faculty at the end of the sixteenth and the beginning of the seventeenth centuries was in a slough of ignorance and self conceit, and not to be aroused even by Moses and the prophets in the form of Hippocrates and the fathers of medicine.

In the pictures referred to, Sydenham is placed between Linacre and Harvey; but science preceded practice, and Harvey's great Lumleian Lectures were delivered before Sydenham was born. Linacre has been well called by Payne, Harvey's intellectual grandfather. "The discovery of the circulation of the blood was the climax of that movement which began a century and a half before with the revival of Greek medical classics and especially of Galen" (Payne). Harvey returned to Greek methods, and became the founder of modern experimental physiology, and the great glory of British scientific medicine. The demonstration of the circulation of the blood remains in every detail a model research. I shall not repeat the oft told tale of Harvey's great and enduring influence, but I must refer to one feature which, until lately, has been also a special characteristic of his direct successors in Great Britain. Harvey was a practitioner and a hospital physician. There are gossiping statements by Aubrey to the effect that "he fell mightily in his practice" after the publication of the *De Motu Cordis*, and that his "therapeutic way" was not admired; but to these his practical success is the best answer. It is remarkable that a large proportion of all the physiological work of Great Britain has been done by men who have become successful hospital physicians or surgeons. I was much impressed by a conversation with Professor Ludwig in 1884. Speaking of the state of English Physiology, he lamented the lapse of favorite English pupil from science to practice; but, he added, "while sorry for him, I am glad for the profession in England." He held that the clinical physicians of that country had received a very positive impress from the work of their early years in physiology and the natural sciences. I was surprised at the list of names which he cited—among them I remember Bowman, Paget, Savory and Lister. Ludwig attributed this feature in part to the independent character of the schools in England, to the absence of the university element, so important in medical life in Germany, but above all to the practical character of the English mind, the better men preferring an active life in practice to a secluded laboratory career.

Thucydides it was who said of the Greeks that they possessed "the power of thinking before they acted, and of acting too." The same is true in a high degree of the English race. To know first what has to be done, then to do it, comprises the whole

philosophy of practical life. Sydenham—*Angliæ lumen* as he has been well called—is the model practical physician of modern times. Linacre led Harvey back to Galen, Sydenham to Hippocrates. The one took Greek science, the other not so much Greek medicine as Greek methods, particularly intellectual fearlessness, and a certain knack of looking at things. Sydenham broke with authority and went to Nature. It is an extraordinary fact that he could have been so emancipated from dogmas and theories of all sorts. He laid down the fundamental proposition, and acted upon it, that "all diseases should be described as objects of natural history." To do him justice we must remember, as Dr. John Brown says, "in the midst of what a mass of errors and prejudices, of theories actively mischievous, he was placed, at a time when the mania of hypothesis was at its height, and when the practical part of his art was overrun and stultified by vile and silly nostrums."

Sydenham led us back to Hippocrates; I would that we could be led oftener to Sydenham! How necessary to bear in mind what he says about the method of the study of medicine. "In writing, therefore, such a natural history of diseases, every merely philosophical hypothesis should be set aside, and the manifest and natural phenomena, however minute, should be noted with the utmost exactness. The usefulness of this procedure cannot be easily overrated, as compared with the subtle inquiries and trifling notions of modern writers, for can there be a shorter, or indeed any other way of coming at the morbific causes, or of discovering the curative indications than by a certain perception of the peculiar symptoms? By these steps and helps it was that the father of physic, the great Hippocrates, came to excel, his theory being no more than an exact description or view of Nature. He found that Nature alone often terminates diseases, and works a cure with a few simple medicines, and often enough with no medicine at all." Well, indeed, has a recent writer remarked, "Sydenham is unlike every previous teacher of the principles and practice of medicine in the modern world." He, not Linacre or Harvey, is the model British physician, in whom were concentrated all those practical instincts upon which we lay such stress in the Anglo-Saxon character. The Greek faculty, which we possess, of thinking and acting has enabled us, in spite of many disadvantages, to take the lion's share in the great practical advances in medicine. The three greatest scientific movements of the century have come from Germany and France. Bichât, Laennec and Louis laid the foundation of modern clinical medicine; Virchow and his pupils of scientific pathology; while Pasteur and Koch have revolutionized the study of the causes of diseases; and yet the modern history of the art of medicine could almost be written in its fullness from the records of the Anglo-Saxon race. We can claim every practical advance of the very first rank—vaccination, anæsthesia, preventive medicine, and antiseptic surgery—the "captain jewels in the carcanet" of the profession, beside which can be placed no others of equal lustre.

One other lesson of Sydenham's life needs careful conning. The English Hippocrates, as I said, broke with authority. His motto was:

> "Thou Nature art my Goddess; to thy law
> My services are bound."

Undue reverence for authority as such, a serene satisfaction with the *status quo*, and a fatuous objection to change have often retarded the progress of medicine. In every generation, in every country, there have been and ever will be *laudatores temporis acti*, in the bad sense of that phrase, not a few of them, men in high places, who have lent the weight of a complacent conservatism to bolster up an ineffectual attempt to stay the progress of new ideas. Every innovator from Harvey to Lister has been made to feel its force. The recently issued life of Thomas Wakley is a running commentary on this spirit, against the pricks of which he kicked so hard and so effectually. But there are signs of a great change. The old Universities and the Colleges, once the chief offenders, have been emancipated, and remain no longer, as Gibbon found them, steeped in port and prejudice. The value of authority *per se* has lessened enormously, and we of Greater Britain have perhaps suffered as the pendulum has swung to the other extreme. Practice loves authority, as announced in "the general and perpetual voice of men" (Hooker). Science must ever hold with Epicharmus that a judicious distrust and a wise scepticism are the sinews of the understanding. And yet the very foundations of belief in almost everything relating to our art rest upon authority. The practitioner cannot always be the judge—the responsibility must often rest with the teachers and investigators who can only learn in the lessons of history the terrible significance of the word. In the treatment of fever the fetters of a thousand years were shattered by Sydenham, shattered only to be riveted anew. How hard was the battle in this century against the entrenched and stubborn foe! Listen to the eloquent pleadings of Stokes, pleading, as did Sydenham, against authority and against the bleedings, the purgings and sweatings of fifty years ago. "Though his hair be grey, and his authority high, he is but a child in knowledge and his reputation an error. On a level with a child, so far as correct appreciation of the great truths of medicine is concerned, he is very different in other respects, his powers of doing mischief are greater; he is far more dangerous. Oh! that men would stoop to learn, or at least cease to destroy." The potency of human authority among "the powers that be" was never better drawn than by the judicious Hooker in his section on this subject. "And this, not only with 'the simpler sort,' but the learneder and wiser we are the more such arguments in some cases prevail with us. The reason why the simple sort are moved with authority is the conscience of their own ignorance; whereby it cometh to pass that having learned men in admiration, they rather fear to dislike them than know wherefore they should allow and follow their judgments. Contrariwise with them that are skillful, authority is much more strong and forcible; because they only are able to discern how just cause there is why to some men's authority so much should be attributed. For which cause the name of Hippocrates (no doubt) were more effectual to persuade even such men as Galen himself than to move a silly empiric." *

Sydenham was called "a man of many doubts," and therein lay the secret of his great strength.

Passing now to the main question of the development of this

* Ecclesiastical Polity, Book II., VII., 2.

British medicine in Greater Britain, I must at once acknowledge the impossibility of doing justice to it. I can only indicate a few points of importance, and I must confine my remarks chiefly to the American part of Greater Britain.

We may recognize three distinct periods, corresponding to three distinct waves of influence: the first from the early migrations to about 1820; the second from about 1820 to 1860; and the third from about 1860 to the present time.

The Colonial settlements were contemporaneous with the revival of medicine in England. Fellow-students of Harvey at Cambridge might have sailed in the Mayflower and the Arbella. The more carefully planned expeditions usually enlisted the services of a well-trained physician, and the early records, particularly of the New England colonies, contain many interesting references to these college-bred men. Giles Firman, who settled in Boston in 1632, a Cambridge man, seems to have been the first to give instruction in medicine in the new world. The parsons of that day had often a smattering of physic, and illustrated what Cotton Mather called an "angelical conjunction." He says: "Ever since the days of Luke the Evangelist, skill in *Physic* has been frequently professed and practised by Persons whose more declared Business was the study of Divinity." Firman himself, finding physic "but a meane helpe," took orders. These English physicians in the New England colonies were scholarly, able men. Roger Chillingworth, in Hawthorne's *Scarlet Letter*, has depicted them in a sketch of his own life,—"Made up of earnest, studious, thoughtful, quiet years, bestowed faithfully for the increase of knowledge, faithfully, too, for the advancement of human welfare,—men thoughtful for others, caring little for themselves, kind, just, true, and of constant if not warm affections," a singularly truthful picture of the old colonial physician.

Until the establishment of medical schools—University of Pennsylvania, 1763; King's College (afterwards Columbia), 1767; Harvard, 1782—the supply of physicians for the colonies came from Great Britain, supplemented by men trained under the old apprentice system, and of colonists who went to Edinburgh, Leyden and London for their medical education. This latter group had a most powerful effect in moulding professional life in the pre-revolutionary period. They were men who had enjoyed not alone the instruction, but often the intimate friendship of the great English and European physicians. Morgan, Rush, Shippen, Bard, Wistar, Hossack and others had received an education comprising all that was best in the period, and had acquired the added culture which can only come from travel and wide acquaintance with the world. Morgan, the founder of the Medical School of the University of Pennsylvania, was away seven years, and before returning had taken his seat as a corresponding member of the French Academy of Surgery, besides having been elected a Fellow of the Royal Society. The War of Independence interrupted temporarily the stream of students, but not the friendship which existed between Cullen and Fothergill and their old pupils in America. The correspondence of these two warm friends of the colonies testifies to the strong professional intimacy which existed at the time between the leaders of the profession in the old and new worlds. But neither Boerhaave, Cullen nor

Fothergill stamped colonial medicine as did the great Scotchman, John Hunter. Long, weary centuries separated Harvey from Galen; not a century elapsed from the death of the great physiologist to the advent of the man in whose phenomenal personality may be seen all the distinctive traits of modern medicine, and the range of whose mighty intellect has had few, if any, equals since Aristotle. Hunter's influence on the profession of this continent, so deep and enduring, was exerted in three ways. In the first place, his career as an army surgeon, and his writings on subjects of special interest to military men carried his work and ways into innumerable campaigns in the long French wars and in the War of Independence. Hunter's works were reprinted in America as early as 1791 and 1793. In the second place, Hunter had a number of most distinguished students from the colonies, among whom were two who became teachers of wide reputation. William Shippen, the first Professor of Anatomy in the University of Pennsylvania, lived with Hunter on terms of the greatest intimacy. He brought back his methods of teaching and some measure of his spirit. With the exception of Hewson and Home, Hunter had no more distinguished pupil than Philip Syng Physick, who was his house surgeon at St. George's Hospital, and his devoted friend. For more than a generation Physick had no surgical compeer in America, and enjoyed a reputation equalled by no one save Rush. He taught Hunterian methods in the largest medical school in the country, and the work of his nephew (Dorsey) on surgery is very largely Hunter modified by Physick. But in a third and much more potent way the great master influenced the profession of this continent. Hunter was a naturalist to whom pathological processes were only a small part of a stupendous whole, governed by law, but which could never be understood until the facts had been accumulated, tabulated and systematized. By his example, by his prodigious industry and by his suggestive experiments he led men again into the old paths of Aristotle, Galen and Harvey. He made all thinking physicians naturalists; he lent a dignity to the study of organic life, and re-established a close union between medicine and the natural sciences. Both in Britain and Greater Britain he laid the foundation of the great collections and museums, particularly those connected with the medical schools. The Wistar-Horner and the Warren museums originated with men who had been greatly influenced by Hunter. He was, moreover, the intellectual father of that interesting group of men on this side of the Atlantic who, while practising as physicians, devoted much time and labor to the study of Natural History.

I wish that time permitted me to do justice to the long list of men who have been devoted naturalists, and who have made contributions of great value. Benjamin Smith Barton, David Hossack, Jacob Bigelow, Richard Harlan, John D. Godman, Samuel George Morton, John Collins Warren, Samuel L. Mitchell, J. Aiken Meigs and many others, have left the records of their industry in their valuable works, and in the Transactions of the various Societies and Academies. In Canada, many of our best naturalists have been physicians, and collections in this city testify to the industry of Holmes and McCullough. I was regretting the humanities a few minutes ago, and now I have to mourn the almost complete sever-

ance of Medicine from the old Natural History. To a man, the most delightful recollections of whose student-life are the Saturdays spent with a preceptor who had a Hunterian appetite for specimens —anything from a trilobite to an acarus—to such a one, across the present brilliant outlook, comes the shadow of the thought that the conditions of progress will make impossible again such careers as those of William Kitchen Parker and William Carmichael McIntosh.

Until about 1820 the English profession of this continent knew little else than British medicine. After this date in the United States the ties of professional union with the old country became relaxed, owing in great part to the increase in the number of home schools, and in part to the development of an American literature. To 1820 one hundred and fourteen native medical books of all kinds had been issued from the press, and one hundred and thirty-one reprints and translations, the former English, the latter few in number and almost exclusively French (Billings). Turning for few minutes to the condition of the profession in Canada during this period, I regret that I cannot speak of the many interesting questions relating to the French colonies. I may mention, however, that with the earliest settlers physicians had come, and among the Jesuits, in their devoted missions, there are records of *donnés* (laymen attached to the service) who were members of the profession. One of these, René Goupil, suffered martyrdom at the hands of the Iroquois. *

Between the fall of Quebec in 1759 and 1820 the English population had been increased by the settlement of Upper Canada, chiefly by United Empire Loyalists from the United States, and after the war of 1812 by settlers from the old country. The physicians in the sparsely settled districts were either young men who sought their fortunes in the new colony, or were army surgeons who had remained after the revolutionary war or the war of 1812. The military element gave for some years a very distinctive stamp to the profession. These surgeons were men of energy and ability, who had seen much service and were accustomed to order, discipline and regulations. Sabine in his *History of the Loyalists* refers to the Tory proclivities of the doctors, and says that they were not so much disturbed as the lawyers and clergymen. Still a good many of them left their homes " for conscience sake," and Canniff, in his *History of the Profession in Upper Canada*, gives a list of those known to have been among the United Empire Loyalists. The character of the men who controlled the profession of the new colony is well shown by the proceedings of the Medical Board, which was organized in 1819. Drs. Macauley and Widmer, both army surgeons, were the chief members. The latter, who has well been termed the father of the profession in Upper Canada, a man of the very highest character, did more than any one else to promote the progress of the profession, and throughout his long career his efforts were always directed in the proper channels. On looking through Canniff's most valuable work one is much impressed by the sterling worth and mettle of these old army surgeons, who in these early days formed the larger part of the profession. The minutes of the Medical Board indicate with what military discipline the

* Parkman. Jesuits in North America.

candidates were examined, and the percentage of rejections has probably never been higher in the history of the province than it was in the first twenty years of the existence of the Board. One picture on the canvas of those early days lingers in the memory, illustrating many of the most attractive features of a race which has done much to make this country what it is to-day. Widmer was the type of the dignified old army surgeon, scrupulously punctilious and in every detail regardful of the proprieties of life. "Tiger" Dunlop may be taken as the very incarnation of that restless, roving spirit which has driven the Scotch broadcast upon the world. After fighting with the Connaught Rangers in the war of 1812, campaigning in India, clearing the Sangur of tigers—hence his soubriquet "Tiger"—lecturing on Medical Jurisprudence in Edinburgh, writing for Blackwood, editing the *British Press* and the *Telescope*, introducing Beck's Medical Jurisprudence to English readers, and figuring as director and promoter of various companies, this extraordinary character appears in the young colony as "Warden of the Black Forest" in the employ of the Canada Company. His life in the backwoods at Gairbraid, his *Noctes Ambrosianæ Canadensis*, his famous "Twelve Apostles" as he called the mahogany liquor stand (each bottle a full quart), his active political life, his remarkable household, his many eccentricities—are they not all portrayed to the life in the recently issued "*In the Days of the Canada Company*"?

Turning now to the second period, we may remark in passing that the nineteenth century did not open very auspiciously for British medicine. Hunter had left no successor, and powerful as had been his influence it was too weak to stem the tide of abstract speculation, with which Cullen, Brown and others flooded the profession. No more sterile period exists than the early decades of this century. William, a great naturalist in skin diseases, with a few others, save it from utter oblivion. The methods of Hippocrates, of Sydenham and of Hunter had not yet been made available in every day work. The awakening came in France, and such an awakening! It can be compared with nothing but the renaissance in the sixteenth and seventeenth centuries, which gave us Vesalius and Harvey. "Citizen" Bichât and Broussais led the way, but Laennec really created clinical medicine as we know it to-day. The discovery of auscultation was only an accident, of vast moment it is true, in a systematic study of the correlation of symptoms with anatomical changes. Louis, Andral and Chomel extended the reputation of the French School, which was maintained to the full until the sixth decade, when the brilliant Trousseau ended a long line of Paris teachers, whose audience had been world-wide. The revival of medicine in Great Britain was directly due to the French, Bright and Addison, Graves and Stokes, Forbes and Marshall Hall, Latham and Bennett were profoundly affected by the new movement. In the United States Anglican influence did not wane until after 1820. Translations of the works of Bichât appeared as early as 1802, and there were reprints in subsequent years, but it was not until 1823 that the first translation (a reprint of Forbes' Edition) of Laennec was issued. Broussais' works became very popular in translations after 1830, and in the Journals from this time on the change of allegiance be-

came very evident. But men rather than books diverted the trend of professional thought. After 1825 American students no longer went to Edinburgh and London, but to Paris, and one can say that between 1830 and 1860 every teacher and writer of note passed under the Gallic yoke. The translations of Louis' works, and the extraordinary success of his American pupils, a band of the ablest young men the country had ever seen, added force to the movement. And yet this was a period in which American Medical literature was made up largely of pirated English books, and the Systems, Encyclopedias and Libraries, chiefly reprints, testify to the zeal of the publishers. Stokes, Graves, Todd, Bennett and Williams furnished Anglican pap to the sucklings, as well as strong meat to the full grown. In spite of the powerful French influence the textbooks of the schools were almost exclusively English.

In Canada the period from 1820 to 1860 saw the establishment of the English Universities and Medical Schools. In Montreal the agencies at work were wholly Scotch. The McGill Medical School was organized by Scotchmen, and from its inception has followed closely Edinburgh methods. The Paris influence, less personal, was exerted chiefly through English and Scotch channels. The Upper Canada Schools were organized by men with English affiliations, and the traditions of Guy's, St. Bartholomew's, St. Thomas's, St. Georges', and of the London Hospital, rather than those of Edinburgh, have prevailed in Toronto and Kingston.

The local French influence on British medicine has been very slight. In the early decades of the century, when the cities were smaller, and the intercourse between the French and English somewhat closer, the reciprocal action was more marked. At that period English methods became somewhat the vogue among the French; several very prominent French-Canadians were Edinburgh graduates. Attempts were made in the medical journals to have communications in both languages, but the fusion of the two sections of the profession was no more feasible than the fusion of the two nationalities, and the development has progressed along separate lines.

The third period dates from about 1860, when the influence of German medicine began to be felt. The rise of the Vienna School was for a long time the only visible result in Germany of the French renaissance. Skoda, the German Laennac, and Rokitansky, the German Morgagni, influenced English and American thought between 1840 and 1860, but it was not until after the last date that Teutonic medicine began to be felt as a vitalizing power, chiefly through the energy of Virchow. After the translation of the Cellular Pathology by Chance (1860), the way lay clear and open to every young student who desired inspiration. There had been great men in Berlin before Virchow, but he made the town on the Spree a Mecca for the faithful of all lands. From this period we can date the rise of German influence in the profession of this continent. It came partly through the study of pathological histology under the stimulus given by Virchow, and partly through the development of the specialties, particularly diseases of the eye, of the skin, and of the larynx. The singularly attractive courses of Hebra, the organization on a large scale in Vienna of a system of graduate teaching designed especially for foreigners, the remarkable expansion of the

German laboratories, combined to divert the stream of students from France. The change of allegiance was a deserved tribute to the splendid organization of the German Universities, to the untiring zeal and energy of their professors, and to their single-minded devotion to science for its own sake.

In certain aspects the Australasian settlements present the most interesting problems of Greater Britain. More homogeneous, thoroughly British, isolated, distant, they must work out their destiny with a less stringent environment than, for example, surronds the English in Canada. The traditions are more uniform, and of whatever character have filtered through British channels. The professional population of native-trained men is as yet small, and the proportion of Graduates and Licentiates from the English, Scotch and Irish Colleges and Boards guarantees the dominance of old country ideas. What the maturity will show cannot be predicted, but the vigorous infancy is full of "crescent promise." On looking over the files of Australian and New Zealand journals, one is impressed with the monotonous similarity of the diseases in the Antipodes to those of Great Britain and of this continent. Except in the matter of parasitic affections and snake-bites. the nosology presents few distinctive qualities. The proceedings of the four Intercolonial Congresses indicate a high level of professional thought. In two points Australia has not progressed as other parts of Greater Britain. The satisfactory regulation of practice, so early settled in Canada, has been beset with many difficulties. Both in the United States and in Australia the absence of the military element, which was so strong in Canada, may, in part at least, account for the great difference which has prevailed in this matter of the State license. The other relates to the question of ethics, to which one really does not care to refer, were it not absolutely forced upon the attention in reading the journals. Elsewhere professional squabbles, always so unseemly and distressing, are happily becoming very rare, and in Great Britain and on this side of the water we try at any rate, to wash our dirty linen at home. In the large Australian cities differences and dissensions seem lamentably common. Surely they must be fermented by the atrocious system of election to the hospitals, which plunges the entire profession every third or fourth year into the throes of a contest in which the candidates have to solicit the suffrages of from 2,000 to 4,000 voters! Well, indeed, might Dr. Batchelor say, in his address to the Fourth Intercolonial Congress: "It is a scandal that in any British community, much less in a community which takes pride in a progressive spirit, such a pernicious system should survive for an hour."

Of India, "of Vishnu-land," what can one say in a few minutes? Three thoughts at once claim recognition. Here, in the dim dawn of history, with the great Aryan people, was the intellectual cradle of the world. To the Hindoos we owe a debt which we can at any rate acknowledge; and even in medicine many of our traditions and practices may be traced to them, as may be gathered from that most interesting *History of Aryan Medical Science* by the Thakore Saheb of Gondal.

Quickly there arises the memory of the men who have done so much for British medicine in that Great Empire. Far from their homes far from congenial surroundings, and far from the stimulus of scien-

tific influences, Annesley, and Ballingall, Twining, Morehead Waring, Parkes, Cunningham, Lewis, Vandyke Carter and many others have nobly upheld the traditions of Harvey and of Sydenham. On the great epidemic diseases how impoverished would our literature be in the absence of their contributions? But then there comes the thought of "the petty done, the undone vast," when one considers the remarkable opportunities for study which India has presented. Where else in the world is there such a field for observation in Cholera, Leprosy, Dysentery, the Plague, Typhoid Fever, Malaria, and in a host of other less important maladies? And what has the British government done towards the scientific investigation of the diseases of India? Until recently little or nothing, and the proposal to found an Institute for the scientific study of diseases has actually come from the native chiefs! The work of Dr. Hankin and of Professor Haffkine, and the not unmixed evil of the brisk epidemic of plague in Bombay may arouse the officials to a consciousness of their shortcomings. While sanitary progress has been great, as shown in a reduction of the mortality from 69 per mille before 1857 to 15 per mille at present, many problems are still urgent as may be gathered from reading Dr. Harvey's Presidential Address in the Proceedings of the Indian Medical Congress. That typhoid fever can be called the "scourge of India" and that the incidence of the disease should remain so high among the troops points to serious sanitary defects as yet unremedied. As to the prevalence of venereal diseases among the soldiers—an admission of nearly 500 per mille tells its own tale.

On reading the journals and discussions one gets the impression that matters are not as they should be in India. There seems to be an absence of proper standards of authority. Had there been in each Presidency during the past twenty years thoroughly equipped Government Laboratories in charge of able men, well trained in modern methods, the contributions to our knowledge of epidemic diseases might have been epoch-making, and at any rate we should have been spared the crudeness which is evident in some of the work (particularly in that upon Malaria) of zealous but badly trained men.

In estimating the progress of medicine in the countries comprising Greater Britain the future rather than the present should be in our minds. The strides which have been taken during the past twenty years are a strong warrant that we have entered upon a period of exceptional development. When I see what has been accomplished in this city in the short space of time since I left, I can scarcely credit my eyes. The reality exceeds the utmost desires of my dreams. The awakening of the profession in the United States to a consciousness of their responsibilities and opportunities has caused unparalleled changes, which have given an impetus to medical work which has already borne a rich harvest. Within two hundred years who can say where the intellectual centre of the Anglo-Saxon race will be? The mother country herself has only become an intellectual nation of the first rank within a period altogether too short to justify a prediction that she has reached the zenith. She will probably reverse the history of Hellas, in which the mental superiority was at first with the colonies. At the end of the next century ardent old-world

students may come to this side "as o'er a brook," seeking inspiration from great masters, perhaps in this very city; or the current may turn towards the schools of the great nations of the South. Under new and previously unknown conditions the Africander, the Australian, or the New Zealander may reach a development before which even the "glory that was Greece" may pale. Visionary as this may appear, it is not one whit more improbable to-day than would have been a prophecy made in 1797, that such a gathering as the present would be possible within a century on the banks of the St. Lawrence.

Meanwhile to the throbbing vitality of modern medicine the two great meetings held this month, in lands so widely distant, bear eloquent testimony. Free, cosmopolitan, no longer hampered by the dogmas of schools, we may feel a just pride in a profession almost totally emancipated from the bondage of error and prejudice. Distinctions of race, nationality, color and creed are unknown within the portals of the temple of Æsculapius. Dare we dream that this harmony and cohesion so rapidly developing in medicine, obliterating the strongest lines of division, knowing no tie of loyalty but loyalty to truth—dare we hope, I say, that in a wider range of human affairs a similar solidarity might ultimately be reached? Who can say that the forges of Time will weld no links between man and man stronger than those of religion or of country? Some Son of Beor touched with a prophetic vision, piercing the clouds which now veil the eternal sunshine of the mountain top, some spectator of all time and all existence (to use Plato's expression), might see in this gathering of men of one blood and one tongue a gleam of hope for the future, of hope at any rate that the great race, so dominant on the earth to-day, may progress in the bonds of peace—a faint glimmer, perhaps, of the larger hope of humanity of that day when "the common sense of most shall hold a fretful 'world' in awe." But these, I fear, are the dreams of the closet student who knows not the world nor its ways. There remains for us, Greater Britons, of whatsoever land, the bounden duty to cherish the best traditions of our fathers, and particularly of the men who gave to British medicine its most distinctive features, of the men, too, who found for us the light and liberty of Greek thought—Linacre, Harvey and Sydenham, those "ancient founts of inspiration," and models for all time in Literature, Science and Practice.

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Editorial.

BRITISH MEDICAL ASSOCIATION, SIXTY-FIFTH ANNUAL MEETING, MONTREAL, 1897.

The Montreal branch of the British Medical Association is deserving of the many congratulations extended to it for the admirable manner in which all the arrangements of this meeting were carried. While a few did the greater part of the work, the whole profession of Montreal rendered every aid possible in promoting the success of the meeting. The arrangements for the meetings of the sections were perfect, and this may be said of almost every item of the extended programme arranged for the gathering. The only real difficulty presenting itself to visitors and members was that of how to take it all in, whether at the section meetings, general meeting, or in regard to the abundant means of entertainment provided. Each section was well provided with interesting papers, and an opportunity was afforded of listening to men of wide reputation in each; but as the sectional work went on simultaneously, one could only do a limited amount of audience work, and either remain in one section and obtain some information or sip at the different fountains, and have no other remembrance than the fact of having been there and seen the faces of some of the lights of the profession. The Medical and Surgical sections seemed to be the favorite ones, while such sections as that of Pharmacology had but slim audiences.

It would seem that the day of drugs was fast vanishing into the past, if one can come to such a conclusion from the indifference manifested generally by medical men in regard to them. This is further exemplified in the want of interest shown in the excellent museum display. It was generally conceded by those who examined the collections, that at no past meeting was there such a full and varied exhibition of physicians' requisites; but there was no interest taken in it by the members and visitors, much to the regret and disappointment of the many exhibitors, who had at great expense and effort arranged to show the perfection of their productions in the line of drugs, apparatus, literature, etc.

This may be accounted for largely, probably from the fact that the building where the exhibit was held was in a different part of the city, instead of being in close proximity to the sectional meeting place, where members could have passed through on their way from one section to another; and doubtless the fact that firms keep their products so constantly before the members of the profession led many to conclude that but little that would be new would be seen.

We give two of the principal addresses, and for these we are indebted to the *Daily Journal*, which appeared each day of the meeting, and from which, owing to the good work done by the representatives of the *British Medical Journal*, a good résumé of all that occurred at the meeting could be obtained. It was remarkable how considerate the clerk of the weather and old probs were, as the finest spell of clear, bright, sunshiny typical Canadian weather that we have had during the summer began on the day of the meeting, and continued throughout and after; this was an important item in regard to the carrying out of the many out-door entertainments provided, and in giving our visitors from across the water a favorable opinion of our country, which has only too thoroughly been depicted, by many who should know better, as a land of snow and ice. Our city owes much to the generosity and beneficent hospitality of many of its wealthy citizens who assisted in the entertainment of the guests. The magnificent conversazione of Lord Strathcona and Mount Royal was one to be remembered, and must have impressed our visitors with the fact that we had grown beyond the log

cabin stage. This conversazione and that of McGill University could only be characterized as grand successes, and a credit to any city in the world. We hope in our next to give some of the other addresses and a résumé of the work done, as well as a description of the excellent displays at the museum.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

A dinner was given by the Society to Lord Lister on Tuesday evening, August 31st, which was largely attended by the members of the profession in Montreal, Canada and the United States. The chair was occupied by the President of the Society, Dr. Wilkins, who had on his right His Excellency the Governor-General. As the Conversazione at Laval University was to begin at 9 o'clock p.m., the time for the dinner was limited and but few speeches were made. After the toast of the Queen was honored, Dr. Wilkins proposed the health of His Excellency the Governor-General, Lord Aberdeen, who responded in his usual happy manner, expressing the pleasure it gave him to share with the members of the profession in Canada in offering this tribute of appreciation to the honorable guest of the evening.

Dr. Wilkins then in a few well-chosen remarks proposed the toast of Lord Lister, referring to the honor which had been conferred on the Medical profession in appointing one of its members to a place in the House of Lords, and the worthiness of the chosen recipient of this token of high esteem. He also referred to the great work done by Lord Lister for the profession and humanity in the inauguration of the methods of antiseptic surgery, which would for all time be known as Listerism, and by that term the name of the honorable guest of the evening would be cherished by generations of physicians and surgeons to come, as of one who had been instrumental by long, arduous, persistent labor, in introducing one of the greatest advances in the history of medicine. The following address was then read to Lord Lister, and an illuminated copy presented to him.

MY LORD—The members of the Montreal Medico-Chirurgical Society rejoice in the opportunity afforded them of congratulating your Lordship on having been selected by the best sovereign that ever graced a throne for the high dis-

tinction of the peerage. No one in the medical profession was more worthy. Through a long period of years you have, through methods, well nigh perfect, sought after truth with an intelligence and discernment given to few, with a patience and assiduity, and above all with a truthfulness and modesty that cannot but exert a salutary influence on all searchers for scientific truth, and with a success unsurpassed with history of modern medicine. These purely scientific researches of your earlier years were the foundation on which at a later period you built the magnificent structure of antisepsis which placed you on the scroll of fame with Harvey, Hunter, Jenner, Simpson, and Pasteur. In advancing scientific and practical surgery you have advanced every branch of the healing art, and by investigations which have lead you to the detection of the causes of disease you have brought us to a knowledge of the hinderances to the healing process. Henceforth, present and future generations may point to your Lordship with pride as the man who has brought relief from suffering in every quarter of the globe. May your years be many, and may they be filled to repletion with the happiness which is born of having done nobly and well.

Lord Lister was deeply affected, and replied feelingly in a brief address, thanking the Society for the compliment paid him, and stating his keen appreciation of it as coming from members of his own profession on another continent.

CANADIAN MEDICAL ASSOCIATION.

Annual Meeting, Aug. 30th, 1897, Montreal.

But little was attempted at this meeting other than the merest routine business and election of officers. Nothing definite was done in regard to the only point of interest attached to the meeting, that of a scheme for interprovincial registration. Ontario had failed to come to an agreement, while all the other provinces of the Dominion had acquiesced in the plan which had been outlined and under consideration during the year. We hope that before another year passes this desirable confederation will be accomplished. The following report of the meeting is from the *Daily Journal*:—

"The thirteenth annual meeting of the Canadian Medical Association was held in the Synod Hall, Montreal, on Monday, August 30th, when Dr. James Thorburn, of Toronto, resigned the Chair to the newly elected President, Dr. V. H. Moore, of Brockville. Dr. Roddick, Chairman of the Local

Committee, having welcomed the visitors to Montreal, Dr. Moore delivered his presidential address. He referred to the formation of the Association, just one hundred days after the formation of the Dominion, and to the election of Dr. Tupper, now Sir Charles Tupper, as the first president. He sketched the objects of the Association, which was established to promote the science of medicine, to unite the members of the medical profession in the Dominion of Canada, and to secure a uniform standard for medical education and for the license to practice in the Dominion. While the Association had been successful in attaining the two objects first named, the third has not yet been reached. Under the British North America Act educational matters were placed under the control of the Legislatures of the Provinces which passed Acts providing for the formation and election of a Medical Council in each province. In these Councils was vested the control of medical education, and the right to grant licenses to practice. Diversities in the requirements of the Councils in the different provinces thus arose, and at the present day there was nothing of more importance to the medical profession in Canada than the establishment of uniformity in medical legislation. The medical profession in Canada was now very nearly of one mind on this subject, and was divided only upon points of minor importance. He hoped that a united effort would be made, and that the Medical Acts of the various provinces would be brought into harmony one with another. Inter-provincial registration would then be easy of attainment, and Canada might then turn to the mother country, and seek reciprocity with her, with every prospect that it would be obtained. Then any person who obtained a license to practice in any Canadian province would be free to practice his profession in any land over which floated the Union Jack. As it was, Canadian medical institutions required as high and, in some instances, a higher standard of preliminary education than was demanded in Great Britain. A four years' course, and in Ontario a five years' course was already required, and in two years' time the fifth year, which was to be spent in clinical and technical work, would be obligatory. Finally, the examinations for graduation and for the license to practice were well calculated to test the know-

ledge of candidates. Canadian medical colleges were well equipped, the teaching they gave was of the best, the practical instructions excellent, and the clinical opportunities plentiful. There were between sixty and seventy hospitals in Canada, and over forty in Ontario alone, while there were a dozen well-equipped Universities and a large number of collegiate institutes and well provided schools. In concluding his address Dr. Moore extended to the members of the British Medical Association a most cordial and sincere welcome. He trusted that they would not only derive advantage from the scientific discussions which would take place, and carry away a warm memory of the hospitality of Montreal, and of Canada at large, but would also gain a knowledge of the resources of Canada, and would learn to appreciate its free institutions and the enterprise and industry of its people. The President received a warm vote of thanks for his address, and after the transaction of some formal business, the Association proceeded to the consideration of a scheme of interprovincial registration. Dr. Walker for New Brunswick, Dr. Beausoleil for Quebec, Dr. Thornton for Manitoba, and Dr. McLeod for Prince Edward Island were able to announce that the scheme had been accepted by the provinces which they severally represented. At a meeting on Tuesday a report recommending the formulation of an agreement was adopted, and it was resolved that the Canadian Medical Association should meet next year in Quebec under the Presidency of Dr. Beausoleil. Dr. H. B. Small of Ottawa was elected treasurer, and Dr. F. N. G. Starr of Toronto was re-elected secretary.

"On Monday evening the Canadian Medical Association gave a smoking concert to the members of the British Medical Association; a full programme had been arranged, and was highly appreciated by the large number of guests present, who testified their gratitude to the gentlemen who had been at so much pains to provide a most agreeable evening by the applause which they accorded to the songs, recitations, etc."

THE AMERICAN PEDIATRIC SOCIETY.

The American Pediatric Society is making a collective investigation of infantile scurvy as occurring in North America, and earnestly requests the co-operation of physicians, through

their sending of reports of cases, whether these have already been published or not. No case will be used in such a way as to interfere with its subsequent publication by the observer. Blanks containing questions to be filled out will be furnished on application to any one of the committee. A final printed report of the investigation will be sent to those furnishing cases.

[Signed].

J. P. Crozer Griffith, M.D., *Chairman*, 123 S. 18th St., Phila.

William D. Booker, M.D., 853 Park Ave., Baltimore.

Charles G. Jennings, M.D., 457 Jefferson Ave., Detroit.

Augustus Caille, M.D., 753 Madison Ave., New York City.

J. Lovett Morse, M.D., 317 Marlboro St., Boston.

Committee.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Arrangements are now about completed for the meeting of the Association at Louisville on October 5-6-7-8, 1897. The different passenger associations have granted a round-trip rate of one and one-third fare on the certificate plan. The sessions will be held at the Liederkranz Hall, and the headquarters will be at the Louisville Hotel. The following are among those whose papers have been accepted:

J. B. Murphy, Chicago: "Address on Surgery."

J. V. Shoemaker, Philadelphia: "Address on Medicine."

I. A. Abt, Chicago: "The Nature of Croup following Measles."

J. C. Ayers, Cincinnati: "Further Observations in the Use of Hydrogen Dioxide in the Treatment of Blepharitis Marginalis."

W. F. Barclay, Pittsburgh: "Milk; Its Production and Uses."

J. F. Barnhill, Indianapolis: "Regarding Hypertrophied Faucial Tonsils."

J. M. Batten, Pittsburgh: "Report of Five Cases of Heart Disease."

J. K. Bauduy, St. Louis: "Some New Thoughts in the Treatment of Locomotor Ataxia."

A. C. Bernays, St. Louis: Paper.

A. F. Bock, St. Louis: "The Surgical Treatment of Basedow's Disease."

John Young Brown, St. Louis: "Some Remarks on Appendicitis."

Sanger Brown, Chicago: "Some Anomalous Conditions of the Spinal Cord, with Report of Cases."

Eug. G. Carpenter, Cleveland: "Posterior Radicular Neuritis."

W. Cheatham, Louisville: "Of what Assistance has the Serum Treatment of Diphtheria been to the General Practitioner."

Archibald Church, Chicago: "The Differential Diagnosis and Treatment of Cerebral Hemorrhage and Cerebral Softening."

J. W. Cokenower, Des Moines, Ia.: "Neurotic Deformities in Children."

A. H. Cordier, Kansas City: "Ectopic Pregnancy, Clinical and Pathologic Phases."

J. Homer Coulter, Chicago: Paper.

Ephraim Cutter, New York: "Beef—A War Paper."

Richard Deway, Wauwatosa, Wis.: "Some Cases of Insanity in Adolescence."

Arch Dixon, Henderson, Ky.: "To Drain or not to Drain."

Kennon Dunham, Cincinnati: "The Hypodermic Syringe and its Uses in Malaria."

C. Travis Drennan, Hot Springs, Ark.: "Report of a Case of Anesthesia Produced by Mercury, with Remarks."

Sherwood Dunn, Los Angeles: "Mothers and Daughters."

J. Rilus Eastman, Indianapolis: "Diagnosis by Inspection in the Urinary Tract."

A. R. Edwards, Chicago: "The Diagnosis of Abscess of the Liver based upon a Study of Twenty-five Cases."

Jos. Eichberg, Cincinnati: "Typhoid Fever Treated Without Cold Baths."

C. Fisch, St. Louis: "The Antitoxic and Bactericidal Properties of the Serum of Horses treated with Koch's New Tuberculin (T. R.).

F. R. Fry, St. Louis: "Pressure Symptoms After Head Injuries."

A. H. Goelet, New York: "The Surgical Treatment of Fibroid Tumors of the Uterus."

Spencer Graves, St. Louis: "Appendicitis."

H. Hatch, Quincy, Ill.: "Severe Injuries from Electricity, and What Best to Do."

A. G. Hobbs: "Mouth-Breathing in Children."

Discussion opened by Dr. H. W. Loeb.

B. W. Holliday, Cleveland: "The Civic Aspect and Therapy of Some of the Common Neuroses."

A. F. House, Cleveland: "Symptoms and Surgical Treatment of Perforated Intestinal Ulcers."

W. H. Humiston, Cleveland: "Cocaine Anesthesia in Perineorrhaphy."

C. C. Jacobs, Frostburg, Md.: "The Treatment of Obstructive Lesions of the Urinary Tract, Anterior to the Bladder, with Especial Reference to the Enlargement of the Prostate Gland."

A. C. Klebs, Chicago: Paper.

E. L. Larkins, Terre Haute, Ind.: "Appendicitis."

F. F. Lawrence, Columbus, O.: "Hysterectomy."

Elmer Lee, New York: "The Elimination of Empiricism in the Treatment of Pneumonia."

I. N. Love, St. Louis: "The Relations of the Secular Press to Medicine and the Public."

C. F. McGahan, Aiken, S.C.: "The Treatment of Pulmonary Phthisis"

A. H. Meisenbach, St. Louis: "A Plea for Early Operation in Cholelithiasis."

L. Harrison Mettler, Chicago: "Neuroses of Gout."

Robt. T. Morris, New York: Paper.

Harold N. Moyer, Chicago: Paper.

A. M. Owen, Evansville, Ind.: "Cathartics and Constipation."

A. J. Ochsner, Chicago: "Treatment of Hernia in Old Men."

Curran Pope, Louisville, Ky.: "Sanatoriums a Necessary Factor in the Treatment of Chronic Diseases."

Joseph Price, Philadelphia: Paper.

J. Punton, Kansas City: "The Growing Needs of Medical Political Organization."

D. C. Ramsey, Mt. Vernon, Ind.: "Municipal Sanitation of Tuberculosis."

A. Ravogli, Cincinnati: "Tuberculin in Dermatology."

B. Merrill Rickets, Cincinnati: "Abdominal Incision for Ascites."

Byron Robinson, Chicago: "The Classification of Peritonitis."

Enno Sander, St. Louis: "The Carlsbad Springs of the United States of North America."

E. W. Saunders, St. Louis: "Therapeutic Properties of Infant Foods."

E. J. Senn, Chicago: "The Treatment of Suppurating Fistulous Tracts."

E. B. Smith, Detroit: "Experimental Surgery."

J. O. Stillson, Indianapolis: "Retro-bulbar Optic Neuritis."

L. Strauss, St. Louis: "Primary Tuberculosis of the Rectum witn Report of Cases."

J. A. Stucky, Lexington, Ky.: "Intratympanic Surgery in Chronic Suppuration."

J. B. Taulbee, Mt. Sterling, Ky.: "The Treatment of Wounds by the Open Method."

H. M. Thomas, Chicago: "Experimental Work on the Penetrability of Vaporized Medicaments in the Air Passages."

K. K. Wheelock, Fort Wayne, Ind.: "Plastic Operation for Reforming Interpalpebral Space."

Alex. C. Wiener, Chicago: "Congenital Dislocation of the Hip."

Frank Woodbury, Philadelphia: Paper.

Titles of Papers should be sent to Dr. Thomas Hunt Stucky, President, Louisville, or to Dr. H. W. Loeb, Secretary, St. Louis.

Book Reviews.

The Diseases of Women, a handbook for Students and Practitioners By J. Bland Sutton, F.R C.S. Eng., Surgeon to the Chelsea Hospital for Women; Assistant Surgeon Middlesex Hospital, London, and Arthur E. Giles, M.D., B.Sc. London; F.R.C.S. Edinburgh; Assistant Surgeon Chelsea Hospital for Women, London. With 115 illustrations. Philadelphia, W. B. Saunders, 925 Walnut street. 1897. Price $2.50; 436 pages.

In the modest preface the authors merely state that it has been their earnest desire to relate facts and describe methods belonging to the science and art of gynæcology, in a way that will be useful to students for examination purposes, and which will also enable them to practise this important department of surgery with advantage to their patients and with satisfaction to themselves. A careful perusal of the work shows that the authors have well succeeded in their task. Facts only are stated in the plainest language and most concise terms, no space being wasted in quoting mere theories. The first chapter of 17 pages speaks of the anatomy of the reproductive organs of women, the second of their physiology. Then comes a chapter on methods of examination. Chapters fourth and fifth are taken up with malformation, which is of least value, although they could hardly be left out entirely. Chapter sixth, on retention of menstrual products; chapter seventh, and four following chapters, on diseases of the vulva, are quite exhaustive. Chapters eleven, twelve and thirteen are devoted to diseases of the vagina; chapters fourteen to twenty-three treat of the uterus, those on deformities and displacements being very good. The operations of ventrofixation and Alexander's operation are described very clearly, and their indications and contra-indications are set forth impartially. The chapter on pessaries is very good. In discussing operations, the vaginal and abdominal routes are treated with much

fairness, and the opinions expressed by the authors are those held by the majority of leading gynæcologists of the present day. We fully agree with them in their condemnation of vaginal fixation and in their hearty approval of ventrofixation and Alexander's operation in suitable cases. In speaking of posterior colpotomy, or opening into the peritoneal cavity by the vagina, the authors highly commend it for breaking down adhesions or removing small ovarian tumors or prolapsed ovaries or a tubal pregnancy in its early stages. The limit of our space prevents a more extended notice of what we may safely say is one of the most satisfactory manuals which have appeared for some time. The type is large and plain, and the paper good, reflecting credit upon the mechanical department of the publishers, while the manner in which the subject matter is handled will add much to the already great reputation of Dr. Bland Sutton as well as to that of his less known collaborator, Dr. Arthur Giles.

Flint's Medical and Surgical Directory of the United States and Canada. Issued annually. 1897. Compiled by A. L. Chatterton. J. B. Flint & Co., 104 Fulton Street, New York. Price $6.00, delivered.

This is the first appearance of a book which is to be issued annually, containing the names and addresses, and where possible the date and college of graduation, of all physicians practising in the United States and Canada. There is also a digest of the medical laws of the States and Territories and Provinces of the United States and Canada; also a list of the Medical Colleges of those two countries, as well as a list of the sanitariums and private medical institutions. There are over one thousand large pages, and over one hundred thousand names of physicians are printed.

An immense amount of work must have been done to put this list in its present position.

The work will be useful to authors and journalists. The publishers are desirous of having sent to them corrections of any errors that may be observed as well as any new information in regard to names which should be included.

The book is kept standing in type, and changes are daily made as information is received.

The Menopause, a consideration of the phenomena which occurs to women at the close of the child-bearing period, with incidental allusions to their relationship to menstruation. Also, a particular consideration of the premature, especially the artificial menopause. By Andrew F. Currier, A.B., M.D., New York city. New York, D. Appleton & Company, 1897.

It is now some fifteen years since an original work on the menopause in the English language has appeared. Tilt's work upon the subject was long the only one of its kind, and was last seen in a reprint published in the United States about that time. That work may have been useful in its day, but it contained a great deal of statistical information from which, as it seems to the writer of the present work, unwarrantable deductions have been drawn. It also has handed down the hoary tradition, which has been current from time immemorial among the laity and the pro-

fession, that the menopause is an experience fraught with peril and difficulty. This and all similar teaching the author declares to be incorrect and unwarrantable in the light of his own experience and observation. Dr. Currier has the great advantage over Tilt, inasmuch that he has the immense amount of information obtained from thousands of cases of artificial menopause to draw upon. Dr. Currier points out some of the errors of the past on this subject. He says: if hæmorrhage were exhausting the patient, she was told that, if she could only pass the menopause, she would be secure, no matter whether the hæmorrhage were due to benign or malignant disease; and if the menopause were suspected, too often the doctor neglected to examine his patient and find out—with assistance, if unable alone—whether the disease were malignant or not, and whether there was good cause for thinking that the menopause could produce a cure.

He points out that the menopause causes as little discomfort in the majority of cases as puberty does. It is only the exceptional woman who has a hard time and comes to the doctor to tell him about it. He also devotes a chapter to showing that there is no relationship between cancer and the menopause, and he shows that the percentage of women who, during the menopause, are affected with cancer is ridiculously small. Concerning the question of the treatment of the ills of the menopause, the author hopes that his work will stimulate those who read it to a more careful and systematic investigation of these ills, and that, when surgical intervention is necessary, it will be resorted to instead of loading them down month after month with drugs.

Altogether, the book is a most timely one, and should be read by every practitioner of medicine who has ever been consulted for the so-called troubles of the natural menopause, while the abdominal surgeon will find much of interest with reference to the artificial menopause.

Annual of the Universal Medical Sciences and Analytical Index. A yearly report of the progress of the General Sanitary Sciences throughout the world. Edited by Charles E. Sajous, M.D., Paris, and seventy associate editors, assisted by over two hundred corresponding editors, collaborators and correspondents; illustrated with chromo-lithographs, engravings and maps. The F. A. Davis Company, Philadelphia, New York, Chicago; Australian Agency, Melbourne, Victoria.

The value of such a publication, as what is briefly called by the profession "Sajous' Annual," is beyond all question, for it collects and places in a permanent form, easy of reference, a digest of the medical thought of the year. In this busy age, rendered still more busy by the means by which business is facilitated.—how hard sometimes even to get time to read our weekly budget of medical literature. How hard, indeed, sometimes to preserve that literature for binding, and when bound, amid much dross, the precious metal is difficult to find. All this is overcome by this volume, and any special subject that is desired can in a very few seconds be found. Such a book ought to be found in the library of every medical man, and we are glad to know that the work has an excellent sale among the profession in Canada. We believe,

however, that, if its value and importance was fully understood, its sale, large as it is, would be very materially increased. We make this remark from practical experience, for we have been subscribers to it from the first year of its publication, and have become so used to it that we would find it difficult to be without it. The issue for 1896 consists of five volumes, and these volumes simply teem with valuable information, and arranged in much the same way as in previous issues. A few improvements have, however, been made. The length of the abstracts have been increased so as to make it possible to convey more fully the author's meaning, and to furnish the reader with sufficient data to enable him to utilize that author's suggestion to the best advantage. To carry this out, a re-arrangement of the entire text was necessary, and this additional labor necessitated an increase in the number of the editor's immediate assistants. Under their direction this idea was carried out, and the best work of the year prepared and submitted to the Associate Editor of the Department to which the article belonged. In this way the very best results were obtained, although it will necessitate a little more labor on the part of the reader who desires to inform himself as to the progress of the Medical Sciences as a whole. In the opinion of Dr. Sajous, and we heartily endorse his views, this class of readers is entitled to the greatest respect and encouragement. The professional reader who seeks to familiarize himself with every branch of medicine can alone be considered in these days as well informed. The epoch of absolute specialism belongs to the past. Every disease known represents but one link of a chain, and to totally ignore portions of that chain is to refuse the light its other links may afford, and limit one's capabilities. In practical medicine this is not permissible. A very important part of the work is the Analytical Index and Cyclopedia of treatment, which occupies a large portion of the fifth volume. It gives a summary of every practical article quoted in the annual proper, and of all the criticisms introduced by the Associate Editors—the active principle of the whole year's labors. The brevity of the excerpts gives them a most striking character—yet they combine most instructive material, and practically bring everything up to date. The type used is such as to give comfort to the majority of its readers, for which we believe they will be thankful.

Hyde on the Skin—New (4th) Edition. Just Ready.

A Practical Treatise on Diseases of the Skin. For the use of Students and Practitioners. By J. Nevins Hyde, A.M., M.D., Professor of Dermatology and Venereal Diseases in Rush Medical College, Chicago, and Frank H. Montgomery, M.D., Lecturer on Dermatology and Venereal Diseases, Rush Medical College, Chicago. New (fourth) edition. In one octavo volume of 815 pages, with 110 engravings and 12 full-page plates, 4 of which are colored. Cloth, $5.25; leather, $6.25. Lea Brothers & Co., Publishers, Philadelphia and New York, 1897.

Dr. Hyde's work on diseases of the skin was first published in 1883, and at once took a high position as a book of reference, and one which it has steadily maintained in the succeeding editions. The present (fourth) edition has been brought quite up to our

present state of knowledge on dermatological subjects. As in most branches of medicine, during late years, considerable strides are being made. In the 1893 edition thirty-five new diseases were considered. In the present edition almost every page has been changed, and new chapters have been added and old ones re-written on some twenty-five subjects, and critical corrections have been made or new paragraphs added in as many other subjects.

It contains some one hundred and ten engravings and twelve plates in colors and monochrome. Many of these illustrations are new to the volume. As stated in the last preface, the doctrines based upon the recent progress of dermatological science, which have not been completely established, have been for the most part briefly noted, while essential facts, those especially resting upon pathological and bacteriological research, have been set forth and, when practicable, considered in detail. Much material which existed in the preceding editions, and which no longer possesses any value, has been omitted. There are some eight hundred pages in the book, neatly bound in cloth or leather, the typographical work being entirely in keeping with the literary value of the work and the usual character of the output of the publishers.

The work opens with a general description of the anatomy and physiology of the skin, symptomatology, etiology, diagnosis, prognosis, therapeutics and classification. Then, in order, appears a minute consideration of the various affections of the skin, under the heads of disorders of glands, inflammations, hæmorrhages, hypertrophies, atrophies, new growths, neuroses, parasitic affections. In all, over three hundred and fifty diseases of the skin are described.

Symptoms, etiology, pathology and diagnosis are fully gone into in each affection, but where this work exceeds is in the detailed directions for treatment; all methods which the author has proved are fully described, as well as those of the leaders throughout the world in this specialty. Numerous formulæ abound, and minute explanations in regard to the best means and remedies to be adopted in every variety of the affection.

The work is adapted to be a thorough guide to the general practitioner in his management of this interesting class of affections; at the same time, it is sufficiently comprehensive to be a book of reference for the specialist, as well as a complete and epitomized text-book suitable to the wants of the student.

In every respect it is representative of the most modern aspects of dermatology, and one of the best books on the subject now available.

Manual of Static Electricity in X-Ray and Therapeutic Uses. By S. H. Monell, M.D. Founder and Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics and Roentgen Photography; Fellow of the New York Academy of Medicine. Illustrated. 614 pages, octavo, cloth, gilt. Price, $5 net; postage, 35 cents. William Beverley Harison, Publisher, 3 & 5 W. 18th Street, New York, 1897.

The author has presented us in this book with a complete résumé of all that is known in regard to static electricity, and more

especially its therapeutic applications, a subject about which but little is known compared with the Faradic or Galvanic forms. The thoroughness of the work done may be judged from the extent of pages which the information covers—over six hundred—and each article gives evidence of being as brief and to the point as is possible with an intelligent presentation.

The book is largely a therapeutic treatise. There are two parts. In its first of forty chapters, six chapters are devoted to the Holtz apparatus, its permanency in therapeutics, opinions in regard to it, the care of it, and methods of using it, its therapeutic action, precautions to be observed, how to regulate the strength of a static application and other hints. Some sixty-four pages are devoted to X-Ray methods, a description of the apparatus required and how to use them; the Holtz apparatus is considered preferable for surgical and medical X-Ray work, its use in diagnosis and medico-legal cases. Chapter ten describes how to work X-Rays photography. Then X-Ray effects in general are discussed; explanation of the injurious effects sometimes observed. It is explained that dermatitis is impossible in X-Ray work with the Holtz apparatus and convective methods. The therapeutic properties of the X-Rays are referred to, and everything relative to this interesting and modern subject is here discussed and made plain.

Chapter twelve is devoted to Electro Physiology, the actions of static electricity are described, its sedative effects and action on the various functions of the body and power of regulating them; its want of action in health is pointed out, and its modifying influence on most of the functions of the body; how it brings about the changes is here made clear and the wide range of its action learned and the modifying influence of concomitant conditions.

The therapeutics of static electricity is very fully dwelt upon, and one is struck with the wide range of morbid conditions in which it is recommended, and with remarkable results in many instances. He urges a careful attention to the proper care of the apparatus as being a very important point in securing good results. The first group of derangements considered is that of rheumatic diseases; here, as in all cases, minute directions are given for all that is to be done, how to seat the patient, where to place the electrodes, when to vary its intensity, length of seance, and the modifications to be observed in the various forms of the disease. Numerous illustrative cases are interspersed throughout the text. The author regards this method of treatment as one of the most successful in all this class of affections, including rheumatoid arthritis, gonorrhœal rheumatism, chronic gout and the uric acid diathesis; it increases the elimination of urea and carbonic acid, and reduces in corresponding amount the uric acid in the system by increasing the consumption of oxygen and making its metabolic changes more complete. Its great field is shown to be in the various forms of neuralgias and neuritis, which it will, it is claimed, relieve in all cases where a neoplasm or severe local pathological condition is not the cause, or when a general ailment such as diabetes is the cause. It is gratifying to learn that such excellent results as are here indicated can be obtained in such rebellious cases as sciatica, the neurasthenias, chronic chorea, hysteria and migraine. The chapter on pain is very instructive, showing the many forms which can be relieved, and

its advantages over medical anodynes in incurable forms where it exerts a palliative action.

Chapter twenty-seven shows that static electricity has a wide range of usefulness in skin affections in combination with other appropriate treatment.

Among other affections in which it is recommended are chronic and subacute inflammatory conditions within the thorax, morbid mental states, chronic cachexias, impaired voice of singers, debility of old age and chronic invalidism, paralytic diseases, etc. The use of static electricity in gynæcology is fully discussed in chapter forty, and it is shown that a variety of abnormal conditions can be relieved by its use. Some one hundred and fifty pages at the end of the book are devoted to historical therapeutics, showing what has been done in the past with this agent.

The book is one of great interest, and is replete with the information needed by anyone desiring to add this somewhat discarded therapeutic agent to his *armamentarium*. The author might be regarded as over enthusiastic from the sanguine character of the work throughout, in regard to the wide range of usefulness of static electricity, and the wonderful superiority of the Holtz machine; but from such a practical observer and teacher as Dr. Monell, one must accept his results as from one qualified to dictate; and if skeptics or others desire to prove the manifold advantages of static electricity in the large range of affections in which it is recommended, no better preparation is available than the perusal and study of this excellent and comprehensive work.

International Clinics. A quarterly of clinical lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and specially prepared articles on treatment. By Professors and Lecturers in the leading Medical Colleges of the United States, Germany, Austria, France, Great Britain, and Canada. Edited by Judson Daland, M.D. (Univ. of Penna.), Philadelphia, Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania; Assistant Physician to the Hospital of the University of Pennsylvania; Professor of Diseases of the Chest in the Philadelphia Polyclinic; Fellow of the College of Physicians of Philadelphia. J. Mitchell Bruce, M.D., F.R.C.P., London, England, Physician to and Lecturer on the Principles and Practice of Medicine in the Charing Cross Hospital. David W. Finlay, M.D., F.R.C.P. Aberdeen, Scotland, Professor of Practice of Medicine in the University of Aberdeen; Physician to and Lecturer on Clinical Medicine in the Aberdeen Royal Infirmary; Consulting Physician to the Royal Hospital for Diseases of the Chest, London. Volumes I and II. Seventh Series. 1897. Cloth, $3.00 per volume; half leather $3.25. Philadelphia: J. B. Lippincott Company, 1897. Dominion Agent, Chas. Roberts, 593a Cadieux St., Montreal.

We are in receipt of volumes I. and II., seventh series, International Clinics.

This publication, as most of our readers are doubtless aware, is issued quarterly in a neatly bound volume, in cloth or half leather, of

some three hundred and fifty pages. This is the seventh year of its existence. The work has been a success since the beginning, and continues to increase in popularity, as the scope of its work and aim of its promoters is better understood. It seeks to place before its readers the most recent clinical teachings of the leading clinicians in England, Ireland and Scotland and the United States and Canada.

The contents of each volume are considered under the headings of treatment, medicine, neurology, surgery, gynæcology and obstetrics, ophthalmology, laryngology, pharyngology, rhinology, otology and dermatology.

In the two last volumes we notice among the various authors of contributions the names of J. M. Baldy, M.D., Simon Baruch, M.D., J. M. Dacosta, M.D., LL.D., Sir Dyce Duckworth, M.D., LL.D., F.R.C.P., G. Hunter Mackenzie, M.D., T. McCall Anderson, M.D., Byron Bramwell, M D., F.R.C.P. (Ed.). F.R.S. (Edin.); C. H. Burnett, A.M., M.D., H. A. Hare, M.D, Thos. J. Mays, A.M., M.D., C. W. Mansell Moullin, M.D., Robert Saundby, M.D., F.R.C.P., J. William White, M.D., etc. These names indicate the character of the articles which are published, and it can be said that most of the contributions are interesting epitomes of the subjects discussed, given in terse, choice and appropriate language, rendering their perusal anything but a task, and conveying the latest thoughts of the writer as well as that of the recent authorities on the subject. Of special interest are the articles by Thomas J. Mays, A.M, M.D., on hæmoptysis and its treatment. The practical application of hydrotherapy, by Simon Baruch, M.D. Relations of optic nerve atrophy to general medicine, by Casey A. Wood, M.D. The management of uterine hæmorrhage by C. S. Bacon. M.D. The mastoid operations by Seth Scott Bishop, M.D., LL.D. The sequelæ of Iritis by S. D. Resley, M.D. Abdominal palpation in pregnancy by A. H. Freeland Barbour, M.D., F.R.C.P. Evacuation of the urine in prostatic enlargement by C. W. Mansell Moullin, M.D. The palliative treatment of diseases of the rectum by Joseph M. Matthews, M.D., and many others. The article on Rules Governing the Treatment of Appendicitis by J. William White is a masterpiece and a paper of great value, embodying the very best advice on this live subject.

Those who can keep the volumes of this work on their library shelves will certainly have for reference a treasure store house of information of inestimable value.

A System of Medicine. By many writers, edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., LL.D., F.R.C.P., F.R.S, F.L.S, F.S.A., Regius Professor of Physic in the University of Cambridge, Fellow of Gonville and Caius College. Volume II. MacMillan & Co., Limited, London. The MacMillan Co., New York. Price 25 shillings. 1897.

Since the issue of the first volume of this System, the volume on gynæcology has been published, and was recently reviewed in our pages. This second volume of medicine proper was somewhat delayed, owing to the fact that the report of the Commission on Vaccination had not appeared, and the writers of the articles on vaccination thought it better to delay their articles for the information to be gleaned from it.

This volume contains the articles on infectious diseases of chronic course, such as tuberculosis and leprosy; diseases of uncertain bacteriology, such as measles, scarlatina, smallpox, yellow fever, typhoid and some sixteen other affections; infectious diseases communicable from animals to man, glanders, anthrax, rabies, etc. Diseases due to protozoa, malaria, dysentery, etc.; the intoxications, such as poisoning by food, snake poison, alcoholism, etc.; internal parasites, and some addenda.

The article on tuberculosis by Sidney Martin is of a general nature. The lesions produced by the bacillus tuberculosis and their retrogressive changes are described, then the lesions of the different parts of the body. In the pathology of tuberculosis the role of the bacillus as the cause is pointed out; the modes of infection are intimated, and extensive reference is made to various inoculation, feeding and inhalation experiments. The infectiousness of sputum, milk and meat is considered, and immunity is explained. A general description is given of the symptoms produced, but the special symptoms and physical signs and other details of the different varieties are reserved for the articles on the different organs of the body in succeeding volumes.

The subject of actinomycosis receives more than usual attention at the hands of Theodore Dyke Acland, the history of its recognition is given in detail, a photogravure of a section of liver affected with the disease illustrates the article. Its minute structure, anatomical distributions, invasion, method by which the disease spreads, biological position, comparative biology and pathology, and its clinical course, prognosis and treatment, form the heading of the divisions of this interesting article, which represents a large amount of labor, judging from the bibliography and reference list at the end.

The article on whooping cough by E. Stace Smith is a well written and instructive résumé of this subject. Its symptoms are vividly described, and its complications and sequelæ dwelt on at length, and an exceedingly sensible and scientific line of treatment is recommended. Jonathan Hutchinson's article on constitutional syphilis is a masterly presentation of this subject, given in classical language by one who has for many years given this subject special consideration. The subject, like tuberculosis, is considered in a general way, and all the present known facts are compressed into a comparatively short article of thirty pages, in such a manner as to be very interesting reading and replete with everything pertaining to this common affection. The article on vaccinia, occupying one hundred and thirty pages is one of the most exhaustive in the volume. It is considered in three sections the first on vaccinia in man, a clinical study, is by T. D. Acland; the second on the pathology of vaccinia by S. M. Copeman; the third on vaccination as a branch of preventive medicine, by Ernest Hart. The subject is very fully considered from every point of view, the various reports and appendices issued by the Royal Commission on vaccination between 1889 and 1896 being frequently referred to. An immense amount of statistical matter has been boiled down and the results given. A strong preference is given for glycerinated vaccine, stored in capillary tubes; it is said that mostly all the saprophytic and pathogenic bacteria which may contaminate the lymph are destroyed after a few

weeks. This article is undoubtedly the most complete presentation of the subject now available, and is worth the cost of the volume to anyone wishing to be abreast on the subject. Articles which are authoritative references, and will remain the best available for some time to come, are those on Malaria by Wm. Osler, Dysentery by Andrew Davidson, Amœbic Dysentery by Henri A. Lafleur, Alcoholism by H. D. Rolliston, Rabies by German Sims Woodhead, V. Beriberi by Patrick Manson. The articles on internal parasites are complete and well illustrated; and a unique and exhaustive article at the end by J. C. Verco and E. C. Stirling on hydatid disease is the best presentation of this subject hitherto available. This volume maintains fully the high standard attained by the first and aimed at by the workers for this System.

A Text-Book of Diseases of Women. By Charles B. Penrose, M.D., Ph.D., Professor of Gynæcology in the University of Penn.; Surgeon to the Gynecean, Philadelphia. Illustrated. Philadelphia. W. B. Saunders, 925 Walnut street. 1897. $3.50 net.

This book has been written for the medical student. The Author has presented the best teaching of modern gynæcology, instruments by antiquated theories, or methods of treatment. He has in most instances recommended but one plan of treatment for each disease, hoping in this way to avoid confusing the student or physician who consults the book for practical guidance. Another praiseworthy feature is the omitting of all facts of anatomy, physiology and biology which may be found in all the general text-books upon these subjects.

A careful perusal of several chapters shows that the Author possesses to a great degree the gift of explaining clearly with the fewest words, while the engravings are so admirably selected that the dullest student cannot fail to understand. In speaking of methods of examination, it says, that no examination of a woman is thorough unless a careful visual examination of the external genitals has been made—not only because the discovery of discharges and of lesions may throw light upon the conditions found higher up in the pelvis, but because the examiner protects himself. A great many unfortunate cases of syphilis have been acquired by physicians from a primary sore upon the examining finger. Another point of importance is the necessity for absolute cleanliness on the part of the physician; we have known many who, while very scrupulous, washing their hands after examination, never thought of doing so before one.

The chapter on gonorrhœa in women is specially good, also a valuable chapter on the effect of the removal of the uterine appendages.

One of the best chapters in the book is one on the technique of gynæcological operations, as well as one on the after-treatment of coeliotomy.

In regard to the engravings we notice, what we think is an improvement, that is, that the names, the various tumors and organs are plainly written on the pictures themselves. The paper is extra heavy and the type extra large. We have no doubt that it will prove of great value to the large number of students—not only in

Philadelphia, for whom it was especially written, but that it will be gladly welcomed in many other centres of medical education. Considering that Dr. Penrose, although a comparatively young man, has succeeded to the position formerly occupied with so much distinction by the late and great William Goodell, is a sufficient guarantee of his ability to fill his position in a satisfactory manner.

Tuberculosis of the Genito-Urinary Organs—Male and Female. By N. Senn, M.D., Ph.D., LL.D., Professor of Practice of Surgery and Clinical Surgery, Rush Medical College; Attending Surgeon to Presbyterian Hospital; Surgeon-in-chief St Joseph's Hospital, Chicago. Illustrated. W. B. Saunders, 925 Walnut St., Philadelphia, Pa.

This monograph of over three hundred pages discusses a subject which is of extreme interest to both physician and surgeon, and being the work of an author and teacher whose work and writings command the greatest respect, it will be received as a welcome addition to our knowledge on a form of disease often only recognized in its later stages.

There are ten sections describing the disease as it affects the male genital organs: penis, urethra, spermatic cord, seminal vesicles, prostate, testicles and epididymis; the female organs of generation: vulva, vagina, uterus, Fallopian tubes and ovary, and lastly of the bladder and kidney. The scanty literature on the subject and the unsettled condition of the pathology of this variety of tuberculosis in the male genital organs is pointed out. The statistics of this variety are given and illustrative cases described. The portion on the testicles and epididymis is illustrated with several wood cuts and one colored plate; the treatment is mainly by castration, curetting or cauterization.

In regard to the affection as it occurs in the female organs of generation, the same paucity of literature on the subject is apparent, and the greater difficulty in making a diagnosis in the female is pointed out, as well as the fact that it is often not recognized and mistaken for some other affection such as carcinoma.

The possibility of infection as a result of sexual intercourse adds to the interest and importance of this subject.

The affection is shown to be caused by either primary infection, the bacilli being deposited from the blood, or secondary to other adjacent foci. The importance of making sections for microscopical examinations of portions of suspected spots of infection or by examining scrapings or the secretions for bacilli is pointed out. The treatment by injections of 10 per cent. iodoform glycerine emulsion is recommended, and a cut of Senn's syringe for the purpose given.

The frequency of this disease in the Fallopian tube is referred to, and the special opportunities for the study of this variety owing to the common gynæcological operation of removal of the tubes. Two beautiful colored plates show the typical appearance of this condition.

More appears to be known in regard to tuberculosis of the kidneys, owing to the light thrown by bacteriological examination of the urine, catheterization of the ureters and the employment of the cystoscope, by means of which it is now more easy to distinguish it from renal calculus, tumor, catarrhal pyelitis and suppurative

pyelonephritis, tumor, stone and inflammatory affections of the bladder.

A very minute description is given of the symptoms and means of diagnosis of these affections, and the peculiarities of the urine, which point to its presence and what is to be learned by palpation, percussion, rectal insufflation, rectal palpation, catheterization of the ureters, cystoscopy, inoculative experiments, etc. The medical treatment of this affection as might be expected is not of much avail. Should the biocidal action of Koch's new tuberculin stand the test of further observation, these cases would probably be spared the more severe treatment of nephrotomy and nephrectomy, which are now the only rational curative resources.

The book is a most interesting contribution to our modern medical literature, and undoubtedly fills a niche not hitherto occupied, and in a pleasing, attractive manner reduces to a more comprehensive grasp the scattered fragments of knowledge on this abstruse subject.

A System of Practical Medicine. By American Authors. Edited by Alfred Lee Loomis, M.D., late Professor of Pathology and Practical Medicine in the New York University; and William Gilman Thompson, M.D., Professor of Materia Medica, Therapeutics and Clinical Medicine in the New York University. To be completed in four imperial octavo volumes, containing from 900 to 1000 pages each, fully illustrated in colors and in black. Vol. I. Infectious Diseases. Just Ready. Vol. II. Diseases of the Respiratory and Circulatory Systems, and of the Blood, Kidneys and Genito-Urinary Organs. Just Ready. Vol. III. Diseases of the Digestive System, of the Liver, Spleen, Pancreas and other Glands. Gout, Rheumatism, Diabetes, and other Constitutional Diseases. In Press. Vol. IV. Diseases of the Nervous System and of the Muscles. Diseases of doubtful origin, Insolation, Addison's Disease, etc. In active preparation. For sale by subscription. Per volume: cloth, $5.00; leather, $6.00; half Morocco, $7.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

The second volume of this System has appeared in a comparatively brief period after the first, indicating commendable activity on the part of the writers and publishers.

It considers diseases of the respiratory system, diseases of the circulatory system and the mediastinum, diseases of the blood, diseases of the kidneys, diseases of the bladder and prostate gland.

The contributors to this volume are Richard C. Cabot, Thomas D. Coleman, Warren Coleman, Ethridge Cutler, I. N. Danforth, Reginald H. Fitz, William Whitworth Gannett, Irving S. Haynes, Alfred Lee Loomis, Henry P. Loomis, A. Lawrence Mason, Charles Quimby, Frederick C. Shattuck, S. Edwin Solly, James Tyson, Herbert Whitney and James T. Whittaker. The articles consigned to each writer represent the subject upon which the latter are presumed to be most conversant with, and hence each subject is brought quite up to date in every respect, and may be regarded as an authoritative presentation of all the known facts.

Diseases of the nose and throat are first taken up, and given as full consideration as compatible with the character of the work, with ample details for treatment.

Before the various pulmonary diseases are considered, a very full description is given of the methods of examination to be adopted in chest affections, and a full résumé of the various items of physical diagnosis as applied to the pulmonary organs, a mastery of which will make recognition of the abnormal conditions to be met with comparatively easy. We know of no better presentation of this subject than is to be found here, and the same may be said in regard to the section on the means of diagnosis of diseases of the circulatory system.

The method of examining sputum is pointed out—macroscopic, microscopic, bacteriological and chemical.

The various diseases of the respiratory system are then taken up, and are dealt with minutely; throughout each article one meets with quotations and references from the most recent writers and their works, evidencing a thoroughly modern presentation of our present ascertained facts.

The affections of the heart are accorded a similar treatment, and a careful study of what is here presented will make any physician completely *au fait* with this interesting class of affections. In the diagnosis of pericarditis one would like to see mention made of the new points in diagnosis pointed out by Ewart, such as the posterior pericardial patch of dullness, the tubular breathing below the right mamma and the posterior pericardial patch of tubular breathing.

The treatment of the affection of the lungs and heart is very fully described, and one need not go beyond the directions given to be able to cope in accordance with our most recent ideas with these forms of disease.

The article on arterio-sclerosis is illustrated by some beautiful colored plates as well as wood cuts, and this subject is considered very exhaustively, making one of the most interesting chapters in the book. The articles on aneurism, thrombosis and embolism are also similarly illustrated and exceedingly instructive. A very interesting section is that on diseases of the blood, by Frederick C. Shattuck, M.D., and Richard C. Cabot, M.D. The valuable addition to our means of diagnosis of proper examination of the blood has assumed a somewhat more important place than formerly, although it is stated that a reaction against it has already risen in Germany, on account of the fact that there are only a few diseases in which this method is absolutely necessary to establish a diagnosis; but it undoubtedly gives valuable diagnostic aid in many cases, and helps in distinguishing the stages of some affections, as well as affording information in regard to the degree of severity of some diseases.

The methods of the clinical examination of the blood are then fully described, how to prepare and examine the fresh blood, estimation of the corpuscles and hæmoglobin, the methods of using the hæmocytometer for the counting of red and white corpuscles, the hæmatocrit and hæmatometer, the examination of fixed and stained blood films, etc. A beautiful plate in colors exemplifies the normal varieties of leucocytes in the blood, also that of lymphatic leucæmia; two other plates are to be found illustrating the articles on anæmia and leucæmia.

The final chapters discuss diseases of the kidneys, bladder and prostate gland and the abnormalities of the urine; the latter article

is well illustrated, and gives the methods of chemical analysis and the microscopical examination of the urine. The final article on uræmia is quite up to date, the various theories are fully considered, the urea theory, hydraemia, Frerich's ammonæmia theory, and Feltz and Ritter's potash theory, and the recent work of Bouchard is freely drawn on.

This volume fully maintains the position aimed at by the promoters of this work of becoming a representative system of modern medicine by American authors.

Clouston on Mental Diseases. New edition. Clinical Lectures on Mental Diseases, by Thomas S. Clouston, M.D., F.R.C.P.E., Lecturer on Mental Diseases in the University of Edinburgh. Fourth edition, thoroughly revised. Octavo 736 pages, 15 full page plates. Cloth $4.75, with Folsom's Laws of the United States on the Custody of the Insane ($1.50),—$5.50 for the two works. Lea Brothers & Co., Philadelphia and New York, 1897.

There is no class of diseases in which the general practitioner is as a rule so deficient in as those pertaining to the mind. The great variation in the forms of mental disease, and the fact that all forms are most amenable to treatment if diagnosis is early and the appropriate management applied, render it very necessary that the general practitioner, who usually has the first opportunity of seeing the cases, should be well informed in regard to mental diseases.

This work,while containing sufficient detail for the specialist, is especially prepared to be a guide to the general practitioner, who, as we have hinted,should be able to recognize every variety of mental aberration—usually only a manifestation of some brain degeneration in its first manifestation—in order to fulfil his full duty towards suffering humanity. This work is arranged in a series of lectures, each given as if a patient was present for illustration and carrying out the clinical method of teaching,the most attractive and profitable to the reader. The book contains some eight hundred pages, and the subject is included in twenty lectures. At the beginning of each lecture—which rather embraces the entire subject than what could be given in the time usually given to an ordinary lecture—is a résumé of all that is contained in the section ; then follows a detailed description of the form of disease, first the pysiological varieties of the mental state under consideration, then the true psychopathies with all their varieties ; the character of the affection and of its different stages ; the differential diagnosis, prevalence, prognosis, and finally the treatment.

The opening lecture is one of much interest to the student and practitioner, it points out the method of studying a case clinically, and what points are to be considered in making a diagnosis, such as the temperament, and diathesis, education, heredity, and the organic unity of the body in which one organ is allied with the manifestation of all the others, especially the association of the brain functions and mental conditions with the conditions of the organs generally, then the influence of all conditions associated with the reproductive organ upon mental states. What questions to ask and the mental attitude of the examiner are pointed out.

In regard to classification, Dr. Clouston adopts as the best

now available—although as yet unscientific and incomplete—the symptomatological basis, and includes all the mental diseases under the eight heads of; state of mental depression; state of mental exaltation; state of regularly alternating mental conditions; state of fixed and limited delusions; state of mental enfeeblement; state of mental stupor; state of defective inhibition and the insane diathesis. The clinical classification based on causes and the activities of the body other than mental, and which endeavors to take into consideration the whole natural history of the disease is referred. And he points out that a perfect classification will be based on a pathological basis, which will come in the future when the physiological and pathological conditions of the brain are thoroughly understood.

A very instructive table is given, in which the most important anatomical, physiological, psychological, and pathological characteristics of the brain are considered, and the influence of them on mental conditions.

He finally gives fifteen rules for the clinical examination of a patient, which are worthy of being closely studied and mastered. In the descriptions of the various diseases every variety is illustrated by case reports, the perusal of which makes one familiar with the peculiarities of this class of patient, and impresses lessons upon the reader in such a way as to be lasting.

In regard to treatment, which becomes more intelligible when preceded by a full minute description of the affection and its underlying pathological states and causation as we find here; full details are given in regard to medication, health resorts and their mineral waters, diet and regimen, most favorable environments, mental attitude of attendants, and tact in their management, dangers to be on the alert for, such as suicide, etc., the advisability of asylum or home treatment, nursing required, the use of hypnotics and sedatives or stimulants, baths, etc.

Lecture nineteen is one of great interest on the medico-legal and medico-social duties of medical men in relation to mental diseases, it gives suggestions in regard to cases which he should advise treated at home, the degree of control considered necessary, and their responsibility in regard to business transactions, the signing of medical certificates, what to observe in order to arrive at a conclusion and how to describe his condition; the responsibility of a patient in regard to crime, and his responsibility in regard to making a will, making contracts, marriage, etc., how to detect feigned insanity, how to advise in regard to eligibility for marriage, the education of children with neurotic tendencies, etc.

A summary of the general treatment and management of insanity looked at as a whole is given in the twentieth lecture. At the end is a collection of colored and other plates illustrative of various portions of the text.

This book is one of the most complete and authoritative of its kind published, and should be on the shelf of every general practitioner, not only for occasional reference, but to be carefully studied more especially by practitioners who have not had the advantage of a course at college; and for the student no better text book could be recommended.

Clinical Lessons on Nervous Diseases. By S. Weir Mitchell, M.D., LL.D. Edin. Member of the National Academy of Sciences; Honorary Fellow of the Royal Medico-Chirurgical Society of London. Handsome 12mo., 299 pages, with illustrations and two colored plates. Cloth, $2.50. Lea Brothers & Co., Publishers. Philadelphia and New York, 1897.

The author of this volume is one of the most celebrated of the workers in neurology in the United States, where so much good work has been done in regard to this class of diseases.

There are eighteen chapters in this neatly bound book of two hundred and ninety pages, each considering some interesting variety of nervous disease, or combination of diseases. The method of treatment in these articles is in the form of a clinical lecture. In the first article on hysteria, psychic anæsthesia for touch, psychic anosmia, psychic blindness, the report of the case is first given in detail, in regard to personal and family history; and the *status praesens* is then carefully investigated one point after another, according to the method of neurologists, then the case is summed up, and its particuliar character pointed out, and inferences drawn.

In this way each subject is treated, illustrated often with several cases. Among the most interesting chapters are those on some disorders of sleep, choreoid movements in an adult male, motor ataxia in a child of three years, the treatment of sciatica, erythrometalgia, pseudocyesis, and hysterical contractures. The cases are chosen from among the more interesting of the cases in his special hospital, and are each typical of the class it represents. These lessons are of equal interest to the specialist and general practitioner. The latter in the perusal of the cases becomes initiated into the methods adopted by this well-known teacher in studying and examining this class of cases. It is an exceedingly interesting and instructive book, and well worthy of a place in every physician's library.

A Handbook of Medical Climatology. Embodying its Principles and Therapeutic Application, with Scientific Data of the Chief Health Resorts of the World. By S. Edwin Solly, M.D., M.R.C.S., late President of the American Climatological Association. In one octavo volume of 470 pages, with engravings and colored plates. Cloth, $4.00. Lea Brothers & Co., Publishers, Philadelphia and New York, 1897.

Other than brief references to the subject in text-books on the practice of medicine and articles in medical journals, the practitioner has had no authentic source where full information could be obtained in regard to climate and the circumstances and conditions which justified him in sending any given case away from home for the change in his climatic conditions, which would prove of benefit. Hence, a special work on this subject, by one who has spent a lifetime in making observations, and collating facts from every available source, is one to be welcomed by the profession. The author believes that it is possible to prescribe a climate with as much precision as a drug, and with far greater effect in appropriate cases.

At the present time, when physicians depend less on the action of drugs than on the skillful management of their cases on general

principles, and where dependence is placed rather on dieting, exercise, rational hygienic care, and nature's remedies of heat, cold, light, water and electricity, a knowledge of what can be accomplished by change of air, and its allied accompaniments, is particularly desirable.

Although the work is published in the United States, and the result of the labor of one of its citizens, it treats of the climates of the world. And Canadians can judge of the extent of the work done in Canada, and therefore what is still undone when we find here some six pages in a book of four hundred and seventy devoted to this country, and purporting to be about all that is definitely known in regard to a country which nearly equals in extent the whole of Europe, and within whose boundaries the possibilities from a health resort point of view are varied, and likely to assume great importance in certain classes of abnormal conditions, when their merits are more closely investigated. The publication of a work of this kind will undoubtedly stimulate workers in various parts of the country, and point out how to make observations which will be of use in giving definite information in regard to the virtues of our temperate, bracing climate. As yet in this presentation little but mention is made of the possibilities of the Rocky and Laurentian ranges of mountains, the Muskoka Lake district, Caledonia Springs, the Ste. Agathe district, St. Leon Springs, Dalhousie, N.B., and the region of the great lakes.

The subject matter is divided into three sections. In the first the principles of medical climatology are dealt with, and its relations to general climatology defined. Climate is made up of six elements —earth, air, water, sunlight, temperature and electricity, acting upon each other, producing modifications in various proportions. Medical climatology is compared to a pyramid made up of nine parts. The base, or climatics, includes portions of meteorology, geography, geology, botany and zoology; then physiology, the general and particular influences of climate upon the human organism; then ethnology, or the distinction of race; geographical pathology or the distribution of disease; classification of climates, general climatotherapy; individual climatotherapy; study of special climates and regions, and finally the individual case and its appropriate climate. These subjects are taken up seriatum, making a section of exceedingly interesting and instructive reading.

In the second section is discussed the ailments to which climatic treatment is applicable, and the way and how climatic meteorological factors influence them, each group of diseases being considered in turn. In this respect phthisis receives a large consideration, and what is said of it is applicable to other diseases.

The idea the author endeavors to convey is that there is no particular climate to be recommended for particular diseases, but the different sections of the book are to be studied together, and a climate chosen for an invalid, upon rational grounds, employing scientific data as a guide rather than the empirical, and in this way putting medical climatology abreast of the other branches of scientific medicine.

The third section takes up about two-thirds of the book, and describes the various health resorts of the world, and especially of America. The author states that one can estimate approximately

the general meteorology of a place where no reliable data is obtainable, by taking into consideration the elevation, latitude, distance from the ocean, proximity of large bodies of water or mountains, aspect, configuration, and the nature of the soil and vegetation. Humidity is the most important factor. Weather, which consists of the individual atmospheric conditions from day to day, is different from climate, which refers to the average values of the current weather conditions with their ranges in a given locality in connection with the above mentioned points to be observed, and points out that the latter as a whole may be beneficial, even where the weather is unpleasant and may be adverse if precautions are not taken. The work abounds in illustrative maps colored, and many showing the mountains in relief, while numerous meteorological tables, analyses of mineral waters, and numerical notes, attest to the vast amount of labor expended by the author in bringing the work to its present complete and comprehensive state.

This interesting, useful, and unique work should be in the possession of every practising physician.

Transactions of the New York Academy of Medicine.

Instituted 1847. Second series, Vol. XI, for 1894. John S. Brownne, Librarian, 17 West 43rd street, New York.

The volume covers nearly seven hundred pages. There is a list of the officers of the Academy, the committee and officers of sections, and a list of all the presidents of the Academy from its organization, and at the end a list of all the items of scientific work done and papers read in the sections.

The following papers appear in this volume:

Observations upon Abdominal Surgery in Relation to the General Practitioner, by A. Vanderveer, M.D.; Observations on Excessive Intestinal Putrefaction, by C. A. Herter, M.D., and E. E. Smith, Ph.D.; the Prevention of Disease, by W. W. Potter, M.D.; Scorbutus in Infants, by W. P. Northrup, M.D.; Scorbutic Pseudo-Paralysis, by H. L. Taylor, M.D.; Remarks on Scorbutus in Infancy, by L. Starr, M.D.; Pott's Disease of the Spine, by A. M. Phelps, M.D.; Greek as the International Language of Physicians and Scholars in general, by A. Rose, M.D.; Some Recent Measures in the Treatment of Epilepsy, with special reference to the use of Opium, by J. Collins, M.D.; Appendicitis, strictly a Surgical Lesion, by J. A. Wyeth, M.D.; Persistent Albuminuria and Glycosuria, with frequent Hyaline Casts, in Functional Nervous Diseases, by L. C. Gray, M.D.; a Nomenclature for the Different Classes of Infectious Diseases, by W. H. Thomson, M.D.; the Nature and Management of Functional Gastric Disorders, by C. G. Stockton, M.D.; Clinical Observations on Erosions of the Stomach and their Treatment, by M. Einhorn, M.D.; Ten Years' Experience with Alexander's Operation for Shortening the Round Ligaments of the Uterus, Sixty-five Operations, by P. F. Mundé, M.D.; Climate and Health, by C. F. Taylor, M.D.; Defective Vision in its Relation to Crime, by F. Van Fleet, M.D.; The Pathology and Treatment of Intralobular Occlusion Jaundice, by W. H. Porter, M.D.; The Treatment of Inoperable Malignant Tumors with the Toxins of Erysipelas and Bacillus Prodigiosus, by W. B. Coley, M.D.; Anniversary Discourse—on the New Use of some Older Sciences, by

C. L. Dana, M.D. ; the Treatment of Diphtheria, including Serum Therapy, by H. W. Berg, M.D. ; The Influence of the Bicycle in Health and in Disease, by G. M. Hammond, M.D. ; The Wesley M. Carpenter Lecture—Import and Facts relative to Malignant Disease, by J. D. Bryant, M.D. ; Scientific Work in the Sections of the Academy.

Schafer's Course of Practical Histology, by Edward Albert Schafer, LL.D., F.R.S., Jodrell Professor of Physiology in University College, London. Second edition, 12mo, 307 pages, 59 engravings ; cloth, $2.25. Philadelphia & New York Lea Brothers & Co., 1897.

To know that Professor Edward Albert Schafer is the author of any work is in itself a guarantee of its worthiness for world-wide distribution, and in this book we have this fact further borne out. The same author's "Essentials of Histology," now in its fourth edition, is one of the most largely used text-books on this continent, and all those who have read it must have been struck by the pleasant and interesting manner in which he disclosed the secrets of the histologist. The same style flows through the text of this "Course of Practical Histology."

The aim throughout has been to assist the student in carrying on histological investigation independently of the constant presence of a teacher. Of course, all the methods of treating the tissues for histological purposes could not be embraced in a volume of this size, but the author has taken care to select the more general methods upon which, in his experience, complete reliance can be placed.

He begins with a chapter on the instruments used in histology, in which the microscope itself receives sufficiently clear but terse treatment, without explanations of its optical construction being entered upon. The methods of preparing specimens for the microtome are shown, and the methods of using the different kinds of microtomes are demonstrated. The art of microphotography is touched upon, and two full-page illustrations of microphotographic apparatuses are given. A chapter is devoted to each of the different tissues and organs, and in each chapter all the more common and useful methods of hardening, sectioning and staining, are given, besides other peculiar forms of treatment which certain special tissues receive.

PUBLISHERS DEPARTMENT.

SANMETTO IN GONORRHŒAL INFLAMMATION AND EMACIATION.

I have used Sanmetto in a number of cases of gonorrhœal inflammation, and find it all that could be desired. I also consider it as a good constitutional treatment where there is an emaciated condition of the system superinduced by venereal disease.

Earlington, Ky.

G. B. FAYNE, M.D.

BACKACHE.

It is with pleasure that I give you my experience with Sanmetto. Mr. B., age forty nine years, was a sufferer for years from backache, caused from inflamed and overworked kidneys. The pain was so great at times that an opiate had to be given to relieve it. I put Mr. B. on Sanmetto, teaspoonful three times a day. He has never complained of his back since. This has been three months ago.

Gold Hill, Ala.

J. HARVEY BLEDSOE, M.D.

SANMETTO IN POST GONORRHŒAL GLEET.

Dr. Percy Nowell, L.R.C.P.I., L.M., L.R.C.S.I., Mem. Brit. Med. Assoc. Crowborough, Sussex, England, writing, says: I had a very obstinate case of gleet (post-gonorrhœal) under my care—which did not show any sign of going, and was beginning to worry my patient. I had tried every remedy suggested in different works on surgery and therapeutics, but the wretched thing persisted. I put the patient on Sanmetto, a dose three times daily. In a week the thing was practically cured. I shall always stock Sanmetto in my surgery."

THE SUPERIORITY OF SUGAR-COATED PILLS,—"WARNER,"

is demonstrated by a wealth of evidence. There is accumulated evidence of perfect results obtained by the Medical profession, which has used them for over forty years. There is evidence in the award granted by the Columbian Exposition, 1893, upon the following grounds:—"The pills are of uniform size, the coating is perfect, and protects the pills indefinitely, samples 27 years old being shown readily soluble in hot and cold water." A soft pill mass protected indefinitely from atmospheric conditions is certainly the protection of pill-making. There is evidence to be found every day by suspending a Warner pill on a mosquito netting in water from 98° to 100° and watching it dissolve. This test is conclusive, as the conditions most nearly approach the natural conditions present in pill medication. It will show the superior solubility of the Warner product over pills made by any other process. It will guide the physician in his specifications.—*Monthly Retrospect of Medicine.*

ARE YOU IN PAIN?

You will probably ask this question more frequently than any other. Nothing appeals to one more strongly. To be able to relieve pain, whether it be a slight nervous headache or the most excruciating suffering from a severe neuralgia, brings the height of pleasure to both patient and attendant.

The ideal remedy must not only do its work but it must also do it quickly. Touching this point is an article in the *Boston Medical and Surgical Reporter*, by Hugh Engel, A. M., M. D. The author says:

"Antikamnia has become a favorite with many members of the profession. It is very reliable in all kinds of pain, and as quickly acting as a hypodermic injection or morphia. It is used only internally. To stop pain one five-grain tablet (crushed) is administered at once; ten minutes later the same dose is repeated, and, if necessary, a third dose given ten minutes after the second. In 90 per cent. of all cases it immediately stops the pain."

CANADA
MEDICAL RECORD

OCTOBER, 1897.

BRITISH MEDICAL ASSOCIATION MEETING, MONTREAL, 1897.

ADDRESS IN SURGERY.

By W. MITCHELL BANKS, M.D. Edin.,

Fellow and Member of Council of the Royal College of Surgeons of England; Surgeon to the Liverpool Royal Infirmary; Emeritus Professor of Anatomy, University College, Liverpool.

THE SURGEON OF OLD IN WAR.

I am indeed greatly honored by having to deliver to you to-day an Address in Surgery. Fortunately for me the title is a wide one, and I shall take advantage of that fact to diverge from the strict consideration of surgical disease, and shall offer you instead a brief sketch of some of the most notable work done of old by a body of members of our profession who have never received their due reward—those, namely, who have devoted their lives to the succor of the sick and the wounded in war.

Military Surgeons in the Roman Army.

Twelve months ago my friend, Dr. Barnes, of Carlisle, ex-President of this Association, made me acquainted with a remarkable paper by the late Sir James Simpson, entitled "Was the Roman Army provided with Medical Officers?"—a paper exhibiting such profound learning, so charmingly written, and so little known, that I need not make any apology for acquainting you with some of its chief points of interest.

The most careful investigations have failed to make out from their writings whether the Romans regularly appointed physicians and surgeons to their armies or not, although nearly every other question relating to their military organization has been treated of, sometimes very fully. Curiously enough, what little information we possess on the subject comes mainly from mortuary or from votive tablets. Borcovicus, in Northumberland—now called Housesteads

—was one of the principal stations on the line of Hadrian's wall. Here, about seventy years ago, was found a monumental tablet, now in the Newcastle Museum. On it is the following inscription.

D M	D(IIS) M(ANIBUS)
ANICIO	ANICIO
INGENUO	INGENUO
MEDICO	MEDICO
ORD COH	ORD(INARIO) COH(ORTIS)
I TUNGR	PRIMAE TUNGR(ORUM)
VIX AN XXV	VIX(IT) AN(NOS) XXV

The First Tungrian Cohort is known to have been present at the battle of the Mons Grampius, and to have served at Castlecary, at Cramond near Edinburgh, in Cumberland, and at Housesteads. The tablet is highly ornamented, and antiquarians hold that a rabbit and round bucklers carved in the upper part, which are emblems of Spain, show that the young military doctor was probably a native of that country. From various works treating of Roman inscriptions Simpson was enabled to find that four more tablets, in which surgeons of cohorts are mentioned, existed. They were found at Rome. One of them is a votive tablet, the inscription upon which intimates that it was dedicated by Sextus Titius Alexander to Æsculapius and to the safety of his fellow-soldiers. It was cut in the year of the consulship of F. Flavius Sabinus, which is known to have been A.D. 83. As the Roman legion consisted of ten cohorts, it is interesting to know that there were not only medical officers attached to each cohort, but also one attached to the legion—a sort of surgeon-colonel, as we should call him nowadays. Three tablets have been discovered in which the *medicus legionis* is mentioned. One found at Verona was a tablet raised by Scribonia Faustina to her dearest husband J. Caelius Arrianus, medical officer to the Second Italian Legion, who died at the age of 49 years and 7 months. Furthermore, Simpson routed out of Mommsen's Latin inscriptions of Naples a tablet, now in the Dresden collection, which was found in the Elysian fields near Baiâe, close to the Portus Julius, which was the station of a division of the Imperial fleet. The inscription tells that M. Satrius Longinus, *medicus duplicatorius* to the Trireme Cupid, and the heirs of those freed by Julia Veneria erected the tablet to the manes of that deserving lady. The term *duplicatorius* means that by reason of long or meritorious service he was entitled to double pay and rewards. These little gleanings from Simpson's paper show what an interesting one it is, and one is astonished at the labor that must have been expended in digging up the information contained in it.

Ambroise Paré.

Hundreds of years went past before there came upon the scene any military surgeon of note, but when he did appear he was a man of transcendent merit—the illustrious Ambroise Paré. From 1517 to 1590, for seventy-three years, he lived a long and incessantly active life, the contemporary of Vesalius, the immediate predecessor of Harvey. We have only time to glance at the soldier-surgeon side of Paré's life. For over thirty years he followed the wars under four kings of France—Henry the Second, Francis the Second Charles the Ninth, and Henry the Third, with intervals of a few years at home in Paris. Perpignan, Metz, Verdun, Rheims, Hesdin (where he was taken prisoner and had to write to his wife for his ransom), St. Quintin, La Fère, Amiens, the taking of Rouen, Dreux, Moncontour—these are but some of the bloody battles and sieges at which he was present. Through them all his humanity, his love of his profession, his independent character, and his jovial, frank disposition carried him safe, and made for the son of the poor country joiner warm friends among the greatest and noblest warriors of France. Even that miserable monster, Charles the Ninth, loved the Huguenot surgeon; and when the awful day of St. Bartholomew came, Paré was spared to tend his wretched master through the brief term of agonized and remorseful life that was given him. The description in Dumas's novel, the *Two Dianas*, of the wound of the famous warrior, Duke of Guise, where the lance entered above the right eye and came out between the nucha and the left ear, breaking short off, and how Paré lugged it out, with the chance that when it did come, one terrible gush of blood would finish his illustrious patient's life and his own career at the same moment—the picture of all this is real history.

Amid all the splendid work, both anatomical and surgical, which Paré did, the application of the principle of the ligature to bleeding arteries is of course that with which his name will be for ever associated. In this day of grace it is impossible for us to imagine the horrors that awaited a wretched man so soon as his limb was cut off and the process of stopping the bleeding began. Think of the raw and exquisitely sensitive stump exposed to the red hot cautery or plunged into boiling pitch! For this frightful treatment Paré substituted the ligature, which in our own day, employed in the form of an aseptic animal material which the tissues quietly absorb, has practically reached the pitch of perfection. In his time, too, there was a fixed belief that the danger from gunshot wounds arose from the poison of the gunpowder conveyed on the bullet. To destroy this poison the treatment was to pour into the wound boiling oil in which elder-wood bark had been stewed. On one

occasion, not having this infernal concoction at hand, Paré used a cold mixture of yolk of egg, oil of roses, and turpentine to his wounded soldiers. He passed a sleepless night from dread that this would injure those to whom it had been applied, and his delight next day was proportionately great when he found that they had had but little pain, while their wounds were free from inflammation and swelling. This was his panacea for wounds ever afterwards. There are of course persons who wish to make out that he was not original in the matter of the ligature. He himself says this about it: "Taught me as I interpret it by the suggestion of some good Angel, for I neither learnt it of my masters nor of any other man. And thus I wish all chirurgions to doe. For it is not in our Art as it is in civill affaires, that prescription, law, or authority should prevail over right reason." But these cavillers have doubtless never heard of an ancient proverb which says that there is nothing new under the sun. In spite of them the world will ever believe in a glorious trio—Paré, the Frenchman, who invented the ligature; Morton, the American, who discovered anæsthetics; and Lister, the Englishman, who introduced antiseptics. In the fullness of years, possessed of affluence, and surrounded by friends, died Paré, the whilom poor barber-chirurgeon, now a Councillor of State and Surgeon-in-Chief to the King. One final touch will perhaps reveal a sentiment that permeated and guided his every labor. On one occasion, after the successful treatment of a wounded officer, he made this wise and reverent remark, afterwards adopted as his motto: "*Je le pansay; Dieu le guarist*"—I treated him; God cured him.

Robert Clowes.

Coming to England, a surgeon who saw no little fighting was Robert Clowes, who was born somewhere about 1540 and died in 1604. He served in France in the army commanded by the Earl of Surrey, and was afterwards for several years in the navy. He then began practice in London, and was made surgeon to St. Bartholomew's and Christ's Hospitals. But, after being about fourteen years in civil practice, he was despatched by Queen Elizabeth's orders into the Low Countries to attend upon the Earl of Leicester, Commander of Her Majesty's forces. He was at Zutphen when Sir Philip Sydney was killed. His last piece of service was a glorious one, he being with our fleet that defeated the Spanish Armada. It is told of him that he always kept beside him his military surgical chest with the bear and ragged staff of his old chief Leicester on the lid. He finally settled down once more in London, where he was very successful in practice, and was made surgeon to the Queen. He wrote several works in English, of which the most important is entitled: *A profitable and necessarie Booke of Observ-*

ations for all those that are burned with the flame of gunpowder, &c., and also for curing of wounds made with musket and caliver shot, and other weapons of war commonly used at this day both by sea and land. A good half of this treatise is occupied with a record of surgical cases of note which he had treated, and this renders the work very entertaining, inasmuch as we get an accurate and positive knowledge of everything that was done for a wounded man in those days, while there are numerous little side touches very characteristic of life at the time it was written. He tells us, for instance, of "The cure of one Master Andrew Fones, a merchant of London, which, being in a ship at the sea was set upon by the Flushingers, in which fight he was very dangerously wounded with a gunshot." There is "The Cure of one Henry Rhodes, one of the waiters at the Custom House, he being upon the river of Thames a skirmishing with his peece, and by reason the peece had certain flaws in it, did breake into many peeces, and made a great wound upon his chin, and carried away a good part of the manduble and the teeth withall; moreover it did rend his hand greatly: all which I cured without maime or deformitie." There is "An observation for the cure of the master of a Hoy that had both his legs fractured and broken into many peeces with an iron bullet, shot out of a great basse or harquebusse of crocke at the sea by a Pyrat or sea rover." These few titles will give you an idea of Clowes's clinical cases. The importance which attaches to them, and the reason why they constitute a distinct advance in the science of surgery is that the author gives his actual experiences, and tells us what he did to his patients, whereas at that period the tendency was to write endless commentaries on ancient writers, to whose every dictum the blindest and most unreasoning respect was paid.

Peter Lowe.

Contemporary with Clowes was a most interesting character—Maister Peter Lowe—who was born in Scotland about 1550, and lived some sixty or sixty-five years, reaching well into the seventeenth century. Like many of his countrymen, he went to France when very young, where he lived for some, say, ten, some twenty years. Then he returned to Glasgow, where he lived and died a citizen of much renown, having obtained in 1599 from King James the Sixth a charter for the Faculty of Physicians and Surgeons of Glasgow, which he thus founded. A few years ago Dr. Finlayson published a most charming account of Maister Peter.

His most important work is termed *A Discourse of the whole art of chirurgery, compiled by Peter Lowe, Scottishman, Doctor in the Faculty of Chirurgerie at Paris, and ordinary Chyrurgion to the French King and Navarre.* The first edition dated from 1597,

and is one of the earliest, if not the very earliest, work embracing the whole art of surgery published in English. It is clear that Lowe must have seen a good deal of military service abroad, being "Chirurgion Major to the Spanish regiments two years at Paris, and since that time following the king of France my maister in the warrs." In his day, as we have seen, the surgical world was still greatly exercised about gunshot wounds and burning by gunpowder, as it was believed that they were injuries of quite a peculiar and very poisonous character. Lowe, however, treats of them with great good sense. Thus; "*Of Wounds done by Gunshot.*—These wounds come indifferently to all parts of our body whereof there are divers opinions; some think that there is a venenosity in the powder, and burning in the bullet, which is false, for the things whereof the powder is ordinarily made, as Brimstone, Saltpeter, coales of divers sorts of trees, Water, Wine and Aquavitæ, have no venenosity in them; likewise there is no burning in the bullet, for if the bullet of lead being shot a great way, should burne, through heat would be melted itself. I have cured divers within these thirty yeares of divers nations which have followed the warres in Fraunce and other cuntries, in the which I have found no more difficulty than in any other contused wounds." Here, again, we have a most important advance made by a military surgeon, for only those who are acquainted with the medical literature of Lowe's time can understand the ridiculous views then held about gunshot wounds, and the dreadful consequences to the patients which followed from them.

We have seen that Paré lived between 1517 and 1590, and that Peter Lowe was in France between 1570 and 1580; consequently, he probably learnt all about the ligature for the arrest of hæmorrhage. When treating of amputations he describes the whole process of the operation up to the removal of the limb. Then he says: "One of the Assisters shall put the extreamities of his fingers on the great vains and arteries to stay them from bleeding till the Chyrurgion either knit or cauterise them one after another. Where there is putrefaction we stay the flux of blood by Cauters actuals, and where there is no putrefaction, malignitie nor humour venomous we use the legator." He narrates the case of a certain valiant Captain Boyle, of the Spanish troops, whom he, in the capacity of Chyrurgion-Major to the regiment, was summoned to treat for an "aneurisme on the right side of his cragge." Lowe ordered it to be let alone, "but the captain sent for an ignorant Barbor who did open the swelling with a Launcet, which being done, the spirit and bloud came forth with such violence that the Captain died in fewe howers after." Having duly castigated the Ignorants who do such things, Lowe observes that his treatment for such cases is first to draw

blood in both arms, and then to apply on the tumor "Rec, Pulveris subtilissimi boli arminici, sanguis draconis, myrtilorum, lapidis calaminaris in aceto extincti, absinthii ad unc. cum cerato refrigerantis Galeni quantum sufficit, fiat unguentum." Curious to note how, even in men of distinct ability like Lowe, a complete ignorance of pathology dragged them into the perpetration of the silliest empiricism.

Woodall's "Viaticum."

In 1628 appeared the first work in England specially devoted to military and naval surgery. Some eleven years later a second edition appeared, and this is its title:—*Viaticum, being the Pathway to the Surgeon's Chest, containing chirurgical instructions for the younger sort of surgeons imployed in the service of his Majestie or for the Common-Wealth upon any occasion wha'soever intended for the better curing of wounds made by Gunshot*, by John Woodall. A perusal of the *Viaticum* shows that Woodall was a very practical surgeon and an eminently religious man, and the way in which he mixes up pills and piety is sometimes very diverting. After some excellent general advice to the surgeon's mate, including a warning against "being given and dedicated to the Pot and Tobacco-pipe in an unreasonable measure,"—he enumerates the instruments for the Surgeon's Chest, including among others Catlings, Rasours, Trapans, Trafine, Lavatories, Cauterising Irons, Storks bills, Ravens bills, Crowes bills, Terebellum, Probes or flamules, Glister Sirings and (what would have utterly damned his book in the present day) "one bundle of small German instruments." Then comes a list of medicines under the heading Unguentum, Aqua, Sol, Oleum, Chemicall Oyles, Syrups, Conserva, Electuariæ, and so on, winding up with a list of the Simples, and of the Herbs and Roots most fit to be carried. A long and careful description of the uses of the instruments and drugs follows, and then come chapters on wounds, apostumes, fractures, dislocations, amputation, scurvy, the plague, gangrene, and other topics. He observes that the cauterising irons had gone somewhat out of fashion, and he did not use them much himself "because of the feare they put the Patient into and for speech of people who are ready to scandalise an Artist upon each light occasion." In amputation, moreover, they are "now wholly forborne for reasons aforesaid, and for that a more pleasant course is known better for the patient and the Artist by making a ligature upon the veine, wound or artery, which is the binding of each end thereof, being first caught and holden with some fit instrument, and tied with a sure and strong thread."

Woodall advances the cure of wounds a distinct step, once more putting us under an obligation to the soldier-surgeon. This

he does by sharply attacking all through his works the inordinate and meddlesome use of strong caustics. He says that he had seen men lamed by the needless use of caustic medicines, even in slight wounds to which if an old wife had only applied her one salve for all sores, no such thing had happened. "They will not see a wound incarne and red and good flesh to grow, but straight they slander it of pride, and call it proud flesh, like their owne; and then must at the fairest Precipitate or Vitriale burnt goe to work, yea though the Patient be lame for it, or at the least the griefe put back again."

Richard Wiseman.

I wish I had time to give you a proper account of the adventurous life of Richard Wiseman, who has been termed the Father of English Surgery, and that not without reason. Born in 1620, dying in 1676, he lived in the time of Charles the First, of the Commonwealth, and of Charles the Second. He was a naval surgeon to begin with, serving in the early part of his life in the Dutch navy. Being, however, a devoted Royalist he served with the armies of Charles the First, and after his death went into exile with his son in France. He was present at the battle of Worcester, where he was taken prisoner, and afterwards confined in Lambeth House for awhile. During the Commonwealth he was naturally under a cloud, and even went on for three years to serve in the Spanish navy. At the restoration the King did not forget his old surgeon, who had done and suffered so much in his service, but appointed him his surgeon-in-ordinary, and afterwards serjeant-surgeon. The first edition of his work, printed in 1672, is quite a small book, and is entitled *A Treatise of Wounds*, but it afterwards expanded into a very large volume.

Nothing reveals a man like his own words, and so in trying to give you an idea of these old worthies I have let them tell their own stories. Wiseman believed in the need for giving stimulants to a man who was in the habit of taking them, if that man was in a dire strait. After describing the parlous case of a certain patient, it seems that the "man swooned and complained that he could not live without wine. I complied with his desire; he drank again as he pleased, his sickness went off, his wound digested, and he cured. This I have often seen in some of our Dunkirkers at sea, who drank extraordinarily, and were full of drink in our sea fights. I could scarce ever cure them without allowing them wine, and thereby their spirits were kept up, and I had the liberty to bleed them as I thought fit." From this it is clear that the old saying about Dutch courage has a distinct origin in fact. But if the unhappy Batavians were liable to be bled at once by the lance of the enemy and the

lancet of the surgeon, one can hardly wonder at their taking something to keep their spirits up.

When speaking of gunshot wounds, he insists upon the bullet being searched for and extracted at once. "The part is at first dressing, with what diligence you can, to be cleared of all such Foreign Bodies as have made violent Intrusion into it, while the patient is warm with the heat of Battel, and the wounds fresh and very little altered by either Air or Accidents, so that less pain must necessarily follow upon the extraction. In the *Armada Naval de Dunquerque*, where we Chirurgeons were oft employed in this Service, we after every fight went together visiting one another's wounded men. Amongst us it was thought a great shame if any of this work of Extraction was there to be done. It hath been the cause of the death of many a brave Souldier, and every Battel produces instances of it, to the discredit of our profession." This is good surgery and straight talk. I think it must have been a fine spectacle to have seen these rough old surgeons, with their limited knowledge and their miserable means of treatment, walking round to see each other's patients and learning how best to mend their mistakes.

He has a chapter entirely devoted to a great case of a fracture made by a splinter. The patient had his arm badly smashed above the elbow, and ought to have had it amputated ; but a sudden cry of fire stopped this. "I hastily clapt a dressing upon his wound and rouled it up, leaving his arm in his other hand to support it, and endeavored to get up out of the hold as the others did, I verily believing I should never dress him or any of them more. But our men bravely quitted themselves of the Fire-ship by cutting the Sprizil Tackle off with their Hatchets (which they wore during fight sticking in their Shashes); we were freed of the fire, and by our hoisting up the top sails got free of our Enemy. Now, I was at a loss what to do with this man, who lay not far off complaining of his arm. I would have cut off his arm presently with a Razor (the Bone being shattered there needed no Saw); but this man would not suffer me to dress his arm ; he cryed 'it was already drest.' The Fight over, we got into the next Port; I caused presently the Mariner's Bed to be set up (which was four pieces of wood nailed together and corded, and a Bear's skin laid upon it); this was fastened between two Guns to the Carriages." Wiseman then set hard to work to save this unfortunate mariner's arm ; but "when it came to my turn to be visited by my brother Chirurgeons of our Squadron, they did not dislike the wound nor my way of dressing (for we, being used to see one another's Patients, had all much one way of dressing); but they laughed at the excuse I made for not cutting off his arm, and doubted I should yet be forced to do it.

But at the end of two months there was in this Patient a strong callus, filling up the void place of the lost Bone at least two inches, with little or no shortening of the arm." Well done, Wiseman!

Baron Larrey.

Up till the time of the French Revolution it is clear that military surgeons were not men of much importance, and probably had very little influence, if any, in the conduct of campaigns. But in the latter part of last century war was made on a scale which was never known before, and was made also with a rapidity and a precision quite unprecedented. Moreover, the science and art of surgery had been rescued from quackery, and surgeons in actual practice were able to be of great and real service to the wounded. As a result of the vast masses of men that were hurled against each other, the number of wounded after a big battle amounted to thousands, and civilization had so far advanced that it was imperative that immediate help should be given to them. So that about this time the military surgeon really became an important officer in warfare, and began to have his rank and pay well defined, and his merits (up to a certain point) recognized.

In 1776, near the Pyrenees, was born Jean Dominique Larrey, the Chirurgien-en-Chef de la Grande Armée, the friend and body surgeon of Napoleon, the greatest military surgeon that ever lived. He studied at the medical school of Toulouse, and in 1792 joined the headquarters of the Republican Army of the Rhine under Custine. Now, the ambulances of these days were obliged to remain about a league from the army, and the wounded were only picked up after the fighting was done. General Custine was a man who moved his troops very rapidly which made matters worse for the wounded. This greatly affected Larrey, who set to work and devised a new ambulance hung on springs, and combining great strength with lightness. Such carriages were termed *ambulances volantes*. They could keep up with the advanced guard of the army with the speed of flying artillery, and they carried off the wounded almost as they fell. Larrey had early perceived the enormous advantage a wounded man got by having his fracture set or his bleeding stopped as rapidly as possible, and by then getting a roof over his head before night set in. General Beauharnais, in a despatch to the Convention, made special mention of "Surgeon-Major Larrey and his comrades with flying ambulances, whose indefatigable care in the healing of the wounded has diminished those afflicting results to humanity which have generally been inseparable from days of victory, and has essentially served the cause of humanity itself in preserving the brave defenders of our country." The staff of a flying ambulance was about 340 in number. For each

division there were four heavy carriages and twelve light ones. Some had two and others four wheels, and they were furnished with mattresses. In Napoleon's Italian campaigns they came greatly to the fore, and the great man displayed a lively interest in them reviewing them and causing them to manœuvre before him just as if they were on a battle field. After one of these inspections he said to Larrey: "Your work is one of the most happy conceptions of our age. It will suffice for your reputation."

When Napoleon undertook his Egyptian campaign, Larrey proceeded to Toulon to organize the medical staff. So readily did professional men respond to the call made by him that he soon was able to reckon on 800 well qualified surgeons, of whom many had served in the army of Italy, and these were in addition to the medical officers actually attached to regiments. This I think, shows the value that the king of commanders set upon the health of his troops, and the trouble and expense which he was prepared to face in order to maintain it—a great contrast to the miserable way of dealing with this subject, which has too long been the fashion with our military rulers. Not long after the landing at Alexandria a certain General Figuières was severely wounded. By able treatment he recovered, and in gratitude for the preservation of his life he asked Napoleon to accept a valuable Damascus sword. "Yes," said the latter, "I accept it in order to make a present of it to the Surgeon-in-Chief by whose exertions your life has been spared." Upon the sword was engraved the words Aboukir and Larrey, and the surgeon had it till the fatal day of Waterloo, when the Prussians robbed him of it. Some months after the occupation of Egypt a terrible revolt took place in Cairo by fanatical Turks. Utterly regardless of anything except how to get at Frenchmen to murder them, they attacked the hospital, which was crowded with sick and wounded soldiers, but the doctors valiantly defended their patients, and two staff-surgeons, Roussel and Monjin, were killed, while Larrey nearly shared the same fate.

At one period there was a total dearth of meat, and Larrey had nothing wherewith to make even a drop of bouillon for his patients. He ordered camels' meat to be used for this purpose, and, when that fell short, he used up the horses. Years afterwards, in the second campaign against Austria, the Imperial Guard and several other corps were crowded together in the island of Lobau in the midst of the Danube, which Napoleon was endeavoring to cross. The days were roasting, and the nights icy cold, and provisions became so scarce that Larrey's patients were in danger of starvation. Without more ado he impounded certain officers' horses, and had them slaughtered and employed as food. As there was a lack of kettles,

he employed the cuirasses of those who had been killed, and made his horse flesh soup and stews in them. Certain generals made bitter complaint to the Emperor of Larrey's proceedings, who summoned the Surgeon-in-Chief, and in the presence of his staff demanded an explanation with a severe expression of countenance. "What," he said, "have you on your own responsibility disposed of the horses of the officers in order to give soup to your wounded?" "Yes," answered Larrey. He added no more, but soon afterwards he heard of his promotion to the rank of Baron of the Empire.

One of the most appalling retreats, next to that from Moscow, was Napoleon's retreat from the invincible walls of St. Jean d'Arc through Jaffa. There is no doubt that at that place a considerable number of patients sick of the plague were quietly put out of their misery by opium. Alison says 60; Sir Robert Wilson says 580. The retreat had to go on, the Turks were only an hour's march behind, and nothing but a cruel death awaited these unfortunates, so that whether this were a justifiable deed or not may well give ground for argument. But, as Alison says: "History must record with admiration the answer of the French chief of the medical staff when the proposal was made by Napoleon to him: 'My vocation is to prolong life, and not to extinguish it.'"

In those days means of transport were so inferior, and the necessity for removing hopelessly damaged limbs as soon as possible after the injury so imperative, that amputations were performed on the field of battle, while it was still raging, and amid showers of bullets. During the battle produced by the landing of the English in Aboukir Bay, General Silly had his knee crushed by a bullet. Larrey saw that unless the leg were promptly amputated the case would prove fatal, and, the General giving his consent, the operation was performed in the space of three minutes under the enemy's fire. Just then the English cavalry came upon them. "I had scarcely time," said Larrey, "to place the wounded officer on my shoulders and to carry him rapidly away towards our army, which was in full retreat. I spied a series of ditches, some of them hedged with caper bushes, across which I passed, while the enemy, owing to the ground being so cut up, had to go by a more circuitous route. Thus I had the happiness to reach the rearguard of our army before this corps of dragoons. At length I arrived at Alexandria with this honorably wounded officer, where I completed his cure." We must all agree that these were a pair of heroes.

As may be imagined, the awful retreat from Moscow called into play all Larrey's resources, and many an interesting story could be told of his efforts. Think of the awful battle of the Borodino, where under Larrey's own direction 200 amputations were performed

where there were neither couches nor blankets nor covering of any kind, and where the food consisted of horseflesh, cabbage stalks, and a few potatoes; think of cold, so intense that the instruments requisite for the operations too often tumbled from the powerless hands of the French surgeons. Think of the savage Cossacks, hovering about all the while, and waiting their chance to kill the surgeon and the wounded man equally with the combatant. Then came the passage of the Beresina. Take an incident of it. Among the wounded was General Zayonchek, who was over 60 years of age. His knee was crushed, and without amputation the saving of his life was impossible. It was performed under the enemy's fire, and amid thick falling snow. There was no shelter except a cloak, which two officers held over him while the operation was being performed; but the surgeons did their work with such coolness and dexterity that the old general survived, and died fourteen years afterwards Viceroy of Poland. Larrey succeeded in getting over the Beresina with the Imperial Guard, but discovered that the requisites for the sick and wounded had been left on the other side. At once he recrossed the river, only to find himself in the midst of a furious struggling crowd. He was on the point of being crushed to death when providentially the soldiers recognized him. No sooner did they do so than they carried him across the river in their arms, with the cry, "Let us save him who saved us!" and forgot their own safety in their desire to preserve the man whose tender kindness they had so often experienced.

Following his adored master through victory and defeat, Larrey at last stood at night on the field of Waterloo alone, except for some medical officers and the wounded who lay groaning around them. Down upon them came a squadron of Prussian lancers. Expecting no quarter, he fired his pistols at them and galloped away. They shot his horse, and sabred him as he lay on the ground. Leaving him apparently dead they went off. But he recovered his senses, and tried to crawl by cross roads into France. Again he was seized by another detachment of Prussian cavalry. They robbed him promptly of all he possessed, and took him before a superior officer, who ordered him to be shot. What a reward from a soldier to one whose life had been passed in succoring soldiers! About a quarter of an hour before the sentence was to be carried out, a surgeon major recognized Larrey. He had attended with deep interest a course of lectures which Larrey had delivered in Berlin six years previously. The prisoner was brought before Bulow, and finally presented to Blücher, whose son in the Austrian campaign had been badly wounded and captured by the French, and who owed his life to Larrey's exertions.

Larrey's honorable and glorious life terminated in 1842. Napoleon, when he made his will at St. Helena, wrote in it: "I bequeath to the Surgeon-in-Chief of the French army, Larrey, 100,000 francs. He is the most virtuous man I have ever known." From Napoleon's lips the words of free, spontaneous, ungrudging praise such as this rarely fell.

Pestilence more Deadly than the Sword.

In the middle of last century, while surgery had distinctly improved, the gross neglect of the Government and the pig-headed obstinacy of the generals was such that our unfortunate soldiers and sailors were hardly any better off than they were in the days of Paré. It has been maintained that Smollett, in the appalling picture of naval life as witnessed in the miserable expedition to Carthagena which he drew in *Roderick Random*, and which is known to have been the record of his own experience as a surgeon's mate, grossly exaggerated the evils thereof. I do not believe this. Look at the awful and unsuccessful expedition to Porto Bello in 1726, when nearly the whole of the crews of the ships were destroyed by fever three times over; where 2 admirals, 10 captains, 50 lieutenaats, and about 3,000 to 4,000 inferior officers and men perished without striking a blow. Look at the taking of Havannah in 1762. The Earl of Albemarle took with him in the fleet 11,000 soldiers. Between June and the middle of October, when Cuba was ours, we had lost 560 men by wounds, and 4,708 by sickness. At the end of the Seven Years' War, a statement was drawn up in the *Annual Register* for 1763, from which it appeared that in all the naval battles of that war there were but 1,512 sailors and marines killed, while 133,738 had died of disease or were "missing." Look even at the end of last century, and consider the wretched and disgraceful Walcheren campaign. Never did our poor soldiers fight with more gallantry than in that campaign, only to perish beside Dutch ditches and canals from fever and ague and dysentery.

Military Courage.

As we have just seen, Baron Larrey's whole life shows that, while absolutely devoted to the work of his profession, he displayed a cool courage on the field of battle not less heroic than the more dazzling deeds of his fellow combatant officers. Not less does it mark the military surgeon of the present day. Have you ever heard of Surgeon Thomson who, during the Crimean war, when the army marched off after the battle of the Alma, volunteered, with his servant, John McGrath, to remain behind on the open field with 500

terribly wounded Russians, and passed two awful days and nights —these two Englishmen alone—among foreign foes, some dead, some dying, and none able to raise a hand to help themselves? Have you ever heard of Assistant-Surgeon Wolesley, of the 20th Regiment, who, at the battle of Inkerman, had quietly established his field hospital in that awful place, the Sandbag Battery? When the 150 men, who were all that remained of its defenders, were forced to desert it, about 100 of them fell back in one direction, and in that they found, at 30 paces from them, a Russian battalion blocking their path. There was not a combatant officer left, so the assistant surgeon took command. He had not even a sword with him, but, laying hold of a firelock with a fixed bayonet on it, he spoke a few words to the men within range of his voice, and told them that what they now had to fight for was not victory but life. Then he gave them the word of command: "Fix bayonets, charge, and keep up the hill." The soldiers answered him with a burst of hurrahs, sprang forward to the charge, and the next instant were tearing through the thickest of the Russians. One half of these reached the other side alive. Have you ever heard of Surgeon Landon who was shot through the spine while attending to the wounded on Majuba Hill? His legs were paralyzed, but he caused himself to be propped up, and continued his merciful work till his strength ebbed away. When unable for more he quietly said: "I am dying; do what you can for the wounded." Have you ever heard of Surgeon-Captain Whitchurch, who gained the Victoria Cross at the beleaguering of Chritral for the most determined courage in endeavoring to save the life of Major Baird? Yes, you have, for last year at Carlisle you gave him the gold medal of the Association, the highest honor which our Association can give to its members. There died the other day a certain Surgeon-General Reade, C.B., V.C. During the siege of Delhi, while attending to the wounded at the end of one of the streets of the city, a party of rebels advanced from the direction of the bank, and having established themselves in the houses in the street commenced firing from the roofs. The wounded were thus in very great danger, and would have fallen into the hands of the enemy had not Surgeon Reade drawn his sword, and calling upon a few soldiers who were near to follow, succeeded under a very heavy fire in dislodging the rebels from their position. Surgeon Reade's party consisted of about ten in all, of whom two were killed and five or six wounded. Ladies and gentlemen, Surgeon Reade was a Canadian, and the son of a colonel of the Canadian Militia. Of the 118 wearers of the Victoria Cross, 14 are surgeons, nearly 12 per cent. of the whole number. They stand in the proportion of 9½ per cent. of all the

officers of the army, so at all events they have contributed not less than their fair share of the deeds of valor which alone can win that glorious distinction.

The Army Medical Service To-day.

Ladies and Gentlemen,—I have diverged from the beaten track common to the givers of addresses such as this, to tell you what splendid men have been the military and naval surgeons of old, who not merely did their duty nobly and courageously as such, but who have in their day enormously contributed to the advance of the art of surgery. I have done it with a purpose; with the hope of attracting more strongly than ever the sympathy and help of this great Association to their military brethren in a critical juncture of their history. To day Her Majesty's Government cannot induce candidates to come forward for the medical service of the Queen's army. And why? Because it has persistently treated the Army Medical Department meanly and shabbily. To-day the Government of India can secure the services of the pick of our newly-fledged doctors for its army. And why? Because it has always treated the Indian Medical Service liberally and generously. I am not going to enter into the reasons for this; I desire merely to emphasize one point namely, that money is not at the bottom of this difficulty. The soldier surgeons of to-day are the same men now that they were in the days of William Clowes, who winds up his book, as I shall my address, with these verses:

> When valiant Mars, with brave and warlike band,
> In foughten field with sword and shield doth stand,
> May there be mist a surgeon that is good,
> To salve your wounds and eke to stay your bloud.
>
> To cure you sure he will have watchful eie,
> And with such wights he means to live and die,
> So that againe you must augment his store,
> And having this he will request no more.

AN ADDRESS ON THE WORK OF PASTEUR AND THE MODERN CONCEPTION OF MEDICINE.

DELIVERED BEFORE THE BRITISH MEDICAL ASSOCIATION AT LAVAL UNIVERSITY, MONTREAL,

By PROFESSOR CHARLES RICHET,

Delegate of the French Government and of the Faculty of Medicine of Paris to the Sixty-Fifth Annual Meeting of the British Medical Association.

MR. PRESIDENT, LADIES AND GENTLEMEN:

It is not without emotion that I rise to address this learned assembly. I know indeed that I am addressing men who are not my fellow citizens, but among them are some, *enfants de notre vieille nation gauloise*, who have the same mother tongue as we, they speak from childhood our beloved French language, they are thus a little more than my fellow citizens, for they are my compatriots, and I feel myself animated by a truly fraternal affection for them, as to my English colleagues they have given evidence of so much goodwill and of a courtesy so delicate that I need make no great effort to assure them of my gratitude. In one word, although a stranger I seem to be among friends.

I am somewhat troubled also because I am addressing medical men and am speaking before a medical congress. Now, although I belong in some small degree to the great medical family, since my father has conferred honor upon the profession of medicine by his labors and by his works, and although I have the great honor to be the delegate of the Faculty of Medicine of Paris, yet I am not a medical man, and a physiologist displays some temerity in venturing to speak before you on medical matters.

THE RECONCILIATION OF MEDICINE AND SCIENCE.

Still I have an excuse. It is this, that I desire to attempt to bring about a complete reconciliation between medicine and science. It may seem that this is a commonplace, and that any such attempt would be unnecessary. But it is not so, gentlemen. We might find perhaps, somewhere, not, I am sure, in this assembly, medical men ready unhesitatingly to assert that there is discord between medicine and science, and that all those sciences which are called ancillary, physics, chemistry, physiology, are *impedimenta* with which the clinician has nothing to do. Yes, there are to be found in the world medical men, among them even men of high attainments, who are ready still to say: "What have I got to do with your experi-

"mental science. Observation of the sick and clinical study are worth "more than all your clever experiments, and it is not from laboratories "that the means of curing disease can come." Such an opinion appears to me to be erroneous, and I would with all the energy which I possess help to upset it. I hold that it is by experimental science alone that medicine has made and can make progress. It will suffice to describe the work of Pasteur, my illustrious master, in order to give you a convincing demonstration of this.

I shall not be contradicted when I say that the value of this work is greater than all that the history of medicine has given us since the commencement of our era. Through his labors everything has been renewed, regenerated, and, thanks to him, medicine has made more progress in twenty years than had been made previously in twenty centuries.

The Life-Work of Pasteur.

Louis Pasteur was born at Dôle in the Jura in 1821, and at the beginning of his career gave himself up to the study of chemistry. He became deeply interested in a difficult and important problem —molecular dissymmetry. Here was a question in pure chemistry which would seem to take us very far from medical questions, but it was to lead Pasteur directly to the study of fermentations. If a solution of tartaric acid (in the form of tartrate) be left untouched, a change occurs after some time in the chemical constitution of the liquid, which before Pasteur's time had been overlooked. The original solution has no action on polarized light, but after fermentation this same solution has become capable of deflecting polarized light. Pasteur explained this phenomenon by showing that the original tartaric acid is a mixture of an acid deviating light to the right with an acid deviating it to the left, and that a process of partial decomposition takes place; one of the acids is destroyed and the other is not altered so that the action upon polarized light, previously masked by the mixture of the two acids, becomes evident. Here we have a fundamental experiment. It is told how when the young Pasteur desired to show it to Biot, that great physicist, who had discovered the phenomena of polarization, the old *savant* grasped the trembling hand of the young man and, before beginning the optical examination of the crystals submitted to him by Pasteur, said to him with tears in his eyes, "*Mon cher enfant*, I have loved science so much that in face of the beautiful experiment which you relate to me I cannot prevent myself from being deeply moved."

The explanation given of this phenomenon at that time was that the tartaric acid was decomposed by fermentation. Men were

then content to use this magic word, which appeared to explain everything, but which in reality told nothing at all. Neither Lavoisier, nor Liebig, nor Frémy had been able to discover its meaning, and were reduced to the theory of half organized matter —a childish conception worthy of Paracelsus.

One of Pasteur's experiments, perhaps the most beautiful which he ever made, demonstrated the nature of this mysterious phenomenon. If a sugary solution of carbonate of lime is left to itself, after a certain time it begins to effervesce, carbonic acid is evolved and lactic acid is formed, which decomposes the carbonate of lime to form lactate of lime. This lactic acid is formed at the expense of the sugar, which disappears little by little. But what is the cause of this transformation of sugar into lactic acid? Well, Pasteur showed that the efficient cause of this chemical action was a thin layer of organic matter; that this layer of organic matter consisted of extremely small moving organisms which increased in number as the fermentation went on. Their growth it is, then, which produces the phenomenon of the transformation of sugar of milk into lactic acid. If, for example, we take a sugary solution in which all pre-existing germs have been destroyed by heat, no lactic fermentation will take place. But if we introduce into this sterile liquid a small quantity of this layer of organic matter, such as can be obtained from any liquid in which normal lactic fermentation is taking place, we shall see the lactic acid again form rapidly in the new solution.

Let us dwell a little on this admirable experiment. Nowadays it seems to us so extremely simple that we can scarcely perceive its importance. It seems to us now, in 1897, that from all time we must have known that an organic solution when heated was sterile, and that a germ would suffice to render it capable of fermentation. But this is a mere delusion. No, a thousand times no! This great fact of the generation of germs was absolutely unknown before Pasteur, and the method of sterilizing liquids, and of their inoculation with spores, was revealed to us by Pasteur. It is the nature of great discoveries that they become popularized in a short time, and thus very quickly become elementary. A first year's medical student knows perfectly that which neither Lavoisier, nor Liebig, nor Frémy, nor any one before Pasteur had been able to perceive. We are always tempted to be ungrateful to great creators, for their creations pass rapidly into the domain of common knowledge. They become so simple that they cease to surprise us. We do not think of being grateful, and we forget the efforts which genius has had to make to wrest the truth from jealous nature. Gentlemen, let us not be ungrateful, let us remember that the recog-

nition of the real cause of all fermentation (the development and germination of organized elements) dates from 1857 and from the celebrated memoir of Pasteur upon lactic fermentation. A new world was then opened to science.

Nevertheless this memoir of Pasteur's, containing one of the fundamental discoveries of the century, was not welcomed as it ought to have been. At first its importance was not understood, and afterwards absurd contradictions were opposed to it. A whole series of beautiful and decisive experiments were necessary to prove that there was no such thing as spontaneous generation, and that sterile liquids remained sterile indefinitely so long as no germs were introduced into them. Pasteur devoted six years (1857-1863) to the proof of the fundamental fact that "organic liquids do not alter until a living germ is introduced into them, and living germs exist everywhere."

The Microbic Theory of Disease.

A great step yet remained to be taken. This was to determine the evolution of these germs, not merely *in vitro* but in the living organism. We to whom the idea of parasitism and microbic infection is now so familiar can scarcely conceive that it has not always been thus.

The microbic theory has become so ordinary, so popular, that we are tempted to believe that the part played by microbes was understood even in the times of Hippocrates; but I assure you that in truth this was not the case, and for long enough after Hippocrates the power of microbes was not known.

Pasteur, to whom, and to Sédillot and Littré, we owe the word microbe, was the first also to explain to us in his essay on the silkworm disease, published in 1867, the part they played in the production of disease. He proved that the bright corpuscles found in the bodies of diseased silkworms are living germs—a distinct living species, a parasite which can multiply and reproduce itself and disseminate the contagion.

It was therefore with painful astonishment that I heard Prof. Marshall Hall recently say that the discovery of the part played by micro-organisms in disease was due to Koch, and dated from 1876. Now, ten years before this, Pasteur had published his experiments on *pébrine* and *flacherie*. Davaine had shown the part played by bacteria in anthrax infection, and the idea of infection and of contagion by microbes in the higher animals as well as in the lower had become a common place, not indeed in the medical world, but in all laboratories.

Thus, by successive steps, did the work of Pasteur develop in

all its greatness and logic. In the first place in order to elucidate a chemical problem he studied tartaric fermentation, then he was led to study lactic fermentation, and he showed that they were biological phenomena. He then pursued the analysis of this phenomena with all its consequences, and was led to the conception that disease was due to the development of a parasite.

The normal living being follows out its course of growth without the development of any organic parasite in its tissues or in its humors. But if these humors or tissues happen to be inoculated with an organism capable of developing, then this small living thing multiplies, in the higher organism infected and the whole body becomes as it were a culture fluid, in which the pathogenic microbe propagates itself, a centre of infection which scatters the disease by sowing the noxious germs wherever it goes. Thus arose the new conception, profoundly new not only for medicine, but for hygiene—*Disease is Parasitism.* From thenceforth we understood the meaning of the words "infection" and "contagion," previously mysterious.

It is true that Pasteur did not discover all the microbes of all contagious diseases, but this is of small moment since he was the first to discover that infection was a phenomenon of microbial parasitism. All those who after him have proved points of detail, however important or fundamental they may be, have but followed the path traced by the master. Whether they will or not, they are all the pupils of Pasteur, as those who follow the study of chemistry are pupils of Lavoisier.

The greatest of Pasteur's disciples, Robert Koch, although with some ingratitude he refuses to recognize his master, has only perfected certain points in *technique*, and applied his ingenuity and his perspicacity to the solution of questions which in spite of their practical importance are still secondary. He has not, in fact, been able to do anything new except upon points of detail, all that is essential comes from Pasteur himself.

Need I say that this idea of the microbe, of the parasite, has become the basis of medicine. If we take up treatises on pathology written before this prodigious revolution, we shall be astonished by the insignificance and the nothingness of these very ancient books. Yet they are not really very old, they are dated 1875 or 1880; but as one reads them it seems as though several centuries must have intervened between these venerable writings and modern books. I know an excellent article on tuberculosis written in 1878 before the microbe of tuberculosis had been discovered. Well, this article belongs to another age, it belongs no longer to medicine, but to the history of medicine, for it swarms with mistakes and incredible errors with regard to pathological anatomy, etiology, prophylaxis, treatment,—in fact, from every point of view.

In ten years medicine has been entirely overturned and remade. It is being re-made every day. Every day brings some new discovery in matters of detail, but the great principle is always there, and, it must always be attributed to the one initiator.

This is not all. Another new and great discovery was to be made by Pasteur himself, and to constitute the supreme development, the culminating point as it were of his life's work. This is the principle of vaccination. By a series of researches, admirable for their precision, Pasteur proved that the pathogenic microbe could be attenuated,—that is to say, rendered incapable of causing death. But though this microbe does not cause death yet it can produce the disease. A disease sometimes so attenuated as to be almost imperceptible. Now the living being which has suffered from this attenuated disease is protected against its more serious forms, and, borrowing the word consecrated by the immortal discovery of Jenner, Pasteur said that we have here *vaccination*.

Fermentation, infection, contagion, vaccination; here in four words we have the work of Pasteur. What more need I say? Do not these four words possess, in their simplicity, unequalled eloquence?

Can anyone longer maintain that the progress of medicine is not due to experimental science? Does not all this knowledge of microbes and of the part which they play in disease imply, immediately and necessarily, immense progress in therapeutics?

Antiseptic Surgery.

To take but one example, I will cite the application of microbial theories to surgery.

There was a time when erysipelas, purulent infection and hospital gangrene decimated those upon whom operations had been performed, when puerperal infection claimed a terrible number of victims. It seems to us now-a-days that the medical profession before 1868 were blindfolded, and that their blindness was almost criminal. These are now no more than historic memories. A sad history, doubtless, but one which we must look at coolly in order to understand what science can do for medicine. Left to their own resources, practitioners of medicine during long centuries could do nothing against erysipelas, against purulent infection, against puerperal infection, but, basing itself upon science, surgery has been able to triumph over these odious diseases and to relegate them to the past.

Let me here introduce a reminiscence. When, on the occasion of his jubilee, a great celebration was prepared for Pasteur in the Sorbonne, in the presence of the leading men of science of the

world, there was a moment when all hearts were softened—the moment when the great surgeon who was the first to perceive how to apply to the practice of his art the theory of pathogenic parasites, when Lord Lister drew near to Pasteur and gave him a fraternal embrace. These two great benefactors of humanity, united in their common work, afforded a spectacle never to be forgotten, a striking reconciliation of medicine with science.

But the apogee of the glory of Pasteur was the discovery of the new treatment of hydrophobia. No one of his scientific conquests was more popular, and from France and from the whole world there arose a long cry of admiration. Perhaps in the eyes of biologists this discovery possesses less importance than his labors with reference to the fermentations and to vaccination, but for the public this was the chief part of Pasteur's work. And men of science also were forced to admire the scientific courage of Pasteur, who, putting aside the precise methods which he had taught and discovered, knew how to devise new methods to meet the exigencies of the circumstances, and how to put them victoriously into practice.

Thus was finished the work of Pasteur. He was spared to take part in the triumph of his ideas, and to be a witness of his own glory. If, like so many creators, he had sometimes in his earlier days known conflicts and hatreds and petty quarrels and foolish objections, nevertheless he had not to deplore the ingratitude of mankind. He died full of honors, surrounded by admiration, respect and love. For him posterity had already commenced when he died.

The Union of Medicine and Science.

And now let us turn back to consider the indisputable union of medicine and of science. This, in fact, is what ought to strike us in the work of Pasteur. It is not only in general biology and in the progress of our knowledge that his work is great, it is still more in its immediate practical applications. The great biologists of our century, Lavoisier, Claude Bernard, Darwin, have without doubt left behind them work which by reason of its conquest of new truths is not inferior to the work of Pasteur; but these new truths do not lead to any such immediate application as antisepsis, the treatment of hydrophobia, anthrax-vaccination, or the prophylaxis of infectious diseases. Pasteur was not only a man of science, he was also a philanthropist, and there is scarcely one who can be compared with him as a benefactor of suffering humanity except Jenner, who found out how to preserve thousands and thousands of human beings from the most hideous of all diseases.

Further, Pasteur brought back medicine into the true way of science. Even after Magendie, Müller, Schwann and Claude

Bernard, it might still have been asked whether all these experiments establishing so many important truths had really been of any advantage for the relief of the sick. To discover, as did Schwann, that living beings are an aggregate of cells; to prve, as did Claude Bernard, that the liver forms sugar; to establish, as did Darwin, that living species can be transformed by the influence of long-accumulated variations in the environments—these are admirable pieces of work, but work in pure science which had not any immediate therapeutic results. Strictly speaking then it was possible to maintain that clinical medicine did not derive any benefit from such investigations. I do not for a moment believe that this opinion had a shadow of a foundation, but before the time of Pasteur it was not so absurd as it has become since Pasteur. Since Pasteur no man can, without incurring the charge of monstrous inaptitude, refuse the rights of citizenship in medicine to experiment, and to biology.

And, to speak the truth, men of science and biologists, as though their ardor had been redoubled by the renovation of medical ideas, have during these last ten years made discoveries which have introduced into medical science new elements which clinical observation alone had been absolutely incapable of discovering. I will cite a few examples—the action of the thyroid gland, the Roentgen rays, pancreatic diabetes, and serum-therapeutics.

Serum-Therapeutics.

Physiologists had shown long ago that the ablation of the thyroid gland led to serious results. Schiff had proved this as long ago as 1857, but the explanation of the phenomenon did not become clear until Claude Bernard, but especially Brown-Sequard, had demonstrated the existence of internal secretions of glands pouring into the blood their products which probably neutralize certain toxic substances. This very naturally led Pascal and Gley to inject into animals from whom the thyroid gland had been removed, the juice of the thyroid, and this prolonged their lives. The therapeutic conclusion to be drawn was obvious, namely, to treat the unfortunate subjects of cretinism or of diseases of the thyroid gland by the injection of extracts of the thyroid body. You know that the result has been most happy.

This new treatment was a true experiment, and as is the case with so many experiments the actual result has been a little different to that which was expected. The ingestion of thyroidin is not only a means of curing goitre and cretinism, but is also a treatment, sometimes remarkably efficacious, for obesity.

The Roentgen Rays.

The discovery of the Roentgen rays excited general enthusiasm, and as a matter of fact it is one of the greatest conquests of contemporary physics. Most assuredly medicine had nothing to do with it. The research was made, and the success was obtained in a physical laboratory. Now you are not unaware that these Roentgen rays have been called to play a part, if not in the treatment, at least in the diagnosis of diseases—a part the importance of which goes on increasing from day to day. Physicists have discovered the principle, it is for medical men to follow up its application.

Pancreatic Diabetes.

The existence of pancreatic diabetes was suspected vaguely by a clinical physician, Lancereaux, but the means which clinical medicine and pathological anatomy placed at his disposal did not give him the power to solve the problem. In spite of his perspicacity he could do no more than note a certain correspondence between diabetes and lesions of the pancreas. How could more have been learnt if we had not the resource of experiment? Two physiologists, Mering and Minkowski, have had the good fortune to show that ablation of the pancreas determines glycosuria, to show that there is a pancreatic diabetes, and they have studied its various conditions with great ability.

Serum Therapeutics.

I come now to serum therapeutics, a direct consequence of the labors of Pasteur. This is a mode of treatment born of the experimental method alone. Here again science has done for the art of medicine that which clinical observation left to its own resources could never have accomplished.

Permit me now to show how serum therapeutics is derived directly from physiology and experiment, and pardon me if I am forced to speak of my own work; I shall do so I hope without any vanity. I know very well that we always owe to our predecessors and to our rivals much more than our pride admits, and that the experiments and the ideas which succeed are not always those which have been conceived most methodically.

About 1887 M. Cheauveau had shown that French sheep could contract anthrax, and that they are very easily infected by the bacillus anthracis, the microbe of anthrax, if small quantities of the bacillus be injected under the skin. But Algerian sheep seem to be safe from the disease. In vain is the bacillus anthracis injected into them; they do not contract anthrax. They are refractory to

this disease and possess a remarkable immunity to it. Having reflected on this strange fact, I framed the hypothesis that the cause of the immunity of the Algerian sheep, which are absolutely similar from the anatomical and zoological point of view to French sheep, depended upon chemical substances contained in the blood, and that in consequence we might hope to confer immunity on French sheep by transfusing them with the blood of the Algerian sheep. It is, however, difficult to make experiments on sheep. Therefore, with my friend Hericourt, who has been throughout these researches my tireless fellow-worker, I took animals of two different species, the common victims of physiologists—rabbits and dogs.

Just at that time we had been studying a microbe nearly related to the staphylococcus albus, the staphylococcus pyosepticus which in rabbits produces enormous subcutaneous swellings when injected under the skin, and causes death in 24 or 36 hours. The dog on the other hand seems to be almost refractory to inoculation with this microbe. We therefore attempted to transfuse the blood of the normal dog into rabbits by intravenous injection, but this operation did not succeed, for the transfusion of dog's blood into the veins of the rabbit even in a dose of only ten grammes rapidly causes death.

It then occurred to us to resort to peritoneal transfusion in place of intravenous transfusion. In this way we were able to introduce into the organisms of the rabbit 50 or 60 grammes of dog's blood, and had the good fortune to see the experiment succeed completely. Rabbits transfused with the blood of the normal dog survived the inoculation of the microbe for four or five days, and rabbits transfused with the blood of a dog vaccinated against the microbe did not die, and were in fact hardly ill at all.

This experiment, which was made on November 5th, 1888, is as it seems to me the very basis of serum therapeutics. It in fact proves that the blood of animals refractory to a disease contains chemical bodies which counteract the effects of the specific pathogenic microbe of the disease. We understood its importance from the first, and having established the general pathological principle we resolved to apply it to a disease of man.

For several days, then, Hericourt and I debated the question whether we should experiment with one or other of the three diseases —anthrax, diphtheria, or tuberculosis. Unfortunately we decided for tuberculosis. Its microbe is easily cultivated and, as you know, it produces greater ravages among men and animals than any other disease. We set to work at once, but, as you will understand, time was required before we could obtain definite results. Still, in a year's time we were able to show that the injection of dog's blood

into rabbits retarded enormously the development of tuberculosis. It was, nevertheless, necessary to pass from experimental physiology to human therapeutics. Taking advantage of an observation of Bouchard's, to the effect that the serum of refractory animals is as active as the whole blood, we were able to inject the serum in tuberculous diseases. The first sero-therapeutic injection was made by us on December 6th, 1889.

At first we had for a space great hope. Yes, in truth, for several weeks we believed that we had discovered the heroic treatment of tuberculosis. For several weeks the various patients that we had under treatment found that their strength was renewed, that their appetite returned, that their weight increased, and that cough and expectoration disappeared almost completely. But, alas! it was no more than a transient improvement. A month or a month and a half later the pitiless disease resumed its course, and the sero-therapeutic treatment turned out to be inefficacious. Happily, while by the most diverse plans we were in vain searching for a method of treating tuberculosis by serum, a German experimenter, Behring, after studying the effects of the serum of refractory animals upon diphtheria, showed (in 1892) that this serum is wonderfully efficacious in the treatment of the disease. He applied the serum method of treatment not only to diphtheria, but also to tetanus, and, at first in animals and afterwards in man, he obtained results which were really marvellous. Gentlemen, you know the rest, and I need not tell you that this sero-therapeutic method, improved and popularized by Roux in 1894, is now a treatment without compare. The statistics on this head are absolutely conclusive. The mortality of diphtheria, which was 45 per cent., has fallen to 15 per cent. That means for the city of Paris alone an annual saving of about 1,000 human lives; for the whole of France, nearly 10,000 lives. We may take the same proportion for Italy, Germany, England, the United States, Canada and Russia, and may estimate the number of infants which serum-therapeutics snatch from death at about 50,000.

In other diseases the results of serum-therapeutics have been much more open to criticism, and it would be necessary, in order to arrive at a satisfactory conclusion, to discuss them in detail. I cannot attempt to do this here, for it would be an abuse of your patience. I will content myself by venturing the opinion that serum-therapeutics has not said its last word. The organism is endowed with a marvellous power of resisting the poisons secreted by microbes. It sets to work in its turn to secrete counter-poisons which neutralize the poisons secreted by the microbe. The anti-toxins of the organism combat the toxins of the parasite, and in the future the art of serum-therapeutics will be to seek in these resisting organisms the anti-toxins fabricated by their cells.

Thus on whatever side we turn we find that medicine has always been guided by experimental science. By experiment and by science it is compelled to march forward. This was true in the time of Harvey, for that immortal physiologist had to meet the opposition of physicians. This was true also in the time of Lavoisier, when by a few decisive experiments he proved the chemical nature of the phenomena of life. But how much more true is it at the present time since Claude Bernard and above all Pasteur have by experiment laid open a whole world, and have warranted us in conceiving the widest hopes for the future of medicine?

The parts of the man of science and of the physician are very different. The physician ought to be conservative, applying methodically the teaching and the precepts which he has received. He has no right to experiment upon his patients, or to permit human life or human suffering to be risked on fantastic theories. But the man of science ought to be a revolutionist. He ought not to be content with the doctrines which he has been taught. The opinion of the master ought to be but a light weight upon his mind. He ought to seek on every hand for facts which are new and even improbable. Darwin says somewhere that he had made the experiments of a fool, and often it is right to attempt that which appears contradictory to all the most received and classical opinions. Without this spirit of adventure, without this scientific daring which opens up new horizons there is no progress.

The task of the explorer or of the pioneer is not that of the physician. He ought to be careful to keep himself abreast of all scientific progress in order that his patients may have the benefit of it, but he cannot advance the progress of science, save within restricted limits. Having no right to experiment, he is almost powerless to solve the difficult problems which arise.

It is the duty of the chemists, the physicists, and above all the physiologists, to guide medicine into the new ways. They have not to take the heavy responsibility of a human life upon their shoulders, and nothing ought to check their audacity. You, gentlemen, have not the right thus to be audacious, you need prudence and moderation; and, convinced as I am of the power of experimental science, I still think that the applications which the chemists and the physiologists suggest to you should only be accepted with considerable caution. It costs us nothing, after a few experiments which have succeeded fairly well, to say to the physician, "Try that on your patients." You know very well that our responsibility is *nil*, and that the ancient axiom *primo no nocere*, an axiom which ought to be your strict rule of conduct, does not in any way apply to us. You see, therefore, that it would be unjust to make it a

matter of reproach to physicians and surgeons that they have not made great scientific discoveries. This is not their mission. It is theirs to relieve human suffering and to seek among new scientific truths that one which is most proper to relieve or to cure the sick.

Nor can I understand how anyone should have wished to create an antagonism between medicine and science. To suppose that they are in contradiction is to show that we understand nothing about either the one or the other. It is not reasonable to assert that the one is superior or inferior to the other; they are different in their means and in their ends. They are mutually complementary, and both are equally necessary.

If I were ill, most assuredly I would not seek the assistance of a chemist, or of a physiologist, and medicine is not to be learned from the books of Claude Bernard or of Pasteur. Clinical instruction is necessary, such as long observation of patients alone can furnish. Prophylaxis, diagnosis, prognosis, therapeutics, are not to be learned in scientific books. Something else is necessary—observation, long, patient observation, the old Hippocratic observation, without which there can be no good physician. Young students must be guided in the examination of patients by experienced practitioners, and no one, I presume, would be guilty of the folly of proposing to replace the clinical ward by the laboratory.

But without laboratories the clinical department must remain incapable of scientific advance, and this condition of stasis is assuredly undesirable. For in spite of all the progress which has been made, much yet remains to be done. Are not tuberculosis and cancer, for example, the disgrace of medicine? I appeal to all medical men here present. Is there any one of you, gentlemen, who in the presence of such paintful modes of death does not feel himself humiliated to the bottom of his soul by his powerlessness?

Well, this feeling of our present powerlessness against disease ought to stimulate us to work. The work to be done is enormous, and we must none of us grow weary of our task. We physiologists must seek new facts, we must seek and seek again, seek always without being afraid of the boldest hypotheses, and without putting any limit to our audacity, without troubling our heads as to the practical consequences which may flow from our discoveries, having only truth, divine truth, for our object. As for you, gentlemen, it is your duty to follow with the warmest interest both the general effect and the detailed results of biological discoveries, in order to attempt to find some practical application for them. From this unceasing collaboration progress will be born. But it is necessary that men of science and physicians should both be animated with these two governing sentiments—faith in science and love of man.

Selected Article.

A FEW OBSERVATIONS OF SOME EASTERN EUROPEAN TOWNS AND HOSPITALS.

By CASEY A. WOOD, M. D., Chicago.

The disputed question as to the whereabouts of the largest hospital in the world will be decided in a year or so when the great *Ospedale Romana* is completed. This enormous establishment was begun in 1893, and has already cost many millions of *lire*. It will inclose within its limits, in north-eastern Rome, all the various public hospitals, dispensaries, laboratories and clinics now scattered over the Imperial city. Instead of numerous isolated institutions, most of them housed in old, insanitary and dingy quarters, there will be but one collection of clean, well built, well drained, well ventilated, well lighted pavilions, replete with all the appliances, and provided with all the improvements that distinguish the modern hospital. On the other hand, the present father of hospitals, the great Allgemeines Krankenhaus, at Vienna, grows more and more out-at-the-elbows, down-at-the-heels and baggy-at-the-knees. Nobody has better reason than the writer to appreciate how much the whole profession owes those ancient buildings in the Josephstadt, but surely the time has come for a change, not only in the nursing methods that have so long prevailed there, but in the old microbe-laden walls themselves—a thought suggested by contemplation of the recent hospital erections that almost every small town in Europe and America seems to be making in response to the demand for absolute cleanliness on the part of everything and everybody who enters hospital doors.

When the city hospital in Rome is ready for occupation it will afford ample facilities for study, and, if a liberal policy be pursued toward foreigners, the Italian capital will make a most attractive and profitable center for medical study, and may divert to itself some of that large stream of students that for so many years has been steadily flowing towards Vienna. The work done by Italians in all departments of medicine and surgery deserves to be better known than it is. Moreover, the language, spoken, written and printed, is much more easily learned by Americans than is German, especially when the student has been assisted by a previous acquaintance with more or less French or Latin. In the province

of ophthalmology and otology, with which the writer is most conversant, it may be said with truth that not to know enough Italian for translation purposes is to miss almost as much as not to be able to read French. Certain it is that the medical schools of Pavia, Turin, Rome, Naples and Palermo all have well informed ophthalmologists and otologists attached to them whose activities are of a kind by no means inferior to the best effort of the professors in German, American and French universities.

Although we found Athens in a state of general war depression, the hospital service seemed good in all its appointments. There is an ophthalmic hospital of considerable size for a city of 200,000, that is to say, its dispensary department is largely attended, and it has twenty-four beds for indoor patients. Professor Anagnostakis, who had for years held the foremost place in Greek ophthalmology, having just died, I was indebted to the courtesy of Dr. Georgios Gazepy for my news. Although the limestone dust of Athens covers everything including the bodies of its visitors, it does not appear to set up any particular affection of eyes, throat or lungs. The rather severe winter and the elevated site of the town probably serve to neutralize the harm done by the breathing of a summer air impregnated with lime and dust. So far as I could learn, Athens presents no peculiar eye or ear disease. There are very few cases even of trachoma, although intercourse with Asia Minor and Egypt is frequent and easy. Gazepy illustrated some of the difficulties the oculist who practices in the East has to contend with, by showing me his test cards and types, arranged for ten languages, all of which he is at times called upon to use, viz., Greek, Turkish, Arabian, Servian, Roumanian, Bulgarian, Armenian, French, Italian and Russian.

So far as we could learn, the unfortunate Greek army operating on the Thessalian frontier during the Turko-Greek war was entirely without surgical equipment. A spasmodic attempt to establish a first aid line was, after a time, made with the assistance of some English nurses that accompanied the troops as far as Volo, but even this was entirely inadequate, especially as the temporary hospitals had to be abandoned to the enemy shortly after their establishment. The polite Turk sent a message to these brave women, who had been instrumental in carrying out the project, that they entirely approved of the arrangements and found their quarters of great service! About the only consolation the Greeks seem to have derived from the recent contest is the fact, corroborated by our subsequent experience of the military hospitals in Constantinople, that their guns of the old Chassepot type had done more execution, both in killing and wounding, than the modern rifles of the Ottoman troops.

A most curious custom prevalent among Greeks of all ages and both sexes (but especially among the men) has a remote medical interest. One of its virtues is that it enables even prisoners condemned to solitary confinement, as most prisoners are in Greece, owing to public sentiment that opposes their competing with non-convict labor, to relieve the tedium of prison hours. Instead of twirling his thumbs, or chewing the ends of his moustache, as the nervous American is wont to do, to while away an idle moment, the Greek deliberately provides for such a contingency by carrying about a string of beads that, by the way, have nothing to do with any religious observance whatever. These he draws from his pocket, wherever he may happen to be, and monotonously counts them one by one, or simpiy pushes them along singly, or two at a time, from one end of the string to the other. Surely this is an improvement on gum chewing, rocking-chair exercise or toying with some article of use or adornment as an occupation for nervous individuals, and is particularly recommended as an addition to the pharmacopeia of the neurologist.

As soon as we reached Smyrna evidences of smallpox, from which vaccinated Athens is fairly free, began to appear in the pitted faces of all the numerous races that throng the busy streets of that quaint old town. There seems to be no rooted objection to vaccination on the part of either Mahommedans or infidels; only, nobody seems to interest himself in the matter. and there is no such thing as a compulsory law. Remembering Mary Wortley Montague's experience of inoculation, one would expect prophylactic measures to be widely practiced among a people that are proverbially frugal, abstemious and personally clean. I looked in vain for signs of that ophthalmia which one sees everywhere in Egypt; the people seem to be almost as free of eye affections as the Greeks.

Constantinople is fairly well supplied with both indoor and outdoor hospital service, while the enormous military hospital at Scutari, first established by Florence Nightingale, is, according to Dr. Nicholas Senn, who inspected it during our visit as the guest of the Turkish government, an admirably conducted institution. I was entertained by Dr. Edwin Van Millingen, oculist and aurist to the Sultan, and son of that Dr. Van Millingen who was the friend and medical attendant of Lord Byron during his career in Greece. Van Millingen *père* was with Lord Byron when he died and made the post mortem on his body. The son has recently arrived from a visit to Smyrna and Cairo, and in the latter place made a special study of trachoma. It is a generally accepted axiom among ophthalmologists that certain races, as well as the inhabitants of certain localities without regard to race,

are practically immune to this formidable disease, and among these are counted mountaineers and negroes. Another affection said to be rarely or never seen in the negro is convergent strabismus, and this rule certainly holds good for the American continent. Dr. Van Millingen's experience in Egypt has disproved its universal application, as he found trachoma very prevalent among the pure native and immigrant negroes of Egypt. Although it is very infrequent, he has seen, indeed had a case under observation in Constantinople at the time, well-marked instances of convergent squint among pure north African negroes. As a result of several months' examination of the various races in Egypt he found trachoma in the following proportions: Among the native (1,000 of each race examined) Mohammedans, 86 per cent.; Copts, 85 per cent.; Jews, 92 per cent.; blacks, 60 per cent. Among the foreign population, of which 200 of each were examined, the proportion was: English soldiers, 0; Syrians, Jews, Hindoos, Armenians, Turks, 24 per cent; negroes who have lived in the delta from four to thirty years, 50 per cent.; negroes born in Egypt, 70 per cent. Not only is the disease thus prevalent in such awful proportions, but it is more acute and more destructive than with us. Pannus is comparatively rare, but corneal ulcers are more common than in European countries. He denies that the Soudanese negro is more prone to contract granular ophthalmia than his cousin of the west coast, because he has a mixture of Semitic blood in his veins, since the Soudan has only recently had intercourse with Arabia.

The principal military surgeon-oculist is Dr. V. Behjet who is also the professor in the University. He has to deal in common with other gunshot wounds inflicted during the war, with a number of interesting cases of injury to the orbit, some of them involving the ocular structures. His station was the Yildiz Hospital attached to that imposing array of barracks that surround and protect the palace of the Sultan.

I was much interested in the question of the prevalence of tobacco amblyopia, considering the large amount of the weed consumed in Turkey. Van Millingen informs me that he has never seen a case in a nargileh smoker during his twenty-six years of practice. All the cases of tobacco blindness occur in cigarette, cigar and ordinary pipe smokers. He thinks that the water-pipe undoubtedly prevents the disease and that in the case of cigarette smoking the nicotin is largely absorbed by the lips. As might be expected also, alcohol poisoning (amblyopia included) and trichinosis are practically unknown among a population that really obey the commands of the Koran in the matter of wine and pork. In a country where blindness in both eyes is common from the

formation of large scars over the whole cornea, Van Millingen tried the experiment of trephining a piece of opaque cornea when all other experiments had failed. He then placed over the globe a protective glass shell. The opening in the cornea often persisted for weeks and even months, and when the parts are kept aseptic the patient is able to see (in some instances to read) for quite a long period. When the wound finally cicatrizes the patient is not in any worse state than before the operation and has enjoyed some months of vision, during which time he may have transacted business or have accomplished something that with his blind eyes he could never have succeeded in doing. At any rate, the patient will be able to refer to the period of temporary vision as a pleasant experience when it was better to have seen the happy things of earth for a season then not to have seen at all.

The medical institutions of Moscow are admirably planned and equal in efficiency to those of the other large continental cities. Its public sanitation is,however, not as well looked after as in Berlin or Paris. The drinking water supply is defective and the sewerage system is very incomplete. Water for table use must be carted in casks from distant springs, and the antiquated cesspool, with all its discomforts and dangers, still remains. The mortality rate is, notwithstanding these drawbacks, not high (29.5 per 1,000 of 1,000,000 population), although in 1896 there were nearly 6,000 cases of continued fevers of all kinds, 164 cases of smallpox, 2,380 of diphtheria, 3,500 of intermittent and recurrent fevers and 1,000 cases of chickenpox. The pure Russian is a sturdy and healthy-looking individual, somewhat given to drunkenness and other bad habits, but probably preserved from excessive alcohol and tobacco indulgence by having access to tea as a stimulant. The almost entire absence of smoking among the lower classes is strangely contrasted with the persistent use of cigarettes and cigars by the upper ten thousand. The latter smoke all the time, even between courses at meal time, while the peasant and his city equivalent never smoke, out of the doors at least. The *samovar*, or hot water kettle, for tea making, is everywhere, and it is astonishing to note the quantities of boiling hot tea drunk by all classes at all times of the day. We noticed a large number of persons going about in all the cities with their heads tied up in bandages, hankerchiefs, etc. It was as if there had been a recent epidemic of mumps. We found the trouble to be often middle ear suppuration, complicated with sore throat, decayed teeth, etc. It was explained that the Russians drink their tea so hot that actual burns of the pharynx and oral mucous membrane frequently occur. This sets up,

by infection mainly, acute inflammatory processes in the walls and contents of the naso-oral cavities that often lead to serious consequences.

The majority of the hospitals, clinics, dispensaries and laboratories of medical and surgical Moscow are clustered together in a district called *Dievitchie Pole*, much as they are in Vienna, but with differences greatly in favor of the former city. The buildings are well separated, surrounded by plentiful breathing space and provided with an abundance of light and air. Here it is that most of the clinical and didactic teaching of the medical department of the Imperial Moscow University is given. The material for this purpose is practically endless, and there seems no reason why the average Russian doctor should not receive an education quite equal to that furnished by the other continental schools. For example, in obstetrics there were, in 1896, nearly seven thousand accouchements in the eight public stations of the city, all of them accessible to students. The fact that out of the 31,000 births in Moscow that year, more than nine thousand were illegitimate throws some light on the advantages of this town as a center of obstetric study. A similar story could be told of general and special surgery in all their various branches. The bacteriologic institute, for instance, has a fine collection of animals, and during 1896 delivered to various public and private institutions more than twenty thousand bottles of serum anti-diphtheria, streptococcus infection, tetanus, recurrent fever, etc. I have been informed that the dental clinic attached to the University Dental School (where five sessions of six months each are required for graduation) was attended by nearly ten thousand patients in 1896. Although the methods employed are still somewhat antiquated, it is housed in a building whose appointments far surpass anything of the kind we have in America. It has, among other conveniences, two laboratories, a library and a large museum filled with all sorts of anatomic, microscopic and chemic preparations.

There are many hospitals and dispensaries not attached to the University, some of them of considerable size and importance. Ophthalmology is well represented among these. The Moscow Ophthalmic Hospital has 100 beds, with 722 indoor patients during 1896, and in it 1,750 major operations were done. Twelve thousand patients attended the outdoor department. Connected with this extensive charity is a blind asylum with beds for twenty-five inmates. An account of most of the other hospitals and medical conveniences of the city would be merely a tedious repetition of descriptions applicable to any other large European town, but there are at least two institutions peculiar to this part of Russia, and of considerable interest.

The first is the great Foundling Hospital, instituted by Catherine II. in 1764. Twenty large halls accommodate 980 beds for nursing infants. In summer most of these are transferred to the gardens of the Hospital in which are erected twelve *marquées* with 730 beds. This institution received: 1. Illegitimate infants deprived of their mothers. 2. Abandoned infants. 3. Illegitimate children whose mothers are unable to care for them at home. 4. Legitimate children to be cared for until they are a year old, when the illness of the mother or the poverty of the father prevents their receiving proper care. The average stay of the children in the hospital is thirty- seven days. For about a month each child has a special nurse and for ten days more one nurse looks after two children. When there is a dearth of nurses the mothers of the illegitimate children are requested to act in that capacity, when she is paid about $4 a month (fair wages in Russia) for the service. In case of a refusal the child is not admitted. The average daily attendance in 1896 was 1,005 children and 675 nurses. In an annex are buildings with 150 beds, usually full, where children and sick nurses are treated. All the children are vaccinated as soon as possible at a station where vaccine is also prepared and distributed gratuitously to all who apply. From the Foundling the children, regarded as wards of the State, are sent to certain districts in the country. Hundreds of villages receive their yearly quota, all of whom remain under the care of inspectors and physicians appointed by the State until they are able to take care of themselves. In spite of all sanitary and other precautions the death rate is enormous. Of about eleven thousand children cared for in 1896, 4,028 died, 5,175 being sent to the country. In the beginning of 1897 there were living in the districts above described nearly twenty-nine thousand small foundlings under the care of the hospital authorities. The income of the institution for 1895 was about $600,000.

There are several stations for the sale and preparation of koumyss (or kumys) in and about Moscow (the Maretzky establishment at Sokolniki, for instance), but if we are to believe most authorities, the simon-pure article must be made near and drunk in combination with exercise on the *steppes* of the Volga. Samara, about a day's journey from Moscow, has two of the most noted and oldest of these Russian sanitaria, gotten up pretty much in the same style as similar resorts elsewhere. They are naturally surrounded by pine forests and artificially by lawns, gardens and pleasant walks. The management has also provided them with various kinds of outdoor amusements. One of the best is called the *Datcha Annaeva*. The season is May and June, and the visitor is generally expected to take baths, outdoor

exercise and to drink unlimited kumys. The Tartar mares feed on the rich plume grass and wild strawberry of the steppes, which give the milk of this region certain peculiarities. It is particularly rich in sugar, somewhat defective in fat and contains a portion of albumin resembling that of the human animal. It does not bear transportation, and is readily affected by any departure from certain rules governing the collection and fermentation processes. The mares are carefully tended, never overworked, and milked five or six times daily. Each milking yields about three-fourths of a liter of thin bluish-white milk, of a sweetish taste and peculiar odor. The milk is received in well-boiled wooden pails. The fermentation is brought about by adding, in a churn, fermented to fresh milk in the proportion of five pints of fresh to one of fermented milk. The whole is then churned for an hour and set aside in a temperature of 25 degrees R. The whole quantity begins to ferment in a couple of hours, when it is again churned and again set aside for several hours until it begins to exhale a distinctly alcoholic odor. Fresh milk is again added and the fermentation is stopped at the proper point by cooling. It is now bottled in soda water or champagne bottles and kept at 10 degrees R. The strength, chemic composition and therapeutic action of kumys vary greatly according to the method of preparation; it may be strongly alcoholic and decidedly intoxicant or it may be as faintly spirituous as the mildest Weiss Bier. Probably the outdoor air, regular exercise, pleasant surrounding and careful dieting of the kumys cures have as much to do with the improvement of patients as the drink itself, and this is the reason, no doubt, that the city stations are not as satisfactory places for treatment as the wild steppes themselves. Moreover, unless tested by an expert "taster," too little or too much fermentation of the kumys may occur, and even the best mare's milk be spoiled in the preparation. "Cream Kumys," made of cow's milk, is entirely unlike the original, as it necessarily contains ingredients entirely unlike the mare's milk product and cannot, therefore, be therapeutically compared with it. The kumys cure is regarded in Russia as a specific in all cases of chronic pulmonary diseases, anemia, chronic digestive derangements, most kidney diseases, scurvy and "general debility." The allowance for each patient is from six to sixteen bottles daily.—*Journal of the American Medical Association,* October 2nd, 1897.

Medical Society Proceedings.

COLLEGE OF PHYSICIANS AND SURGEONS OF THE PROVINCE OF QUEBEC.

Report of Meeting, 29th September, 1897.

PROVINCIAL MEDICAL BOARD, QUEBEC.

The semi-annual meeting of the Governors of the College of Physicians and Surgeons of the Province of Quebec took place on the 29th of September, 1897, in the hall of the Faculty of Medicine, Laval University.

The President, Dr. L. J. A. Simard, took the chair at 10 a. m.

Members Present :—Drs. L. J. A. Simard, F. J. Austin and the Hon. Dr. David Marcil, vice-presidents ; Dr. Léonidas LaRue, treasurer ; Dr. J. M. Beausoleil, registrar ; Drs. A. Vallée, W. A. Verge, C. S. Parke, A. A. Walters, C. E. Lemieux, R. Fiset, P. E. Grandbois, C. Rinfret, J. Godbout, P. M. Guay, C. E. Vaillancourt, J. M. McKay, E. E. Laurent, N. Fafard, T. G. Roddick, S. A. Lacombe, P. Laberge, P. Cartier, Régis Latraverse, H. Cholette, P. J. L. Bissonnette, J. E. Fournier, Séraphin Gauthier, J. O. Camirand, L. C. Bachand, L. P. Normand, L. A. Plante, F. W. Campbell, J. B. McConnell.

The minutes of the last meeting were read and confirmed.

The Report of the Preliminary Examinations was read and confirmed, and, according to this report, Messrs. Lorenzo Montreuil and Robert Shearer have passed in Literature and Science.

James M. Duncan, jun.. Edward P. J. Masson, Alcide Fortin, J. H. Alexander, Francis R. Jones, Edward McAleer and Louis Belle-Isle have passed in Literature.

Messrs. L. J. Ouimet and Archibald H. Newman passed in Science.

Dr. Belleau, secretary, read the Report of the Committee on Credentials.

The following graduates have taken their degrees : J. H. Laidley, Alfred Simard, Louis Eugène Admire Parrot, F. Horace Pelletier, Jean Marie Arthur Rousseau, Armand Marcotte, Joseph Pageau, Achille Joseph Boisvert, Joseph Emile Albert Poliquin, Joseph Télesphore Gauvreau, Télesphore Dubord, Samuel W. Hewetson, Camille Elzéar Deguire, Henri Lafleur, Eleas Groulx, Paul Trudel, Olivier Tourigny, L. P. de Granpré, Joseph Louis Henri Pagé, F. X. Massicotte, J. A. Poirier, J. A. E. Ethier, Polydore Albert Dansereau, Oswald Létourneau, David Alexander Shires, James Barkley, Hugh Lennon, Archibald L. Foster, B. Bordeleau, Mademoiselle Regina Landeau, F. X. Duplessis, Jean Baptiste Arthur Quintal, Romuald Picard, Pierre Vandandaigue, Wilfrid Lamy.

Wilfrid F. D. Gadbois will be obliged to pass the professional examination.

Edward A. Mulligan,

Joseph Dequoy will have to pass the examination in final subjects. Mr. Dequoy is equal with Messrs. L. J. A. Migneault and Thomas Lovitt.

The above-mentioned graduates having taken their degrees, have, upon taking the oath, been accorded provincial license to practice.

The following gentlemen have been admitted to the study of Medicine and Surgery: Messrs. Joseph Garon, Narcisse Doucet, Joseph Horace John Kane, Joseph Eugene Beaudet, Pierre Edouard Grenier, Rodolphe Auguste Sirois, Robert Mayrand, Rodolphe Pepin, J. L. A. Melançon, Louis M. Dechene, J. A. St. Pierre, U. Paquin, J. M. A. Valois, L. V. Chapdelaine, L. Legault, D. Jacques, J. A. Belanger, A. Ste. Marie, Joseph Pagé, A. Trepanier, W. Paquin, S. Morin, H. Borden, J. H. Simpson, D. A. Shires, J. Barkley, H. B. Wyman, J. A. L. Laplante, E. Penner, A. Guertin.

Dr. Beausoleil read the following report of the Library Committee:

LIBRARY COMMITTEE.

Mr. President and Members of the Medical Bureau:

GENTLEMEN:—Your committee has the honor to report:

1st. That the volumes, the purchase of which you authorized, have been laid upon the shelves of the library of the College of Physicians and Surgeons of this province, after having been suitably bound.

2nd. They have to acknowledge, with thanks, the receipt, through the kindness of Dr. I. N. Desroches, of five volumes of *The Medical Science Annual*, by Sajous, of the year 1890, and also of *Report of the State Board of Health*, Michigan, 1889, 1890, 1891, Pennsylvania, 1889-90.

3rd. That a large number of doctors from the province as well as from the city have visited and consulted our library.

4th. That to meet the wants of the medico-chirurgical practice, general as well as special, your Committee begs you to authorize them to procure some works bearing on the following subjects:

Duval, Brault, Letulle: Normal Histology, Pathology.
Hayem, Lyon, Robin: Practice of Medicine and Therapeutics.
Wurtz, Kalden, Thoinot: Bacteriology.
Lestut or Poirier: Anatomy.
Gettuchten: Nervous System.
Dieulafoy: Internal Pathology.
Ribermont, Dessaigne: Obstetrics.
Tillaux: Anatomy and Clinical Surgery.
Fuchs, Panas, Foucher: Ophthalmology.
Bronardel, Vibert: Legal Medicine.
Fournier: Syphilis. Syphilis and Marriage.
Pinard: Puerperal Infection.
Doleris: Gynecological Practice.
Bordier:
Gnardea: History of Medicine (Medicine across the Centuries).

5th. Your Committee begs you also to authorize the President to take and have bound and catalogued the Thesis of Paris, 1896-97, which your Committee has just received.

6th. Having received by kind donation thirty-five volumes of *The Annual of the Medical Sciences*, being from its foundation to 1895, your Committee ask to be authorized to continue the subscription to this important review, the most important in every respect, since the suspension of the publication of *L'Index Medicus*, and also to choose from among the great medical reviews one or two series, and subscribe to them in order that physicians may be able to find all the information that they desire to procure.

Your Committee is more than ever convinced that it is doing a work of public usefulness in putting at the disposal of the medical profession the works destined to help in the accomplishment of their duty, works which it would otherwise be difficult to procure.

L. J. A. SIMARD, M.D., Presdt.
HON. D. MARCIL, M.D.
E. E. LAURENT, M.D
A. T. BROSSEAU, M.D.
J. M. BEAUSOLEIL, M.D.

This report was confirmed.

COMMITTEE ON RECIPROCITY.

Mr. President and Members of the Board:

GENTLEMEN :—Your Committee has the honour to report:

1st. That the official delegates of the following provinces, Prince Edward's Island, Nova Scotia, New Brunswick, Manitoba, British Columbia, have signed for the adoption of uniform registration of licence to practice.

2nd. That such registration shall be based on the resolution of the conference of 1896, which you confirmed in September of the same year.

3rd. That, before putting the seal to this inter-provincial compact, it would be expedient to give an account of the organization to the various Faculties of Medicine of the sister provinces.

That the President shall have authority to name two delegates, one representing the medical teachers and one representing the profession generally of this province, who shall be charged to complete such a mission, and to sign, if it takes place, a formula of inter-provincial licence of practice.

4th. That it shall be the duty of these delegates to take the necessary steps with the Honorable Minister of Public Instruction and with the Medical Bureau of Ontario towards securing throughout the possessions of British North America a uniform preliminary examination for admission to the study of medical teaching and of control of the medical examinations.

Your Committee believes that the adoption of these resolutions will elevate the general standard of medical teaching favorable to the students of our University, in assuring a wider field of operation and giving to the general public a medical service worthy of its confidence.

Hon. D. MARCIL, President.
C. S. PARKE, M.D.
H. CHOLETTE, M.D.
J. M. BEAUSOLEIL, M.D.

This report was confirmed.

The President gave the following report of the Committee of Legislation.

COMMITTEE OF LEGISLATION.

The Committee of Legislation met on the 4th and 5th of August, 1897, at the School of Medicine of Laval University, in Quebec. There were present: Dr. L. J. A. Simard, President; Hon. Dr. D. Marcil, M. C. J., Vice-President; Drs. Rinfret, M.P., Bissonnette, M.P.P., Beausoleil, Gauthier, Parke, and Belleau, Secretary.

The Committee has the honor to report as follows, and to recommend:—

1st. The nomination of a Council of Medical Discipline, composed of four governors, elected by the Bureau, and of the President who shall be *ex-officio* President of this Council.

2nd. The duties of the Council shall be to hear any complaints which may be brought against any members of the College, to make any enquiries it may judge necessary, and to give its decision in conformity with the code of etiquette adopted by the College of Physicians and Surgeons on the 25th September, 1878.

Of pronouncing, according to the gravity of cases—1st. censure. 2nd. The deprivation of all office and the right of voting for a discretionary term not exceeding six years. 3rd. The deprivation for a given time of the right to practice the profession of medicine. 4th. The Council of discipline shall have the right to condemn one or other of the parties to defray expenses, or to divide it between them. 5th. It may appeal to the Medical Bureau for decision.

On the motion of Dr. Rinfret, seconded by Dr. Vallée, it is so resolved: That the first part of this report of the Committee concerning the nomination of a Council of Discipline be confirmed.

MEDICAL TARIFF.

The following tariff has been discussed item by item, and has been confirmed as follows:

Visits between 8 a.m. and 9 p.m. not exceeding one mile...	$ 1 00
Visits between 9 p.m. to 8 a.m. not exceeding one mile.....	2 00
Every additional mile (in day time).....	0 50
" " " (at night).....	1 00
Detention from 8 a.m. to 8 p.m.....	10 00
" for entire night.....	12 00
Office consultation at the prescription office (by day).....	1 00
" " " " " (at night)	2 00
Consultation, (by day) with a confrère	5 00
" (by night) " "	10 00
" (by correspondence) "	5 00
Ordinary certificate of heath after examination.....	5 00
Certificate with report of illness and death.....	5 00
External post mortem.....	5 00
Post mortem with autopsy.....	15 00
Ordinary confinement.....	5 00
Confinement with version.....	10 00
" " forceps.....	10 00
" complicated with prolonged retention of placenta—extraction of placenta.....	10 00

Miscarriage	5 00
Confinement (twins)	10 00
Catheterizing (ordinary case)	3 00
" (subsequent)	1 00
Vaccination	1 00
Venesection	1 00
Extraction of teeth	0 50
Hypodermic injection	1 00
Use of stomach pump	5 00
Application of cupping-glass, leeches	1 00
Thermocautery	5 00
Anæsthetic	5 00
Fracture of femur	25 00
Fracture of lower leg or arm	2 00
Reducing dislocated hip	30 00 to 50 00
" lower leg or arm	25 00
Fracture of rib	5 00
Fracture of patella	20 00
Dislocation of jaw	5 00
Other fractures and dislocations	5 00 to 20 00
Amputation of thigh	40 00
" leg or arm	30 00
Disarticulation of hip	100 00
Reduction of strangulated hernia	10 00
Strangulated hernia operation	50 00
Radical cure of hernia	50 00
Tracheotomy	25 00
Removal of uterus	25 00 to 50 00
Operation on glottis	5 00
Amputation of fingers or toes	5 00
Ordinary Insurance examination	5 00
Beneficiary insurance	3 00
Analysis of urine	1 00
Microscopic examination of urine	5 00
Microscopic examination of sputum, blood, and pathological specimens	5 00

For all other operations the fee shall be based on the preceding scale, according to their importance and gravity.

MEDICINES.

Medicinal draughts	50c to $2
Powders, pills, etc., according to number	25c to $1
Lotions, liniments, etc., according to quantity	50c to $2

And other medicines of which the price is according to amount, based on the above scale.

Proposed by Dr. Rinfret, seconded by Dr. Gauthier, and resolved: That the tariff with amendments shall be confirmed and presented to the Lieutenant-Governor in Council.

3rd. The President continued to read the following articles of the said report on "Practice of Medecine."

The Committee recommend the following modifications on the subject of "Practice of Medicine," viz.: In place of the three first paragraphs of article 3998, 1st, all persons will be considered as

illegally practicing medicine whose names are not to be found in the Medical Register of the Province of Quebec, and who administer drugs, and perform any surgical or obstetrical operations whatever, whether performed at their own domiciles or elsewhere, either alone or in company with other physicians or surgeons—all such persons shall be liable to a fine of fifty dollars for first conviction, and an additional fifty dollars for every subsequent conviction.

All persons who illegally announce, either through the medium of the press, by circulars, printed or written, by card or sign-board, purporting to be qualified to practice medicine, are liable to the same penalty for every offence.

2nd. Your Committee recommends the following modification in the method of recovering the penalties : The prosecution shall be taken not only before the circuit court of the county or district in which the offence has been committed, but also before a judge of the peace of the same district or county.

All persons found guilty under this act, and who give notice that they shall appeal the decision of the court, must give sufficient securities for the defraying the penalty and expenses, as well as costs of appeal.

3rd. Your Committee recommends the withdrawal from the Medical Register the following part of article 3987 : "Nothing in the present article, etc., etc."

And on the motion of Dr. Rinfret, seconded by Dr. Gauthier, these three articles are confirmed.

Proposed by Dr. Beausoleil, seconded by Dr. Cholette, and resolved : That the secretaries of the Medical Bureau notify the Faculties of Medicine of this province in regard to the new amendments and rules, confirmed by this Bureau in July, 1896.

Proposed by Dr. Beausoleil, seconded by Dr. Guay, and resolved : That the Committee of Legislation be authorized to take the necessary steps towards the adoption by the Legislature of the amendments approved by this Bureau.

Proposed by Dr. S. Gauthier, supported by Dr. A. T. Brosseau : That the Committee of Legislation composed of the following gentlemen : L. J. A. Simard, Hon. D. Marcil, Hon. J. J. Ross, A. G. Belleau, L. J. P. Bissonnette, G. A. Lacombe, S. Gauthier and Parke, be authorized to take the necessary steps towards demanding of the Legislature the abrogation of the law according to Bachelors of Arts, Science and Literature certain privileges concerning the admission to the study of medicine.—Confirmed.

Dr. Gauthier gave at the same time notice of the motion that he would ask at the next meeting of the Medical Bureau of the College of Physicians and Surgeons Province of Quebec that the articles 1st and 3rd of the VI. Chap. and article 1st of the VII. Chap., pages 84 and 86 of the Statutes, Rules and Regulations of the College of Physicians and Surgeons of Province of Quebec, be amended in the sense of the preceding motion, with the view of restoring to said College all the rights that were conferred by Article 3978, page 14 of the Statutes, Rules and Regulations of the College of Physicians and Surgeons of Province of Quebec.

Dr. A. T. Brosseau gave notice of motion that at the next assembly of College of Physicians and Surgeons he will propose

that there be in future only one annual meeting of the governors of the Medical Board in place of two meetings as at present.—Confirmed.

Proposed by Dr. A. T. Brosseau, seconded by Dr. G. A Lacombe, that this Board authorize the Committee on Legislation to demand of the Government the addition of two members to the representatives of the City of Montreal.—Confirmed.

The Secretary, Dr. Belleau, read the notice of the following motion made by Dr. Marcil at the last meeting:—"I give notice of motion that I shall propose at the next meeting of the Bureau that, seeing the position imposes serious work, it is not reasonable that the President should give his services gratis.

Consequently, that a salary of four hundred dollars annually, beginning from the next year, be granted him.

This motion was unanimously confirmed.

Proposed by Dr. Beausoleil, seconded by Dr. Guay, and resolved: That Dr. Normand be put on the Committee of Legislation in place of the Honorable Dr. J. J. Ross, who is ill.

The Committee on professional examinations reports that Mr. L. J. A. Migneault has passed successfully the examination, and that Messrs. Gadbois and Dequoy have failed.

Moved by Dr. J. B. McConnell and seconded by Dr. Gauthier:—

"That in view of the extent to which the members of the medical profession are defrauded of proper remuneration for professional services, owing to the acceptance by many of the positions of medical officers to various benefit societies, lodges and other positions where remuneration is arranged for by contract;

"It be considered beneath the dignity of our profession to accept and hold such positions; and in order that all professional services shall be awarded remuneration not less than the tariff adopted by the board—

"It is hereby enacted that members of the College of Physicians and Surgeons of the Province of Quebec shall be prohibited from accepting and retaining the position of lodge doctor or medical officer to any lodge or society where a stipulated amount is paid annually or otherwise for professional services amounting to less than the mimimum tariff adopted by this Board, or from attendance upon families, groups of families or other associations at contract prices, which name a stated amount for a certain term, usually an annual fee, and that no physician shall be permitted to retain membership in this College or practice in this Province who accepts such positions."

Proposed by Dr. Bissonnette, seconded by Dr. Camirand, and resolved:—That the Provincial Medical Board learn with pleasure of the nomination of Dr. Beausoleil to the presidency of the Canadian Medical Association, which has thus recognized his merits.

On motion of Dr. Beausoleil, seconded by Dr. Guay, it was resolved:—That the thanks of the College are tendered to the authorities of Laval University for the use of this hall.

An adjournment was proposed by Dr. Camirand, seconded by Dr. McKay, and the session closed at 1 p.m.

NOTES ON THE ANNUAL MUSEUM OF THE BRITISH MEDICAL ASSOCIATION.

Among the many and interesting exhibits, probably the widest and best known exhibit shown was No. 19 of the Apollinaris Co., Limited, 4 Stratford Place, Oxford street, London W. They showed "*Apenta Water*"—a natural aperient water from springs near Buda Pest. This water contains sulph. magnes. sulph. sod. in large proportions ; it also contains Lithium salts. The particular benefits rightly claimed for this water is that it stimulates the gastro-intestinal canal without causing irritation. It is recommended for obesity, chronic constipation, portal obstruction, hæmorrhoids. "*Apollinaris*" water impregnated only with its own gas is probably better known all over the civilized world than any other mineral water, and is used as a table water in clubs and wherever a good, pure and refreshing water is desired from one end of the world to the other. *Friedrichshall aperient natural mineral water* was another well-known water exhibited by the Company. This water is rich in alkaline chlorides, as well as magnes. sulph., and is known as an habitual aperient suitable for continuous use, having tonic, alterative and diuretic action. Dr. Fordyce Barker strongly recommends this water for continuous use when needed.

EXHIBIT NO. 2.—Bovril, Limited, Food Specialists, Hospital Purveyors and Government Contractors, London, England, and Montreal, Canada. This display was of more than ordinary interest, as both medical and lay men can appreciate concentrated foods. This display did great credit to the Company, as it shows what can be done by brains supplemented by capital, and *en passant* it may be said one of the largest companies if not the largest in the world of its kind. Its Canadian branch is at 27 St. Peter street, Montreal. Among its exhibits we noticed Bovril, a concentrated beef extract. Invalid Bovril, in which the seasoning is left out ; Bovril beef jelly, which is really a beef juice ; Bovril lozenges, special emergency foods, which have been prepared to give the greatest amount of nourishment while occupying the smallest space, and have been supplied to the Arctic Expeditions of late—Nansen's, Jackson, Harmsworth and others; Kudos cocoa, a concentrated cocoa, besides many other elegant and useful preparations. We are sure there is a great future before them in this country, and no doubt many a miner will carry them with him to Klondyke in the spring.

EXHIBITS NO. 16 and 17.—John Wyeth & Bro., represented in Montreal by the Davis-Lawrence Co., Ltd. This was a most tasty and full exhibit of drugs made by a firm which

needs no recommendation, for all its goods are known on this continent wherever drugs are used as being standards for both strength and elegant pharmaceutical preparations. The trouble and expense involved in the display will no doubt be reimbursed in the long run to the firm, as it could have no better advertisement.

EXHIBIT NO. 18—Leeming, Miles & Co. made a very excellent display of surgical and medical necessities as agents for Seabury and Johnson, New York. In this country it would be an advertisement in itself, as every student in surgery, not to speak of every practitioner, is familiar with them. Also agents for Marchand's peroxide of hydrogen, Henri Nestlé's food, the Bovinine Co., etc., etc. This display would need to have been seen to be appreciated at its full value.

EXHIBIT NO. 40.—Radnor Water, from the Radnor Mineral Springs, Radnor Forges, Que. Messrs. Drummond, McCall & Co., Canada Life Building, Montreal. This is probably one of the best, if not the best of its kind, of mineral waters. It contains in large quantities the important sulphates, chlorides and bicarbonates, and is the only mineral water containing bromide of sodium. It is of the greatest value in stomachic and intestinal disorders. It is a delicious table water, and has been well named the empress of table waters. It is rapidly making its way into the front rank of table waters, and is likely from its inherent qualities to hold its place easily.

EXHIBIT NO. 28.—Lyman Sons & Co., Wholesale Druggists, Surgical Supplies and Hospital Glassware, 380 St. Paul street, Montreal. This display was very complete, and contained more than many an ordinary druggist has in his store. We might well be proud of the Messrs. Lyman Sons & Co. in Montreal, as they are known as thoroughly reliable and up to date in every line from Halifax to Vancouver. They deserve great credit for their most admirable display.

EXHIBIT NO. 5.—Sharp & Dohme, represented in Montreal by H. Dart & Co., 641 Craig street, made a fine display of extracts, and particularly of pills, soluble hypodermic tablets and compressed tablets of all kinds. A good display of digestive ferments were shown as well as ergotole, especially made by this firm for use instead of ergot or ergotin, being without disagreeable effect either by mouth or hypodermically.

EXHIBIT NOS. 25 AND 61.—Gilmour Bros. & Co., Montreal. This firm displays the goods of the well-known firm of Johnson & Johnson, Upjohn Pill Co., and Dr. Bengue's ethyl chloride, etc. The arrangement of the display was

most excellent, and many most valuable drugs (many of them very recent) and appliances were shown.

EXHIBIT NO. 26.—H. K. Wampole & Co., Canadian branch, Toronto. The many drugs and specialties produced by this firm are well known, such as the tasteless Cod Liver Oil, Cascara Bark, etc., etc. Any preparation coming from this firm may be depended on.

EXHIBIT NO. 41.—Duncan, Flockhart & Co. Agent in Canada, R. L. Gibson, 88 Wellington street, Toronto. This firm is as well known among civilized nations as is the British flag, and to carry the simile further it would be hard to say which has done most for suffering humanity ; certainly their chloroform is the standard for the world, and they make besides many most elegant pills and preparations.

EXHIBIT NO. 6.—J. H. Chapman, 2294 St. Catherine street, importer of instruments. Mr. Chapman had a very large and most interesting display of modern instruments of all kinds, and a large number of the visitors seemed never to tire examining and asking questions. No doubt many received new ideas for their future work, and were well repaid for their curiosity.

EXHIBIT No. 32.—Charles Gurd & Co., 39 to 45 Jurors street, Montreal. A very tasty display of well made and pure aerated beverages and medicated waters.

EXHIBIT NO. 33.—John D. Duncan, 125 Mountain street, Montreal, showed the Walker-Gordon modified milk for children.

EXHIBIT NO. 34.—Kerry, Watson & Co., Montreal. This firm made an excellent display of drugs for which they are so well and favorably known in Canada. Their display was quite as creditable to them as might be expected from a firm of their standing.

EXHIBIT NOS. 12 AND 63.—Paterson & Foster, 21 Phillips square, Montreal. This exhibit was most interesting and extensive. The firm are agents for the Sanitary Construct Co., New York, and showed the new Formaldehyde Generators, all sorts of dental necessities, the J. Ellwood, Lee Co. Surgical Sundries and the Reichert Microscopes, besides hosts of most interesting, valuable and delicate instruments, many of which will be found in every well-appointed physcian's office.

Time and space fail us to go into all the exhibits, for they were legion in number, and for variety of ground covered, for excellence of preparation, and, in many cases showing decided advance in the scientific aspect, the exhibition will be remembered as one of the best the British Medical Association has ever had.

H. L. R.

THE

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Editorial.

THE BOARD OF GOVERNORS OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF THE PROVINCE OF QUEBEC.

We give in this number an account of the proceedings of the last semi-annual meeting of this body at Quebec. It is, as most of our readers are aware, the representative legislative board of the medical profession of this Province, and elected by the members of the latter body tri-annually.

It is empowered to regulate all matters pertaining to the interests of the profession in regard to the study of Medicine, examinations, qualifications for the license, and other matters concerning the general conduct of the members of the College. Hence, its enactments, regulations and the work accomplished at its sessions are of extreme interest to all within this Province and even beyond.

The attempt again to invalidate the B.A. degree as an equivalent for the matriculation examination is one that should receive the full attention of the Universities in the Province. The requirements for this degree are certainly higher than what is demanded in the entrance examination, which has to be passed by all entering upon the study of Medicine here, and we can see no reason why applicants with this degree should not be accepted without further

examination. It would be but a small concession and some encouragement to those who desire the full training in literature, classics, mathematics and science, which such a course affords. If there should be any looseness in connection with any of the degree-granting bodies, let there be a better supervision of these institutions and their work rather than a depreciation of the B.A. degree. It would be desirable that all seeking to enter the study of Medicine should have the preliminary education which the curriculum of the B.A. Course presumes him to possess. There will doubtless be an energetic effort on the part of the Universities of McGill, Laval and Bishop's to prevent the maturing of the attack on the B.A. Degree by the Provincial Medical Board.

The adoption of a tariff of fees is one of the items of business of the last meeting which is open to much criticism. Several attempts have been made to establish a standard of fees. The last one was so manifestly absurd in some particulars that it was disallowed by the Lieut.-Governor. The present list makes no distinction between the country and cities as the last one did, nor does the official report state it to be a minimum tariff as it was understood to be at the meeting. A schedule which takes no account of the distinction between the conditions of city and rural practice nor the patient's ability to pay must lead to greater difficulties and be a greater encouragement to litigation in regard to fees than if none existed. One of the objects aimed at was that it would prevent country practitioners and others from cutting fees in order to gain an advantage over their *confrères*. If the schedule is to be offered as a minimum tariff, some modifications will have to be made before it becomes law, as some of the items are rather high and would be sufficiently so to rank as maximum, such as five dollars for using the stomach tube, a method of treatment now so common in the treatment of affections of the stomach; consultation with a *confrère*, five dollars; microscopical examination of urine, blood or sputum, five dollars; general anaesthesia, five dollars. We cannot understand why the chemical analysis of urine should be one dollar only while its microscopical examination is five.

We think the former requires as much time and skill as the latter. In putting the fee for *accouchement* at five dollars, it is not stated whether subsequent attendance is included. Unless this tariff is made a minimum one with no limit upwards so that superior skill may be properly remunerated and the affluent may be called on to contribute more in accordance with their ability to do so, it would be better to dispense with it altogether, and even with a minimum tariff there will be a disposition for many who have no claim to be considered entitled to reductions in their professional accounts to endeavor to be placed in that category.

THE LODGE DOCTOR.

The resolution which was adopted unanimously by the Provincial Medical Board at its last meeting in regard to lodge and society physicians, prohibiting members of the College from accepting such positions, is one of the greatest importance, and should receive at once the careful consideration of every member of the profession in the province. The warfare on these lines is not confined to this province or country, but is almost universal. Attempts have been made recently in Britain, the United States and Canada to abridge and restrict the injury resulting to the profession generally from this widespread and spreading practice. In some districts the medical men have united and agreed to refuse all such appointments only to find that others may be imported to fill their places, indicating the existence of an inferior brand of physician devoid of professional honor and a proper interest in the general welfare of the profession as a whole. A number of resolutions exist in the records of the College aiming at restrictions of this medical abuse and the amelioration of some of the somewhat humiliating situations to which the holders of such appointments are frequently subject. But it was evident to all that only radical measures would be of any avail if the system is to be wiped out; and while we endorse the action taken, on more mature consideration it probably would be preferable that infractors of the law should be first reprimanded by the council of discipline, and, this failing, a fine to be imposed, and the cancellation of the license be reserved as a final possibility. That great advantages accrue to the members of these

various societies is evident from the hue and cry which has resulted since the publishing of the resolution in the press. The benefit obtained is of course cheap medical attendance, but the alleged reason for the existence of these appointments and the objections made to their possible disappearance is that the members are poor and cannot pay ordinary fees. It may be stated that the majority of Lodge members are not proper subjects for medical charity, but the rule is rather that the members are the thrifty, comfortably circumstanced portion of the community, and quite able to give proper remuneration for the professional services they require. In fact, one writer in the lay press, to show the importance of these societies in the community, stated that "the benefit societies are composed of leading clergymen, lawyers, doctors, judges, merchants, bankers, brokers, mechanics, manufacturers (and finally) laborers." It is admitted by several other writers to the press that many of these organizations would cease to exist if they could not get cheap medical services. It is thus clear that a large portion of the community, and quite a respectable class, are receiving professional services at nominal rates, usually a dollar a year, and in some Lodges this includes medicines as well.

It will be admitted by all that those composing the class of citizens mentioned by the above Lodge Doctor advocate are such as should be expected to give reasonable remuneration to their medical adviser, and that there should be some other method of meeting the alleged wants of the poor than by associating them with the above array of notables who participate equally in the benefits. We have every sympathy with the work that is done by the numerous benefit organizations which exist, and consider that the opportunities they give for social commingling of members, the learning and practice of the rules of debate, the development of the fraternal spirit, the advantages in travelling from home of having friends wherever the order exists, the sick benefit and other funds, as well as the services of a physician when ill are of great advantage: they all belong to the list of the amenities of modern society and tend to develop a higher civilization; but if the lodges, instead of supplying a physician; would supply the means for procuring a physician, and allow the member to choose his own medical attendant, the co-operative idea would

be more consistently carried out. But no, the member will pay for every commodity he needs and for every service he requires at rulingrates, but when illness appears, then cut rates are expected from the individual whose duty it is to undo the grasp of disease or obstruct the approach of the destroying angel. Now, instead of the physician being called upon in these events to be the sole disseminator of benevolence, why should not the judges, merchants, bankers, etc., do the work for their sick brethren by contributing towards adequate payment for the services required? or, if each member contributed annually towards a physician's fund, would it not be a more just and satisfactory arrangement?

But the most objectionable feature of Lodge practice is not insufficient remuneration—it means a loss of independence of action; the physician must be governed by the stated Lodge rules, and members are frequently more than exacting in the services they demand. He is called out at unreasonable hours, and bothered with trifling and imaginary ailments. Imaginary neglect or malicious complaints are submitted to open lodge, and time must be spent in explaining to the Committee of Enquiry. The unseemly situation of several physicians applying and canvassing for the appointment is boasted of by some of the Lodge Doctor advocates. This means factions in the Lodge and a section unfriendly towards the successful candidate, and often bitter feelings and a loss of previous respect among the latter; this being especially the case in small towns and villages.

It is frequently stated that, if the position were not of some advantage, there would not be so many applicants; but it is not contended that there are not some favorable features in connection with lodge practice, such as being for the young practitioner a wholesale gain to his *clientèle.*

However, the fact that such a large proportion of the community are enrolled in these institutions, and the proportion constantly increasing and including frequently children and women's departments, and the fact that if one does not take the appointment others will, will account for so many physicians of some years of practice retaining them and for others being so willing to accept them. Advocating, however, the abolition of the Lodge Doctor in

his capacity as physician to its members by appointment does not prohibit him from being the examining physician, nor does it prevent physicians from joining these organizations; indeed, it is probable that a larger number would be more likely to do so. It was stated to the writer quite recently that the Independent Order of Oddfellows B.U. of the United States, the largest and most influential organization there, have only examining physicians, and includes a great many physicians among its members.

It cannot be said that the movement emanates from any desire on the part of the profession to lessen the amount of their charitable work among the poor; the latter class are not in the Lodges as a rule. The members of the medical profession, probably more than those of any other calling, are never found wanting when poverty and sickness lay claim to their services, and this they can always be depended upon to be for those deserving or otherwise whom they constantly come across in private practice, or as members of the staffs of the various hospitals and numerous charitable institutions. But what must be opposed is the feature of this wholesale organization which results in compelling medical services insufficiently recompensed, and associated with constant occurrences which are humiliating and detract from the true dignity which the character of our work demands in its performance.

In regard to the position of affairs in this province, the Provincial Board has for several years passed resolutions with a view of minimizing the objectionable features of this character of practice, but, realizing that only radical measures would be of much use, have put matters in such a shape that, if the practitioners of the province will with one accord indorse their action, a riddance will be obtained of this well-recognized abuse. We trust that immediate action will be taken by the various medical organizations of the province, so that those who will place the regulation before the Lieut.-Governor for his sanction, may be able to meet the combined opposition which is threatened with a confidence based on the knowledge, that the Provincial Board has the unanimous support of the profession who appointed them, in their efforts to maintain the honor and welfare of its members.

Pamphlets Received.

Presidential Address on Overcrowding in the Medical Profession and its Remedy. By William Mitchell Banks, F.R.C.S., Surgeon to the Liverpool Royal Infirmary; Emeritus Professor of Anatomy, University College, Liverpool, etc. Reprinted from the *Liverpool Medico-Chirurgical Journal.*

The Gentle Doctor. Physic and Letters. Two addresses. By the same author.

1865 and 1895—Student and Teacher. By the same author. Being an Address delivered before the Yorkshire College Medical Society on October 17th, 1895, Leeds. Printed by J. Laycock & Sons, 2 Cross Bank St., Trinity Street.

On the Treatment of Fractured Shafts of Bone in Children; Simple, Complicated and Compound. By Thos. H. Manley, M.D., Professor of Surgery, New York Clinical School of Medicine, New York. Read in the Section on Diseases of Children at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga. Reprinted from the *Journal of the American Medical Association.*

Contribution to Traumatic Abdominal Surgery. 1. Report of a Case of Contusion and Subsequent Gangrene of a Portion of the Ilium, complicated by Laceration of a Horseshoe Kidney. 2. Report of a case of Gangrenous Strangulated Hernia. By the same author.

A New Method of Suturing the Abdominal Wall in Cœliotomy. By Charles P. Noble, M.D., Surgeon-in-Chief Kensington Hospital for Women, Philadelphia. Reprinted from *The American Journal of Obstetrics.*

A Contribution to the Technique of Operations for the Cure of Laceration of the Pelvic Floor in Women. By the same author. Read before the Philadelphia Obstetrical Society. Reprinted from the *American Gynæcological and Obstetrical Journal.*

Vaginal Incision and Drainage of Suppurating Hæmatoceles, due to Ectopic Gestation. By the same author. Read before the Philadelphia Obstetrical Society. Reprinted from the *American Gynæcological and Obstetrical Journal.*

A Clinical Report on the Course of Pregnancy and Labor as Influenced by Suspensio Uteri. By the same author. Read before the Philadelphia Obstetrical Society, October 1, 1896. Reprinted from the *American Gynæcological and Obstetrical Journal.*

The Development and the Present Status of Hysterectomy for Fibromyomata. By the same author. Reprinted from Vol. XXII. *Gynæcological Transactions.*

Remarks on the Use of the Buried Permanent Suture in Abdominal Surgery. By the same author. Reprinted from the *American Gynæcological and Obstetrical Journal.*

Some Further Observations concerning Movable Kidney. By the same author. Reprinted from the *American Journal of Obstetrics and Diseases of Women and Children*, Vol. XXXV., No. 1.

Ectropion of the Cervix in Nulliparæ resembling Laceration of the Cervix. By the same author. Reprinted from the *American Gynæcological and Obstetrical Journal.*

Report of Operations at Private Surgical Infirmary during Season 1896-97. By Charles S. Briggs, A.M., M.D., Nashville, Tenn. Reprinted from the *Nashville Journal of Medicine and Surgery.*

The Progressing Decrease of the Rate of Increase of American Population. Criminal Abortion: its Prevalence, its Prevention, and its Relation to the Medical Examiner—Based on the "Summary of the Vital Statistics of the New England States for the Year 1892," by the Six Secretaries of the New England State Boards of Health. By Dr. H. R. Storer, Newport, R.I., Pres. Med. Staff Newport Hospital; V. P. Am. Med. Ass'n., 1868; Pres. Assoc. Am. Med. Editors, 1871; V. P. Gyn. Sect. Int. Med. Congress, 1887; Fellow (*non-res.*) N. Y. Acad. of Medicine. Reprinted from the *Atlantic Medical Weekly.*

Vaginal Hysterectomy: a Review of Sixty-six Consecutive Cases. By Charles Gilbert Davis, M.D., Chicago, Ill. Reprinted from the *Journal of the American Medical Association.*

A Study of some Infant Foods in comparison with Mother's Milk. By R. H. Chittenden, Ph.D., Professor of Physiological Chemistry in Yale University. Reprinted from the *New York Medical Journal.*

The Deficiency of Fat in Dry Milk-Foods for Infants. By the same author. Reprinted from the *Dietetic and Hygienic Gazette.*

The Content of Fat in Dry Milk-Food for Infants. By the same author. Reprinted from the *Dietetic and Hygienic Gazette.*

Results of (Chemical) Electrolysis versus Divulsion or Cutting in the Treatment of Urethral Strictures. By Robert Newman, M.D., New York. Reprinted from the *Medical Record.*

PUBLISHERS DEPARTMENT.

The Living Age, which has appeared with never-failing regularity for nearly two generations, reflects as faithfully as ever the age in which we live. It is composed of the best articles of the best periodicals, reproduced without abridgment, and is as much superior to any of them as the master-piece of the Grecian artist was to any of the beautiful women who furnished each some particular charm for the representation of perfect beauty. Each number as it is received is a delight.

The latest issues contain papers by the best-known writers, experts in the subjects treated: "In the House of Commons Half a Century Ago," by Sir C. Gavan Duffy; "Scottish Litterature," by Arthur J. Balfour; "A Reminiscence of Tennyson, by William Knight; "The Antiquity of Man," by Sir John Evans; "Contemporaneous Problems: The Colonial Policy of Europe and What that of Spain Should be," from the Spanish of the late Senor A. Canovas del Castillo; "Europe's New Invalid," by John Foreman, "Old Fiction," by Augustine Birrell; "The Superstitions of Shakespeare's Greenwood," by George Morley; "France, Russia, and the England of the Jubilee," by Francis de Pressensé; "The New Sayings of Christ," by M. R. James; "A Trappist Monastery in Natal," by Carlyle Smythe; "Ethics and Science," by Julia Wedgwood; "The Works of Robert Louis Stevenson;" "Unpublished Letters of George Canning," etc., etc. In fiction, besides an occasional short story, there is at present running a quaint and suggestive story, entitled "In Nature's Waggish Mood," translated from the German of Paul Heyse for *The Living Age*.

The present will prove an exceptionally good time to subscribe for this unique magazine, for the publishers announce that, to all *new* subscribers for the year 1898, the weekly numbers of 1897, issued after the receipt of their subscriptions, will be sent *free*.

Send $6 to *The Living Age Co.*, Boston, at once, and receive the benefit of this generous offer.

THE HYPNOTIC MAGAZINE

For October has an article by Dr. J. A. Dickey on "Suggested Analgesia in Childbirth." Among the other contents are "Fallacies of the creed called Christian Science," by Edward B. Warman; and "Demon Possession in China"—a criticism of some statements in a book by Rev. John L. Nevins, for 40 years missionary in the Middle Kingdom. Dr. W. Lee Howard questions the credibility of both possession and cure. Reports of the Chicago School of Psychology, the Illinois College of Psychology and the Kingston School of Suggestive Therapeutics by Drs. C. O. Sahler, Herbert A Parkyn, Dr. A. H. Burr and others; Editorial Notes and Enquiry Department complete this number. The Hypnotic Magazine is a monthly record of the practice of suggestive therapeutics, and is edited by Drs. Sydney Flower (LL.D.) and Wm. Henry Bischoff (M.D.). It is published by the Psychic Publishing Company, Chicago.

SANMETTO IN CYSTITIS AND PROSTATIC TROUBLES.

Sanmetto yields uniformly good results at my hands. I have prescribed it in chronic cystitis of long standing, where the standard remedies failed, and effected a permanent cure. It is certainly ahead of anything I have ever used for enlarged prostate, and in fact for all prostatic troubles.

FARLEY, IOWA.

J. F. LAMBERT, M.D.

SANMETTO IN ENURESIS NOCTURNA.

Mrs. H. M. Robertson, M.D., of Middleport, N.Y., writing, says: "I have just received a letter from the mother of the girl to whom I gave the Sanmetto for nocturnal enuresis, and she assures me that her little girl has no more trouble of that kind, nor has had for some time, so thinks she is cured. I feel sure this case has been cured by Sanmetto, for it was an obstinate case, and did not seem to yield to anything before I gave her the second bottle of Sanmetto, although I had tried all the usual remedies. I believe in giving credit where it is due."

CANADA
MEDICAL RECORD

NOVEMBER, 1897.

Original Communications.

ELEPHANTIASIS.

By J. M. ROHLER, M.D., British Guiana.

This affection is somewhat common in Eastern intertropical regions.

In South America and the West Indies I have observed a great many instances, the lymphangiomatous thickening occurring chiefly in the arms, lips, penis, scrotum, and in the labium in females.

In the present instance the patient was a man of 56 years of age, a Portuguese. He was admitted to my private hospital on the 4th day of February, 1895, with the scrotal variety of lymphangioma, commonly called elephantiasis arabum. He stated that about twelve years before he felt slight pains in the left groin, extending to the testicle, and of an intermittent character. He attributed his trouble to his occupation; he was a baker, and exposed to rapid changes of heat and cold. He consulted several physicians and surgeons, but failed to get relieved. A few months after the scrotum began to swell. It gradually increased in size, and in three years the growth had become very uncomfortable. It developed still further until the patient was unable to move about, and for six years he has been completely laid aside.

On admission to the Hospital, a saline purge was given, and the next morning a thorough examination was made. The tumour hung downwards to about ten inches below the knees.

It was shaved, washed, and sterilized with a 1 to 1000 hydrarg perchlor. solution.

The patient was placed on his back on the operating table, the tumour strapped and suspended above the body, with a cord and pulley, from the ceiling, for two hours, so as to empty the vessels as much as possible.

The A C E mixture was administered. A tourniquet was applied tightly around the neck of the tumour below the pubic arch.

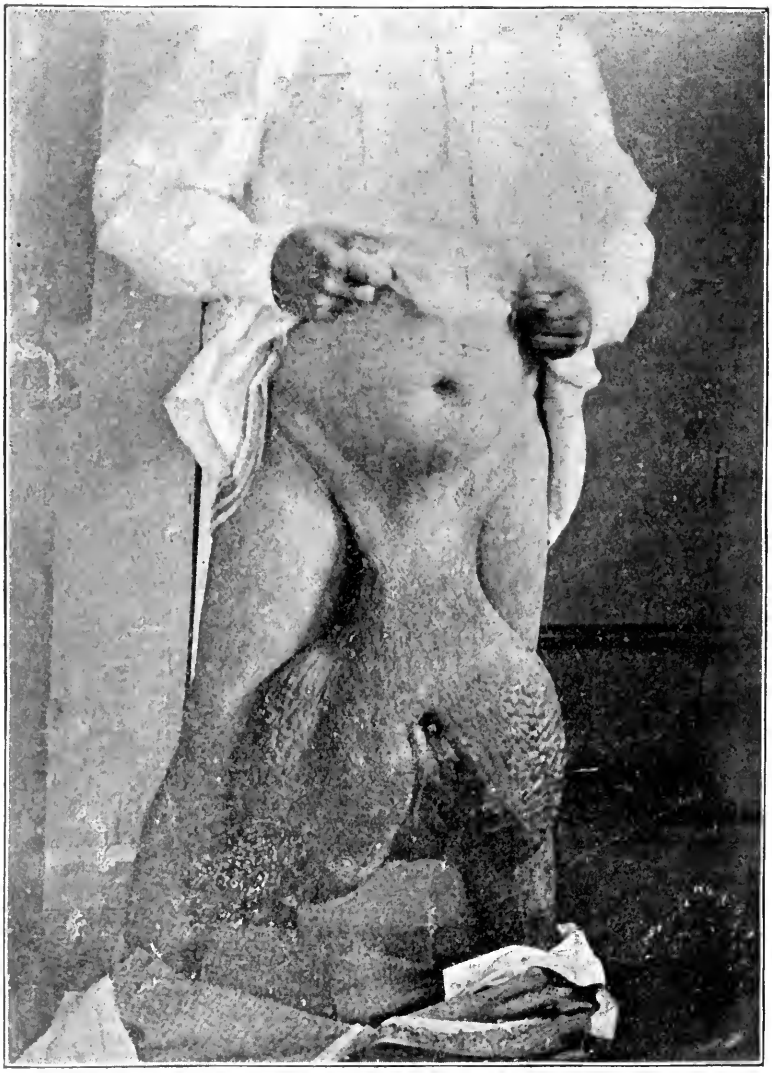
A deep incision with an amputation knife was made, beginning at the raphe ½ an inch below the meatus urinarius, drawn antero-posteriorly on both sides downward and backward, and slightly curved, about four inches from the anus to the perineal raphe, following the margin of healthy tissue, leaving sufficient to form a scrotal sac. On entering the scrotal sac a large quantity of yellowish serum came from between the tunica vaginalis and the testis. The left testicle was implicated and much enlarged, weighing nearly six pounds. It was removed. The right testicle was healthy. All vessels were ligatured, the parts thoroughly cleansed ; deep sutures and superficial silk sutures were used and a drainage tube ; dusting with iodoform, then iodoform gauze, cotton wool, and all firmly bandaged. No after hæmorrhage occurred. The tumour after removal, and including the testicles, weighed sixty pounds.

The skin varied in thickness from ⅜ of an inch to four inches at the summit.

The internal surface presented numerous tubercles of different sizes, some of them cartilaginous. The mass seemed to consist of thickened tissue, adipose tissue, irregular anastomosing cavities, the whole infiltrated with lymphatic liquid.

The parts were dressed on the second day, and everything appeared to be proceeding favorably, and union by first intention promised. On the fourth day, the deep sutures were removed, the parts cleansed and rebandaged.

On the sixth day the superficial sutures were partially removed, and, on the eighth day, the remaining stitches. On the twelfth day the drainage openings were partially closed. On the fifteenth day there was only a slight discharge and the drainage openings were nearly closed. After the parts were dressed, the patient drove to his house, returning again in the evening. The parts were examined from time to time,



A case of Elephantiasis of Scrotum successfully removed by Dr. J. M. ROHLER, in British Guiana, on the 5th February, 1895.

until the twenty-first day, when a second operation was performed to expose the penis. An angular incision was made on each side, beginning one inch from the meatus urinarius anterior to it and about four inches below the pubic arch, extending downward, backward and outward, then inward and forward to a point removing a thick portion of skin and fatty tissue. The meatus was then about five inches below the pubic arch. The incision was closed and united by first intention; the sutures were removed on the eighth day, the parts were dressed every fourth day, and on the fifteenth day the patient was discharged completely well.

I have since then operated on eight other cases with favorable results; none of them were so extreme as the one here reported, and which is shown in the accompanying illustration, copied from a photograph taken shortly before the operation.

PRESIDENTIAL ADDRESS BRITISH MEDICAL ASSOCIATION.

THE SECTION OF MEDICINE.

By STEPHEN MACKENZIE, M. D., F.R.C.P.

Senior Physican to and Lecturer on Medicine at the London Hospital.

On the Influences that have Determined the Progress of Medicine during the Preceding Two and a Half Centuries.—On this very interesting and, indeed, unique occasion, when the British Medical Association meets for the first time on Canadian soil, the mind is irresistibly led to compare the condition of medicine at the present day with that which existed when Europeans first settled in Canada, and to trace the paths by which progress has been made. When Maisonneuve and his companions landed in what is now the Custom House Square in Montreal in 1642, and when shortly after the first hospital was established by the missionary priests, medicine was in a rudimentary stage. Though anatomy had been prosecuted for some centuries, chiefly on the European continent, it formed no part of ordinary medical education; physiology in the scientific sense was unborn and organic chemistry not yet created. The medical teaching of that day consisted mainly of the ancient doctrine of the four elements and their corresponding temperaments of the separate functions of the vegetative, sentient and rational souls; of the agency of the natural vital and animal spirits, that had continued to be taught with very little variation from the time of Galen,

It was an age of Aphorisms, Definitions, Systems and Nosologies. Medical opinions were so dominated by theories and burdened by the weight of authority that the phenomena of disease for the most part passed unnoticed, and its teachings neglected. Such knowledge of medicine as the enterprising members of the medical profession who accompanied the early expedition to Canada possessed must have been of the most elementary character, gained by apprenticeship under teachers whose knowledge consisted in the doctrines of Hippocrates and Galen, and such crude experience as they themselves had obtained. Without doubt they were as zealous and earnest in their professional duties as we as a profession are to-day, and their treatment was as certainly unfettered and unrestrained by any scepticism as to the theories they had been taught or doubts as to the efficiency of their remedies for disease. But this period was the dawn of a new era in science and medicine. Harvey's great work "On the movements of the heart and blood" and Bacon's "Novum Organon" had recently been given to the world, and the seventeenth century was a time of the greatest activity and discovery in geography and in science.

What a gulf separates that medicine of 250 years ago from that of to-day! In tracing how it has been bridged, it is right that we should justly apportion the influence that various spheres of activity have exercised in reaching our present position.

The Study of Anatomy—We must in the first place ascribe the greatest importance to the study of anatomy. Vesalius and Sylvius, Fallopius and Fabricius had already advanced it to a very high point, but the study had been confined to the leisured few. Gradually our knowledge of every detail of naked-eye anatomy has been gained, and at the present time every one practising medicine must have competent knowledge on the subject gained by dissection. The same systematic study has extended to Comparative Anatomy, and great for its time as was the knowledge of Aristotle, it has undergone an entire revolution by the application of scientific methods to increased data of information by such workers as Cuvier, Darwin and Owen. It is now taught as a branch of medical education. Physiology could have no scientific basis until anatomy was fairly advanced. The facts on which it was at first based were founded on medical observations, but in the seventeenth century direct observations and investigations were commenced by Haller, Hunter, Spallanzani and Hewson. It has since been prosecuted with the greatest energy and success, and the position of physiology at the present time is that of a science, explaining the action and interaction of the organs and tissues and the forces of the body which are the true foundation of scientific medical knowledge—the institutes

of medicine. Morbid Anatomy could not exist until normal anatomy was fairly complete, but from that time in the eighteenth century, by the laborious researches of Morgagni and numerous other workers, until now the broad facts of Morbid Anatomy have been accumulating until we have at the present day a fairly accurate knowledge of the principal pathological changes found in the body. The rise of physics and chemistry in the seventeenth and eighteenth centuries contributed greatly to the progress of medicine, by increasing our powers of "searching out the secrets of nature" by methods and instruments of precision.

The Study of Histology—Of any one influence that has helped the advance of scientific study and the progress of medicine, probably the increasing perfection of the microscope has been the greatest. With each new development of this instrument a greater range has been given to our researches, and, with the assistance of chemistry, it is continuing to reveal to us fresh facts that have created new branches of science. Starting from the observations of Bichat on the minute-anatomy of the tissues in 1801, the microscope has enabled us to understand the details of structure which were essential to complete anatomy. Until the microscope was capable of practical use the capillaries could not have been discovered by Malpighi, nor the composition of the blood understood; the mechanism of renal secretion could not be worked out until the minute structure of the kidney was known; the functions of glands, the process of digestion and secretion could not be understood until the histological details of the parts concerned were ascertained; the mechanism of light and hearing, of taste and smell, were not revealed until the ultimate details of the structures involved had been investigated; the marvellous complexity of the nervous system, whether in the delicate though comparatively coarse structure of the nerves, the higher intricacy of the spinal cord, and the marvellous details of the arrangement of ganglionic cells and communicating fibres of the cerebral tissue, which by improved methods of preparation and staining are being revealed to us at the present time, could not have been worked out without its aid. Just as anatomy had to reach a certain stage before physiology and morbid anatomy became possible, so normal histology had to advance before pathological histology could come into existence. And, as knowledge advances from the special to the general, special pathological histology had to reach to a very high point before we could reach that knowledge of general pathology on which our conceptions of the nature of disease are at present based.

What would Harvey have given to see the capillaries that completed the "circle" of the blood stream, or to have watched the

process of inflammation in the exposed mesentery of the frog by the aid of the microscope—to see the contraction followed by dilatation of the blood vessels, the escape of blood corpuscles through the walls of the vessels? What a vastly different conception has the reader of Cohnheim's Lectures on General Pathology to that of the most advanced and profound investigator and physician of two and a half centuries ago. The microscope again has introduced us to a new world, revealing minute organisms that play a great part in the plan of nature, and which are largely concerned in the production of disease. It has led to a new department of science, bacteriology, which has taught us how bacteria enter the body, how they increase and multiply therein, and of the reaction of the tissue for self protection. Chemistry has shown how the poisons formed by such organisms act in the body and supplied us with means, as yet only in their infancy, for counteracting their effects, or guarding against their entrance by their exclusion and by protective inoculation. The microscope has further furnished us with evidence of parasitism, other than bacteria, in the blood, in the muscles, in the skin and hair, and on the mucous membranes. By its aid we are able to diagnose and watch the course of several primary diseases of the blood. It has enabled us to differentiate the various new growths that develop in our bodies. So much does the microscope constitute a necessary means of research that it would be impossible to conscientiously perform our daily medical duties without its aid.

Clinical Instruments of Precision.—The thermometer again has been of invaluable aid in the study of disease, allowing of our measuring and recording the degree of fever, and of watching its progress with such a degree of accuracy as to furnish us with evidence of the greatest value in the diagnosis, prognosis and treatment of disease Electricity, by the laborious and complete investigations of Dubois-Reymond, has revealed to us the mode of action of nerve and muscle that would have been impossible to obtain in any other way. Though the hopes at first entertained of its value in the treatment of diseases have not been altogether fulfilled, it is still of much service in this respect, and perhaps still more valuable as an aid in diagnosis.

The ophthalmoscope, introduced by Helmholtz, has enabled us to understand diseases of the interior of the eye, which without its assistance was impossible. It has admitted of the exact examination of refraction, and has revealed changes in the termination of the optic nerve in the retina and choroid, not only valuable in themselves, but so important in the light they throw on pathological changes occurring in the nervous system, and in the body generally, that the use of this instrument has become a necessity of practical medicine.

The laryngoscope, perfected by Czermak, has given precision to the diagnosis and treatment of diseases of the throat not otherwise attainable, and which has important bearings on general medicine by the recognition of paralysis of the muscles that move the vocal cords in aneurism and in disease of the central nervous system.

The sphygmograph, the cardiograph, the arteriometer, and, the latest invention of this class, the sphygmometer, by enabling us to ascertain the exact condition of the circulatory system, are of the greatest service, not only in studying the problems of normal and abnormal physiology, but in the recognition of disease and its tendencies and in the influence of remedies.

Auscultation.—Nothing from the time of Harvey gave such an impetus to the study of exact medicine as the introduction or discovery of auscultation by Lænnec in 1816 ; and, indeed, Harvey's great discovery had little practical application in clinical medicine until its introduction. Auenbrugger had introduced percussion in 1761. Lænnec had adopted it, and his discovery of auscultation with his zeal as a morbid anatomist, enabled him to work out most of the great problems of diseases of the thorax. The knowledge thus begun has, by the labours of many workers, increased in range and accuracy down to the present time, and the diagnosis of diseases of the chest has reached a degree of precision unequalled in any other department of practical medicine. We are now able not only to recognize disease of each of the valves of the heart, but to estimate its degree, and the influence of the lesion on the greater and lesser circulations and to trace the course and effects of emboli carried along the blood stream. Our knowledge of diseases of the lungs is nearly as complete as that of the circulatory system.

Vaccination.—During the period that bridges the time from when Canada first became populated by Europeans to the present day probably no discovery has exercised a greater influence in medical science or conferred more lasting benefits on mankind than the introduction of vaccination by Jenner. It is not necessary in such a meeting to trace how Jenner was led to his discovery. Protective inoculation from smallpox by the introduction of the smallpox matter had long been known in the East, and had been introduced into England by Lady Mary Wortley Montagu, but Jenner's rare merit consisted in testing the statement made to him by Gloucestershire rustics by scientific methods and experiments ; and by waiting for years until the value of the protection the "variola vaccinia," introduced by inoculation into the human subject, had been tested by exposure to contagion from smallpox, and until time had elapsed to demonstrate that this protection was no ephemeral influence but

of more or less permanent duration as much as that of an attack of smallpox itself. "I never expected it would do more, and it will not, I believe, do less," are Jenner's words. It was not until many years after he had satisfied himself as to the protective influence of vaccine virus that Jenner in 1796 published his observations. It is needless to trace the effects this discovery has had in saving human lives, and in averting the disfigurements with which those who escape death from the disease were almost invariably afflicted. It is probable that the full significance of his discovery was not revealed to Jenner himself, and on the other hand it is possible that he exercised self-restraint in not speculating as to the possible result that might accrue from his remarkable inquiries. Certain it is that the indirect results that have followed from Jenner's discovery that an attenuated virus was protective against contagion from the disease from which the virus was orginally obtained have only recently been fully utilized. Probably several causes have been concerned in the want of continuity of progress in this direction, the most important of which has been the difficulty in isolating and handling the virus in many contagious diseases. The investigations into the full extent of the value of inoculation with attenuated virus and derivatives of bacteria have only been commenced in the last few decades, since bacteriology has been cultivated by Pasteur, Lister, Koch, Klein, Gaffkey, Martin and others, and the whole subject with the aid of organic chemistry made a branch of exact science. Bacteria are now classified by their morphological qualities, by their reactions to staining reagents, by their modes of growth in various media, the temperature at which they grow and at which they are destroyed is determined, their need of oxygen ascertained, the parts of the body they make their habitat studied, the effects of their invasion in the tissues, and protective powers of the organisms observed. The chemical products to which they give rise are isolated, their nature ascertained and their effects observed on the living body independently of that of the organisms by which they are formed. Finally, the knowledge thus obtained is turned against the bacteria. The virus is attenuated by various methods, often by passing through the body of an animal immune to the disease, and its exact strength ascertained. It is then used for protective inoculations or for antidotal purposes in those already attacked by the disease from which the virus was originally obtained. Jenner's and the recent researches are equally scientific, observation, induction, experiment—but the differences in carrying out the inquiry on smallpox by Jenner and that of any specific disease due to an organized virus, at the present time, illustrate my theme of how the progress of medical science has been effected. Great as it has been, and

precise as a rule as are our methods of research, it is remarkable that up to the present time in two diseases in which protective and curative inoculations have been most conspicuously successful, namely, smallpox in which we had, thanks to Jenner, the first vaccine, and in hydrophobia in which Pasteur succeeded in attenuating the virus and using it as antidote, we have not succeeded in finding the micro-organism that is the true virus unless, indeed, Copeman Monkton has at length done so in the case of smallpox and vaccinia. As a matter of fact this organized virus has yet to be discovered in many of the most common specific communicable diseases, but the knowledge gained by the study of some members of this class in animals and of some, *e.g.*, diphtheria in the human subject has afforded a basis of knowledge applicable to the whole group.

There is one other branch of medical science which has been incidentally alluded to in the previous remarks, but which requires fuller recognition in the survey of the influences that have governed our progress. I allude to Experimental Investigations in Animals. In the Seventeenth Century, in the hands of Harvey and others, but more especially in the Eighteenth by the labours of Hunter and others, and in the Nineteenth Century, this method of observation has been the basis of normal physiology, and later of abnormal physiology or pathology and therapeutics. These investigations enabled us to reach a degree of knowledge not obtainable in other ways, not only of value to man, but also to the lower creation.

Therapeutics.—Until the exact nature of disease is fully understood, a truly scientific treatment is manifestly impossible. I need not discuss how entirely in the past, but also at the present day, our knowledge of treatment has been mainly empirical. It could not be otherwise. It is true that up to the present time scientific therapeutics only influence our treatment to a small extent. But looking back, as we have been doing, to the course of progress in medicine, we have seen that it has throughout followed the line of patient and exact research, The action of drugs is now studied with the same care and precision that have been employed in physiology and pathology, and we are yearly adding to the stock of exact knowledge of the action of remedies. The scientific application of this knowledge will come with a more complete understanding of the cause of the disease, increased knowledge of pathology, and greater precision in diagnosis. But therapeutics is not coterminous with drug treatment. It includes all the circumstances of the management of the sick, the surroundings, the feeding and general care of the patient. In all of these respects enormous strides have been made, which greatly influence the chances of recovery of the patient

of to-day. Moreover, therapeutics includes prophylaxis, the prevention of disease. It is in preventive medicine that the greatest triumphs of medicine have been and will continue to be gained. The work of Jenner, Pasteur, Lister, Koch and other pioneers of preventive medicine have saved more lives, probably, than remedial art can claim. Fresh fields of therapeutical triumphs are opening to us in the employment of antitoxin serums and extracts of animal secretions, so that if therapeutics has lagged behind other branches of medical science, it has been due to unavoidable causes, and we may look forward hopefully and confidently to its future.

The Growth of the University System.—We must not leave out of consideration in tracing the path of progress the remarkable development of the University system in all civilized countries, and the increased care and methods of medical teaching.

All the branches of scientific knowledge we have been considering, anatomy, physiology, chemistry and physics, morbid anatomy and pathology, therapeutics, and preventive medicine, have helped us to the knowledge we at present possess. But they have rendered a further aid to medicine than the mere knowledge they enabled us to acquire. Themselves scientific studies utilising methods and instruments of precision they have influenced our whole mode of thought, and made us exact and precise in our observations and investigations of disease. We may paraphrase an expression of Burdon-Sanderson's, "The history of modern medicine is largely the history of scientific method." So when we are taunted with the assertion that medicine is not a science, we can reply that medicine utilises the knowledge gained in every branch of science, and is scientific in its methods of research into the nature and reatment of disease. If its results are not so exact as in some tother branches of knowledge, it is not due to any want of scientific method and care in its investigations, but to the very complicated phenomena with which it has to deal, whilst the investigator has not the same unfettered freedom of dealing with his subject that the investigator into chemistry or physics has. By a continuance of the same methods and exact research we cannot for a moment doubt that the progress that has been so manifest in the past will be exceeded in the future.

Clinical Medicine.—If we turn now to Clinical Medicine we shall see what great strides in progress have been made. It is only possible to give a few illustrations in the time at my disposal.

Fevers.—One of the most important advances in clinical medicine has been the separation of enteric from typhus fever by the labours of Jenner, A. P. Stewart, Murchison, Liebermeister and in America by Stuart. Relapsing fever has in like manner been

separated from the other fevers by Barker and Cheyne, by Graves and Stokes, whilst in 1873, Obermeier described the spirillum in the blood of this disease, at that time the only instance in which a specific organism in the blood was proved to be always present in fevers. Quite recently by the labours of Laveran and Marchiafava, Celli and Golgi, Councilman and Osler, after previous attempts by Salisbury and Balustra, Klebs and Tommasi-Crudeli, it has been conclusively proved that a microscopic parasite, the plasmodium malariæ, is the actual cause of malarial diseases that are so common and destructive in some parts of this continent and in other parts of the world. All these gains to clinical medicine, so important in the recognition and treatment of disease, have been due to increased precision in clinical observation and Morbid Anatomy, aided in a high degree by the use of the microscope.

Diseases of the Kidneys.—It may be safely asserted that two and a half centuries ago nothing was known of diseases of the kidney except the facts of the very coarsest lesions, such as calculus and suppuration. Even these were very imperfectly connected with their clinical manifestations. The detection of albumin in the urine by Cotugne in 1770, followed by the observations of Wells and Blackall, but more especially the work of Richard Bright, who combined in a rare degree the powers of accurate clinical observation and diligent post mortem research, furnished a new vantage ground to the study of clinical medicine. The continued researches of many of the ablest physicians in all countries, who have availed themselves of each new discovery and perfection of instruments of exact investigation, have brought our knowledge to a very high degree of perfection on this subject. The recognition of the association of increased arterial tension with renal disease, and the far reaching effects of this in the production of cerebral hæmorrhage and other consequences, has been one of the triumphs of modern medicine.

Diseases of the Nervous System.—The gradual unfolding of the closed book of the nervous system, by the successive gains in our knowledge of its anatomy and physiology, the invaluable work of Sir Charles Bell and Marshall Hall, the histological researches of Caskell, the clinical and pathological work of Charcot and Westphal, the experimental work of Fritz and Hitzig, of Ferrier, Bevor, Victor Horsley, and others has helped us to understand in a great measure the working of the nervous system and the effects of its lesions. But Clinical Medicine may justly claim to have had a large share in aiding us to reach our present knowledge of its workings and disease. The deductions of Hughlings-Jackson and Broadbent, and the recent valuable work by Starr, Edward Head and Thurston have

greatly increased our knowledge of the physiology of the nervous system and aided us in our means of diagnosis. Improved methods of surgical technique, especially the advent of antiseptic surgery by the genius of Lister, have brought some of these into the region of curative treament.

Addison's Disease.—The discovery by Addison of the association of asthenia, gastric irritation and pigmentation of the skin with diseased changes in the suprarenal bodies will always remain a model of good scientific work, combining clinical and pathological observation. At the time when Addison recorded his observations no definite functions were ascribed to the adrenals, and he could do no more than draw attention to the association of the clinical and post-mortem conditions. The full fruition of his discovery was to come later, when it was established that the suprarenal bodies formed a secretion which supplied to the circulation, probably through the vasomotor centres, a stimulus or tonic necessary for the maintenance of health, and that the asthenia which is the cause of death in Addison's disease is due to the deprivation of this secretion by destruction of the adrenals.

Myxœdema.— In the developments of our knowledge of this condition we have one of the most completely worked out sections of medical knowledge, and the manner and modes in which our knowledge has been gained is most instructive. Starting from the recognition of endemic cretinism in regions in which goitre is prevalent, we next have the observations of sporadic cretinism in England by Curling, who noted that the thyroid gland was ill developed or absent in these cases. Then came the description by Gull of "a Cretinoid State supervening in Adult Life in Women." Later followed a communication by Ord, in which he pointed out that the changes in this disease were due to a mucin-yielding œdema, and who also noted the atrophy of the thyroid body, and discussed its relations to endemic and sporadic cretinism. He gave to the disease the name of myxœdema, which it has since been known by. Next the observations of Reverden and Kocher that a condition similar to myxœdema was apt to follow upon total extirpation of the thyroid gland for the cure of goitre. The latter called this condition "cachexia strumipriva." Semon pointed out the identity of myxœdema cachexia strumipriva and cretinism, and that each was dependent on a loss of function of the thyroid body. Paul Bruns published a case in which the extirpation of the thyroid of a boy, aged ten, had been followed by the condition hitherto described in this country as sporadic cretinism. Then Victor Horsley by experimental research on animals succeeded in demonstrating that loss of function of the thyroid gland produced all the symptoms known as myxœdema and

strumipriva, and varying the mode of experimentation obtained strong evidence that cretinism was a more chronic form of the condition. Finally came the crowning of the edifice by Horsley proving that transplantation of the thyroid gland arrested the changes, by the same results being obtained by Murray by subcutaneous injections, by Hector Mackenzie, by feeding with the glands, and lastly by other observers by the internal administration of an extract of the thyroid body. By these means we have learnt that myxœdema and sporadic cretinism can not only be kept at bay, but that in the latter class of cases a remarkable growth and development can be brought about. Thus it has been shown that the thyroid gland, and probably every other ductless gland, removes or forms certain products in the body, and that the integrity of those glands is essentiel to the wellbeing of the individual. This knowledge is being turned to account in the treatment of quite a number of conditions. It is interesting to observe how these results have been acquired by the steady progress of scientific methods of observation and research, and to my mind the Report of the Myxœdema Committee of the Clinical Society of London, which embraces most of the above facts, is one of the most instructive contributions to Medicine, by showing how each of the great branches of medical science has contributed to the result.

Conclusion.—The question may be asked, have the great and undoubted advances in Medicine been attended with any benefit to mankind. To this question no uncertain answer will be given. Human life has been prolonged, and not only is this so, but as brought out very clearly by Dr. James Pollock, from the figures of Mr. Noel Humphreys, several years have been added to the most useful and valuable period of life. There has been a manifest decrease of mortality from smallpox, scarlet fever, diarrhœa, typhus, enteric fever, phthisis, convulsions, croup, diseases of the digestive system, and puerperal diseases, etc. On the other hand there has been an increase of mortality fron cancer and some other diseases. The gains have been greater than the losses, and this is not the occasion to discuss why we have failed in this direction.

But whilst the review we have taken of the progress of the science and art of medicine is encouraging, we must remember there will always be a limit to our powers of curing disease. When any part of the higher tissues is destroyed it can never be replaced by the recuperative powers of nature or improvements in medical science. Sclerosis and destruction of the nervous elements means that they are almost irremediably lost. If the lung is destroyed by tubercle or other disease it can never be replaced. Nothing can make good disintegration of the kidney or liver. Nor shall we be ever able

to retard the effects of time. "To die is as natural as to be born" it has been truly said, and the silver cord that chains us to this world must sooner or later give way. Great as have been the improvements in the treatment of disease, our greatest triumphs in the future as in the past will continue in the prevention of disease.

One of the most important features in modern medicine has been the remarkable development of Medical Societies and Associations, and the fact that they are yearly increasing is strong evidence that the profession finds them useful in its work. They enable us to submit our observations and inquiries, our theories and our practice to the criticism of those most competent to discuss them, and thus to separate the wheat from the chaff. The meetings of the British Medical Association amongst others have been most useful in this respect. Let me conclude by expressing a hope that the work done at this Meeting at Montreal, and especially this Section of Medicine, will aid in the search after truth, will stimulate and ennoble the aims and energies of those taking part in its proceedings, for the advancement of knowledge and the good of mankind.

Progress of Medical Science.

SURGERY.

IN CHARGE OF

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SURGERY OF THE URETER.

Delagénière (*Archives provincial de Chirurgie*, 1897; *University Medical Magazine*, Sept., 1897) in a review of operative procedures on the ureters, concludes that at present this branch of surgery is in its infancy, and at the present time the indications for instrumental interference are not clearly understood. The recent advance in abdominal surgery, especially the new methods of suturing the stomach, has of late encouraged surgeons to deal freely with the ureter, with diminished dread of supposed fatal results of urinary infiltration. The advance made in the study of ureteral conditions has been at the expense of renal surgery. In cases of hydronephrosis, instead of making a urinary fistula in the loin, or removing the kidney, the surgeon's attention is directed

towards the re-establishment of the lumen of the ureter. The ureter can be irrigated, and ureterotomy enables the surgeon to remove an impacted calculus and relieve a condition which has been uniformly fatal.

ARGONIN IN THE TREATMENT OF GONORRHŒA.

Zydlowicz has applied this remedy in thirty-three cases of gonorrhœa, six of which he described minutely. Of these, six were acute, twenty-six subacute, and one chronic. In the six acute cases, gonococci disappeared from the discharge after from three to thirteen days; in all other cases they disappeared after from eight to seventeen days of the treatment, they did not disappear even after three weeks of the treatment in one case only. Injections are not painful and therefore may by applied in all periods of gonorrhœa; under their influence the symptoms of inflammation diminish and the gonocccus disappears. All this enables the author to conclude that argonin is the best of all known antigonorrhœal medicines, and recommends it warmly.—*Przeglad Lekarski*, Nos. 1-3, 1897.—*Universal Medical Journal.*

EFFECT OF VENESECTION IN SKIN DISEASES.

Schubert (*Berl. klin. Woch.*) has treated thirteen chronic cases of skin affections—including eczema, psoriasis and furunculosis—by venesection. Nine of these cases were cured. The effect in furunculosis is especially marked. Dyes described the case of a lady, aged 30, who for seventeen years suffered from general moist eczema, for which every kind of treatment had been tried in vain. After the first venesection the eczema dried up, and four weeks after the third venesection the patient was cured. Schubert found in blood obtained by venesection that there was an increase in the number of white corpuscles in skin diseases, just as in other illnesses. He thinks that the white corpuscules are most numerous in the capillaries, and that, therefore, they come away first with the blood drawn. The accumulation of white corpuscles in the cutaneous capillaries offers a good nutrient material for the growth of parasitic microbes, which excite skin diseases. His explanation of the good effect of bleeding in some cases of skin disease is that with each venesection the blood becomes poorer in these white corpuscles. With repeated venesection he has observed a kind of regeneration of the skin, the latter assuming a purer aspect and improved coloring.—*British Medical Journal.*

A PRELIMINARY NOTE UPON A NEW OPERATION FOR THE RADICAL CURE OF HERNIA. INTRAPERITONEAL TRANSPLACEMENT OF THE SPERMATIC CORD AND OBLITERATION OF THE INTERNAL RING AND INGUINAL CANAL.

George Ryerson Fowler, M. D., in *The New York Polyclinic*, July 15, makes the following comments upon the operation for the radical cure of hernia :

" A recent experience in a case in which a recurrence took place following the employment of the essential feature of Bassini's operation for the radical cure of hernia, namely, anterior displacement of the cord, the sac of the newly formed hernia finding its way alongside the cord and forming a direct hernia at the site of the internal ring, impelled me to devise some method of getting rid of the latter more effectually than has been heretofore accomplished. The method herewith presented aims at the simultaneous obliteration of the internal ring and inguinal canal, in order to accomplish which the cord is transplaced into the peritoneal cavity for a distance represented by the space extending from the internal ring to the lowermost reflection of the peritoneal investment of the abdominal wall, just behind the pubic bone.

" The parts are exposed by a curved incision, commencing at the spine of the pubis. This is carried parallel with the os pubis for a short distance, this varying with the size of the individual, and thence curves to meet the groove in the skin corresponding to the general direction of Poupart's ligament. It is carried in this groove to a point corresponding to the line of the internal ring. This flap is reflected so as to expose the aponeurosis of the external oblique.

" The aponeurosis of the external oblique is now incised from the external to the internal ring. The cord and sac are first isolated together, and then separated from each other, each being cleared well up to the level of the internal ring. Following the suggestion of Halsted, any large veins present in the cord are isolated and removed.

"The hernial sac is now opened and its contents reduced. The sac is cut away to the level of the muscular layer of the abdominal wall, and its cut edges grasped by the forceps. The deep epigastric artery and veins are identified at the point where they cross upon the transversalis fascia, ligated in two places, and divided between the ligatures. The index finger is now introduced into the peritoneal cavity through the neck of the sac, its palmar surface turned upward, and with this as a guide the entire space represented by the posterior wall of the inguinal canal and Hesselbach's triangle,

incised, this section including, from without inward, the transversalis fascia, sub-peritoneal connective tissue, and peritoneum. The lower angle of this incision should be placed well below the level of the pubic bone.

"The spermatic cord is now transplaced into the peritoneal cavity through the gap made by this incision, entering opposite the internal ring and emerging at the lower angle of the incision. The edges of the incision are grasped by forceps and drawn forward in order to secure broad approximation of the peritoneal surfaces, and these sewn together by a "through and through" suture of kangaroo tendon. The first stitch is taken through a fold of the transversalis fascia above the point where the cord dips backward to enter the peritoneal cavity, and secures the internal ring. The suturing is continued downward until the lower angle is almost reached, just sufficient room being left at this point for the cord to emerge without infringing upon or constricting the latter. This, the new ring, if such it may be called, is placed sufficiently low to compel the cord to curve upward in order to cross the pubic bone, thus securing a bony buttress anteriorly, to strengthen this otherwise weak point.

"The inguinal canal is now closed by interrupted sutures of kangaroo tendon. These include the conjoined tendon and aponeurosis of the external oblique upon one side, and Poupart's ligament upon the other. The two lower sutures should include the outer edge of the pyramidalis upon the inner margin, or, if this is not present, the rectus muscle. This serves the purpose of guarding the site of Hesselbach's triangle. If the muscular structure does not readily come into place, the outer attachment of the muscle may be detached to facilitate its displacement. Accurate approximation of the edges of the aponeurosis of the external oblique may be still further secured by a continuous suture, each turn of which is passed between the interrupted sutures. The skin wound is now closed and the parts dressed.

"I have operated by this method in six cases. Two of these were cases of large hernia which were strangulated, and one was a double hernia. In all of the uncomplicated cases the patients were permitted to walk about in fourteen days. The cases are too few and recent to be of use in estimating the value of the new procedure, as far as permanency of cure is concerned. They are presented for the purpose of demonstrating that obliteration of the internal ring and inguinal canal is possible without resorting to castration, the most efficient of the formerly practiced methods of radical cure of inguinal hernia. This is accomplished by the method of intraperitoneal transplacement of the cord described."—*Medical Review of Reviews*, Sept., 1897.

WHEN TO CRUSH AND WHEN TO CUT FOR STONE IN THE BLADDER.

The Post-Graduate Journal for August, 1897, contains a valuable article on this subject, by Eugene Fuller, M.D., New York. He says:

"Litholapaxy causes no mutilation, and in the hands of a skilled operator it is attended with less danger than a cutting operation. Consequently it should be the procedure of choice over any form of cutting operation, if it is capable of accomplishing a radical cure. It is radically curative in all cases wherein it is possible to crush and evacuate all the calculus, provided certain abnormalities of the bladder itself and of the vesical function do not co-exist. If a stone lies free in the bladder—that is, if it be not encysted; if its diameter be not too great to prevent its being caught between the blades of the lithotrite, and if it be of such consistency as to allow of its being fractured, then there is nothing, as far as the stone is concerned, to stand in the way of a crushing operation. One ought to be able to evacuate all fragments of stone in every case in which normal vesical conditions exist. It may, however, be difficult, and perhaps in some instances impossible, to remove in this manner the nucleus about which some stones form, provided it be a foreign body which cannot be fractured at all, or at best only partially. Thus, India rubber, wire, gum, paraffine, straw, wood and bone, represent substances about which stone may form, and which in all probability cannot, or are not liable to be removed by litholapaxy. In attempting a crushing operation, if it is found that a nucleus such as I have described exists then it is better, as a rule, to abandon that method of procedure and to complete the extraction by making an opening into the bladder. In cases of vesical atony it may be difficult to wash out all the fragments, but, nevertheless, perfectly possible and practical if only time and patience be practiced. In some cases wherein abnormal conditions of the bladder exist, such as sacculi or pouches, generally post-prostatic ones, it may be impossible to remove every fragment secreted in such places. Very few stones, indeed, are too hard to be fractured by the lithotrite. Most of them break readily under one hundred pounds pressure.

"The abnormalities of the bladder and of the vesical function which may contraindicate litholapaxy, are the existence of structural conditions which prevent such an operation, or of pathological ones which render it of very temporary benefit. The conditions which prevent the operation are urethral obstruction, which precludes the passing of the lithotrite, and which cannot be overcome by the passage of sounds,

accompanied, if necessary, by some minor cutting operation confined to the anterior urethra. Thus, if a stricture is deep and non-dilatable, so that a perineal section would be necessary for its proper treatment, that operation would be called for, the stone being extracted through the incision. If an obstructive anterior stricture exists it can be divided by an internal urethrotomy, and then litholapaxy can be performed as in natural conditions. Prostatic senile hypertrophy, and very rarely other abnormal conditions of the prostate, may interfere with the performance of the litholapaxy by so restricting the movements of the lithotrite that it may be impossible to engage the stone or its fragments sufficiently to accomplish the necessary amount of crushing, or if it be possible to crush the fragments it may be impossible, although this is less likely, to so move the evacuating tube as to be able to aspirate all of them. Then, again, vesical sacculi may exist in which a calculus lies wholly protected from attack by the lithotrite. Sometimes a calculus may project from a sacculus, or, in other words, may be partially encysted. A case of this description cannot be radically treated by litholapaxy since the stump, as it were, of the calculus cannot be by that method removed, but remains to act as a focus about which fresh concentrations can collect. Vesical neoplasms may also so prevent the movements of the lithrotrite that a calculus cannot be sufficiently crushed. Very rarely a bladder may be so contracted about a stone that there is no space in which to work the blades of the lithotrite. Structural conditions such as I have mentioned, sufficient to prevent the successful performance of litholapaxy, are not, however, at all common in the experience of skillful operators. Of more importance than the causes which may exist to prevent the performance of litholapaxy are those which act to render it of but temporary benefit. In this class of cases the formation of stone in the bladder is really only secondary to and dependent on existing diseased conditions. Stones of this class are phosphatic and originate in the bladder, due to the prevalence of pathological conditions favoring infection. Thus, any condition which causes an habitual inability to empty the bladder either completely or partially, favors decomposition of urine and phosphatic deposit, Prostatic disease, most often of a senile nature, is the chief cause for this condition, although many other diseases, such as spinal paralysis, vesical and pelvic growths, stricture, etc., may be present. If the surgeon has a case of this description, the radical and best treatment is to do whatever cutting operation may be necessary to correct the vesical disease which causes the stone formation, and at the same time to remove the stone. If a patient of this class has, however, some

disease which it may not be possible to correct, or only possible by resorting to a risk greater than the patient or surgeon may be willing to accept, then litholapaxy should be done as a palliative operation, and as one which is attended with little risk; but before doing this operation under such circumstances the patient as well as those who stand sponsor for him should be plainly told that it is probable the operation will have to be repeated unless the patient, by artificial means, may be able to keep his bladder sweet and free from infection. If this is not done the surgeon who removes the first stone will be blamed when a second one forms, the patient supposing his relapsing symptoms to be due to an incomplete performance of the first operation.

"In the performance of litholapaxy, certain rules should be observed. In the first place, the bladder should be free from tenesmus. This can be accomplished by the administration of ether or chloroform sufficient in amount to produce general muscular relaxation. Local anæsthesia, generally by means of a weak solution (2 per cent.) of cocaine, has been occasionally employed, and is still recommended by a few operators. It is, however, a dangerous agent when used in this manner, owing to the toxic symptoms which may follow from its rapid absorption in case the vesical mucous membrane becomes abraded during the opration. Its use could, however, be justified occasionally in cases where, from certain general conditions, the administration of ether or chloroform might seem to be strongly contraindicated. When it is used the surgeon should be on his guard and ready to draw off the solution and wash out the bladder on short notice, as toxic symptoms may develop suddenly.

"In a very few instances no anæsthetic may be required. Such individuals have bladders which are thoroughly accustomed to instrumentation. One sees cases at times of this description in which calculi have at frequent intervals for a numbers of years passed from the kidney into the bladder, and so little may these patients think of the operation that I have known them to stop at the office of a morning on their way to business to have the concretion cracked and washed out.

"After administering the anæsthetic the bladder should be washed clean through a catheter, the agent employed being simply warm sterile water or a boracic acid solution. No astringent antiseptic should be used, as it interferes with the working of the blades of the lithotrite by causing a binding in the slot. From 5 to 6 ounces of fluid should be in the bladder while the stone is being crushed. The calibre of the lithotrite should be enough smaller than that of the urethra to allow the instrument to be moved about with perfect free-

dom. Most lithotrites have a calibre of from 20 to 25 French. Lithotrites as small as 9 French (4 English) are used in India for crushing stone in boys a year old, or even younger. Boys somewhat older than this will, however, usually take an instrument of 12 to 14 French. One skilled in the use of the lithotrite can generally distinguish the difference in the feel between stone and bladder wall. Stone caught between the blades and gently compressed affords no signs of elasticity. The feel, however, presented by different kinds of calculi varies, phosphatic stones being soft and sometimes even crumbly, while those composed of uric acid, and especially of calcic exalate, are hard. A most important rule to be observed in operating in order never to wound the bladder is always, after catching a concretion in the blades of the lithotrite, to rotate the handle of the instrument, thus moving the concretion away from the place in which it was picked up before the blades are locked, preparatory to screwing them together. By so doing, if perchance a fold of bladder wall is caught in the grip, either by itself or together with a fragment of stone, the movement will cause whatever is between the blades to slip out, while, on the other hand, if stone alone is in the grip, the rotation of the shaft will not dislodge it. After a stone has been so crushed that the fragments as measured by the guage on the lithotrite seem sufficiently small, then the lithotrite should be withdrawn and an aspirating tube as large as can be easily passed and attached to an evacuator inserted, through which as much of the debris should be removed as possible. The lithotrite should next be re-introduced to crush still further the pieces too large to pass through the eye of the evacuating tube. Then the evacuator should be again brought into use, and so on until all the particles have apparently been washed out. Oftentimes at the first washing all the particles can be removed, and it is rarely necessary for the evacuator to be brought into use oftener than three or four times in an operation. Some operators dispense entirely with the aspirating tube and the evacuator. These surgeons crush the stone into very fine particles, reducing it to the consistency of coarse sand. They then introduce a catheter, through which, by means of repeated vesical washings, all the particles are finally removed.

"As a last step in the operation the bladder should be washed out with a strong antiseptic solution, such as nitrate of silver, gr. ss. to gr. i. to the ounce of water. If the bladder is healthy and is emptied completely by the patient at the end of each urination, the after treatment ought to be simple, and the patient ought to wholly convalesce in a week

or thereabouts, the treatment being chiefly rest in bed and the administration of diuretics. If the bladder does not empty itself then the case is different. The catheter will have to be frequently employed, and the bladder washed by antiseptic solutions; otherwise decomposition will be invited. Within a week or so after all operations it is always well to insert a small aspirating tube, to which an evacuator is attached, in order to make a final test for stray fragments. This can usually be accomplished without the use of an anæsthetic.

"If some reason such as has been enumerated exists to contraindicate litholapaxy, then a cutting operation will be in order. There are three principal cutting operations—the median perineal, the lateral perineal and the supra-pubic. Large calculi have also been removed on two or more occasions through an incision on either side of the base of the bladder, that part having been exposed by means of a Kraske incision.

"Very large calculi require the suprapubic incision, as it affords most space. The least space is afforded by the median perineal opening, while the lateral perineal cut is best for stones too large for the median, but still not of excessive size. Many times the supra-pubic operation will be required to correct diseased conditions of the prostate which have occasioned stone. In such instances the removal of the existing stone is simply a preliminary step in the main operation, which is directed toward the prostate."

OBSTETRICS.

IN CHARGE OF

H. L. REDDY, M.D., L. R. C. P., London,

Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

PUERPERAL SEPTICÆMIA TREATED WITH ANTI-STREPTOCOCCIC SERUM—DEATH.

J. B. Rawlings, M.D., Lond., in *Lancet* describes a case of puerperal septicæmia treated by the serum treatment. A primipara æt. 24 at full term had been in labor 54 hours when admitted into the hospital Aug. 24th, an unsuccessful attempt at delivery with forceps having been made in her own home. On admission there were fairly strong pains every 10 minutes. The fœtal heart was 156. Pelvic measurement showed a slight degree of general contraction. A vaginal douche of the bichloride of mercury 1-2000 was given. Two hours later chloroform and an easy forceps delivery. Uteru

and vagina again douched with 1-2000 bichloride of mercury solution. A little later pulse 84, temp. 99.2°F. On the 25th, or 12 hours later, temp. 103.6°F., pulse 120, no rigor. 26th, temp. varied from 101.4°F. to 104.2°F. and the pulse 122 to to 140, resp. 28 to 36. Patient sweating freely; headache; no rigors. Lochia normal. There was found to be some superficial sloughing of the lower part of the vaginal wall. Heart and lungs normal. Uterus curetted, nothing found. After curetting temp. fell suddenly to 97.8°F., resp. infrequent and sighing, pulse 100, good volume.

On the 28th temp. rose to 103.2°F., pulse 120, douche given, and at 2 p.m. 9 c.c. of serum given; in the evening patient seemed a little better, pulse intermittent, temp. 102 8° F. A further 9 c.c. was injected.

29th, patient said she felt better, but looked worse; temp. varied from 102° at 2 a.m. to 98.6°F. at 10 a.m. Pulse 136, 20 hours after the first injection of antitoxin. Antitoxin again injected at 1 p.m. and again at 9 p.m., but no fall in temp. Digitalis, strychnine and caffeine injected. Patient complained of severe pain in back, which persisted till her death, and was unaffected by morphia. On the 30th temp. ranged from 100.4° to 101.4°, pulse 200; 31st, no change, and died Sept. 1st at midnight. Necropsy showed no general peritonitis, but the left half of the post aspect of the uterus and peritoneum was injected. Douglas' pouch contained 2 drachms of pus, otherwise there was little of note.

Remarks:—One interesting point in the case is that there were no rigors. *The case is a striking example of the extreme value of a high pulse rate in the diagnosis of puerperal fever.* There were no rigors, lochia sweet and plentiful, patient bright and cheerful, tongue moist and clean, appetite good. Although the temp. fell 20 hours after the injection of antitoxin from 103.2° to 98.6°, it was not accompanied by a fall in the pulse rate, and hence was not regarded favorably. Hence, in cases where in the first three days of the puerperium the temp. rises to 102° and is accompanied by a pulse rate of 120, the case should be regarded at least provisionally as septic. If the temp. and pulse rates continue 12 hours the uterus should be curetted and douched at once. The intensity of the pain in the back was unusual, and nothing found to account for it. There was marked tolerance of morphia, 3½ grains being injected one night. The condition of euphoria was well marked.

ETHER VERSUS CHLOROFORM IN OBSTETRICS.

In a paper on "Some Things I was not Taught in Obstetrics," E. S. Boland (*Boston Med. and Surg. Journal*) says

a few words in praise of chloroform in midwifery practice. Chloroform he uses hundreds of times to once of ether. Boston, he says, justly proud of her great discovery of that great general anæsthetic, ether, has not been fair to chloroform. He has not found that it predisposes to hæmorrhage. As a routine practice he examines the heart before giving it, and under these restrictions he regards it as an ideal anæsthetic during the latter part of the first stage and during all of the second stage of labor; it is seldom necessary during delivery of the afterbirth or for suturing a perineal tear.

NURSING SORE MOUTH.

Dr. E. Holt Bowling, Luster, N. C., says: Listerine acts like a charm in stomatitis materna. When a nursing mother comes to you complaining of diarrhœa which does not yield to ordinary remedies, and has a sore mouth, irritable gums, etc., give her:

℞ Listerine.....8 ounces.
Sig.: Teaspoonful after each meal.

You will find that the disorder will yield to this treatment when it will resist all others.

NON-LIGATION OF UMBILICAL CORD.

Kellar (*Pacific Med. Journ.*) advocates non-ligation of the cord; he has practised it in more than 2,000 cases, and, after careful observation of these and other cases, summarises as his views: (1) Ligation in man is unnecessary because (*a*) it is not required at birth of any other animal; (*b*) the imagined necessity to prevent hæmorrhage does not exist; (*c*) to tie for cleanliness in superfluous; (*d*) it is unreasonable to consider such an imperfection as need of ligature exists. (2) Ligation is in many cases injurious, (*a*) because it may justly be considered the cause of secondary hæmorrhage; (*b*) by interfering with desiccation, and thus preventing separation, it gives rise to ulceration, with not infrequent consequences of erysipelas, fungoid excrescence, etc.; (*c*) it causes inflammation of funicular vessels by keeping them distended with unnaturally retained blood, hindering their normal obliteration, and laying foundation for phlebitis, jaundice, pyæmia, etc.; (*d*) by preventing normal escape of blood, and thus causing hyperæmia and congestion of portal circulation, it may lay the foundation of numerous infantile affections apparently originating in congestions of these vessels. (3) Certainly in some, and probably in not a few, cases ligature has been directly fatal; (*a*) numerous fatal cases attributed to ligation have been recorded by the highest authorities; (*b*)

it can be seen in the newborn that the ligature maintains the right ventricle in a state of distension, otherwise relieved by bleeding from the hypogastric arteries, and this prevents renewal of action if the heart has stopped, or hastens its stoppage if it is failing; (*c*) in many instances removal of the ligature has saved life when other remedies have failed.

CONSTIPATION IN THE PUERPERIUM.

Hubert (*Revue Médicale* Louvain) writes on alarming symptoms in childbed, which depend entirely on constipation, and disappear when the bowels are opened. No doubt the bowels are naturally slow to act after delivery. Sometimes the retention of fæcal matter simulates metro-peritonitis. Not only is there loss of appetite with foul tongue and breath, but tympanitic distension of the abdomen sets in with rigors, and temperature occasionally as high as 104°. When a purge succeeds all these symptoms vanish. If the constipation be neglected true peritonitis may undoubtedly set in. This complication is not the peritonitis of puerperal infection due to the streptococcus, but a peritonitis of stercoral infection where the offending germ is the bacillus coli, which passing through the intestine infects the serous coat. There is also a later form of constipation in the puerperium, accompanied with hæmorrhages, hæmorrhoids and great pelvic congestion.

IPECAC NOT AN OXYTOCIC.

Dr. A Keilmann (*Petersburger Medicinische Wochenschrift*) has tried the tincture of ipecac as an oxytocic in weak uterine contractions, as recently recommended by Drapes and Utt, of St. Petersburg, and denies that it has any such powers. He would rather advise pushing the head from above down into the pelvis, but under anæsthesia.

THE NOSE AND MENSTRUATION.

The fact has been observed that the nasal mucosa undergoes certain modifications during the menstrual period, turgescence, exaggerated sensitiveness, tendency to hemorrhage and cyanotic discoloration. Fliess, of Berlin, has been studying this phenomenon, and has found that a certain form of dysmenorrhea, in which the pains continue after the commencement of the menstrual discharge, is largely dependent upon the nose. He applies the term genital to those parts of the nose where these manifestations are most intense, namely, the inferior turbinate bones and the tuberculi septi. Lesions of these points produce this form of dysmenorrhea, while their cocainization arrests the dysmenorrheic pain as

long as the effect of the cocaine lasts. Cauterizing will also arrest the dysmenorrhea permanently, or at least for a long while. These nasal congestions occur during pregnancy at the time when the menses would otherwise occur.—*Reported at the Ges. f. Geb. und Gyn.—Jour. A. M. A.*

THE TREATMENT OF PLACENTA PRÆVIA.

G. Fieux (*Annales de Gynéc.*) reports 5 cases of placenta prævia which have come under his notice. In the first two the treatment consisted in the use of the Champetier de Ribes bag and rupture of the membranes; in the next two, packing the vagina very tightly was first tried, and found ineffectual, while rupture of the membranes immediately arrested the hæmorrhage. In the fifth case hæmorrhage occurred at the six month of pregnancy, natural rupture of the membranes then occurred, and the gestation nevertheless persisted for seventy days thereafter, a viable child being ultimately born without incident. Fieux, therefore, sums up strongly in favour of rupture of the membranes as the best treatment of placenta prævia. Even when the placenta covers the os uteri, he would still rupture the amniotic sac through the placenta; in fact, this was done in the third case, although the leg of the fœtus was also drawn down into the opening. The rupture need not be immediately followed by complete emptying of the uterus, as is learnt from the fifth case.

IS THE VAGINA IN NORMAL PREGNANCY ASEPTIC?

Goenner (*Centralbl. f. Gynak.*) has carefully investigated the normal secretion of the vagina in healthy pregnant women. He finds that it contains anaërobic bacteria, not such as cause primary septic endometritis, but those which can be easily introduced from without. As in the case of streptococci which set up puerperal fever, the germs in the vagina do not represent auto-infection, but are brought there by the medical attendant, the midwife, the nurse, or the instruments. Septic endometritis, often indicated by fœtid liquor amnii, may be excited by the bacterium coli.

THE PNEUMOCOCCUS IN PREGNANCY.

Vinay (*Revue Obstet. Internationale*) observed a patient who suffered from great gastric irritability during pregnancy. Multiple abscesses appeared during the seventh month; the pneumococcus was found in the pus. The patient died nineteen days after delivery.

PREMONITORY SYMPTOMS OF PUERPERAL INFECTION.

Ferré (*L'Obstétrique*) lays stress on the success of intra-uteri treatment for puerperal fever. The success stands in direct ratio to the earliness of intervention. Hence very careful clinical researches have been made in lying-in hospitals in order to detect true prodromata. The true rigor, local pains and conspicuous pulse and temperature are known to all, and when combined indicate more or less advanced infection. Ferré denies that these symptoms ever come on suddenly, though certain milder types of infection now observed may represents epsis modified by antiseptic agents. These milder types, however, will assuredly develop into deadly septic infection if neglected. Ferré finds, after long clinical research, that even the severest form is preceded for a day or two by distinct elevation of temperature and pulse, and by insomnia. An evening temperature of about 100° in the axilla, with a fall of about a degree in the morning, without a corresponding drop in a somewhat rapid pulse, is a distinctly suspicious symptom. The rise in the pulse often precedes the rise in the temperature ; the observer must therefore make sure that acceleration of the heart's action is accounted for even in a patient who seems otherwise convalescent. Reaction after the fatigue of labour, hæmorrhage and emotions all send up the pulse. Insomnia, Ferré has noted, is often observed in the earlier stages of infection, distinct want of sleep without restlessness is usual for a day or two before bad septic symptoms. The lochia may remain free from odour in the premonitory stage of puerperal septicæmia, nor are the discharges always fœtid when the disease is established.

THE INDICATIONS AND TECHNIQUE OF LAPARO-HYSTEROTOMY.

Dr. N. Senn (*American Journal of the Medical Sciences*) says :

Laparo-hysterotomy is justifiable when delivery through the normal passage is impossible without mutilation of the living child.

It is absolutely indicated where the conjugata vera is less than two and a half inches, when obstruction is due to fixed pelvic tumors and advanced malignant disease of the cervix.

Mutilating operations on a living child for the purpose of effecting delivery are no longer legitimate obstetric procedures, as laparo-hysterotomy and symphysiotomy are life-saving operations for both mother and child.

Hysterectomy after laparo-hysterotomy is only justifiable if the uterus itself is the seat of a life-threatening removable disease.

Elastic constriction as a hemostatic measure should not be resorted to in laparo-hysterotomy before the delivery of the child.

The uterine incision should be enlarged to the requisite extent by tearing for the purpose of diminishing hemorrhage.

The visceral wound should be closed by four rows of sutures applied in such a manner as to absolutely arrest the hemorrhage and completely separate the uterine from the peritoneal cavity.

Laparo-hysterotomy is also indicated in the operative treatment of single, large myofibroma of the uterus in youug women when the tumor is located within or near the uterine cavity. In such cases the uterine incision should be closed in the same manner as in operations on the pregnant uterus, and the bed of the tumor should be packed with iodoform gauze which is brought through the cervix into the vagina, thus serving the double purpose as a hemostatic tampon and capillary drain.

ANTISTREPTOCOCCUS SERUM IN PUERPERAL FEVER.

W. Butler Walsh (*Intercolonial Medical Journal of Australasia*) records the following case :—Patient, aged 25, in third labour. All well till fourth day, when nurse (contrary to the author's usual custom) administered a vaginal injection. The same evening the patient had a severe pain in the right inguinal region. Temperature 102°. Hot fomentations were applied, and the temperature fell to 99°, but soon rose again to 103°. The uterus was washed out, and a pessary of iodoform (½ drachm) inserted into it. The temperature fell to 99.8°, but rose again the following day to 104.4°. The uterus was then curetted, and a piece of placenta and hypertrophied decidua, quite hard and adherent, removed. There was free hemorrhage and collapse. Temperature 95°. The patient was in a critical state for four or five hours, sometimes almost pulseless. Ether was injected hypodermically and coffee and brandy *per rectum*. Next day temperature in morning 99.6°, in the evening 99.8°. Three days later the temperature in the morning was 104°, running pulse, gasping respiration, face becoming sunken and yellow. The condition appeared almost hopeless. Ten c.cm. of serum injected at 1 p.m., the temperature being 102°. The temperature and pulse improved considerably for a few hours, but gradually rose again. The next day the temperature was

102.6°. Ten c.cm. of serum again injected. The temperature, pulse and general condition gradually improved, and the patient steadily recovered. Besides the serum injections, a pessary of iodoform (½ drachm) was on three occasions introduced into the uterus. Brandy and liquid nourishment were freely given, and quinine (grs. 4) every three hours. A slight cellular infiltration round the uterus was noticed about six days after the fever commenced. This was treated by hot antiseptic vaginal douches. No erythema, urticaria, arthralgia or other unpleasant symptom followed the use of the serum.

PATHOLOGY.

IN CHARGE OF
ANDREW MACPHAIL, B.A., M.D., M.R.C.S. Eng., L.R.C.P. London.
Professor of Pathology, University of Bishop's College.

In the county of London alone there are nearly twenty thousand lunatics and imbeciles, continually under observation in the asylums at Banstead, Cane Hill, Claybury, Colney Hatch, Hanwell, Bexley and Horton. In the asylums of Canada there are fourteen thousand insane, exclusive of idiots; in the province of Quebec alone the asylums contain nearly 3,000 patients. A perusal of the annual reports of all these institutions leads to the belief that an imperfect use is made of this wealth of material for clinical, but more especially, for pathologic purposes.

Everyone interested in the care and treatment of the insane is making an earnest effort to substitute for "asylum," with its old stigma, the more comfortably sounding "Hospital." And yet, for the most part, the people at large are found believing all things of Hospitals for the Insane if only they be false, and the more readily if they are malicious. Some of the more ignorant amongst the public are yet harking back to the calumnies of Charles Reade, whose facts were long ago proven to be fiction.

In the *British Medical Journal*, 22nd December, 1894, these and similar delusions are adequately dealt with.

Those who are responsible for the management of asylums would do well to insist, in their reports, more strongly upon the means taken for the care and cure of their charge rather than upon their detention. The old stigma can only be covered by the scientific mantle, which many superintendents and pathologists are weaving about the insane and their diseases.

There is evidence, however, within the last few years that this state of affairs is passing away, and many reports

contain more than a few scraps of information upon the pathologic enquiry carried on in the various institutions.

The Eighth Annual Report of the Asylums' Committee of the county of London, presented to the Council in June, 1897, yields welcome proof of this fact.

In the report above referred to, there is evidence that the large field at the command of the London authorities is begun to be worked. There is now a pathological laboratory at Claybury in full working order under the direction of Dr. F. W. Mott, F.R.S., to whom is assigned an annual salary of $3,500. Dr. Mott has two laboratory assistants, and the Technical Education Board has established there a research scholarship in neuro-pathology of the annual value of one hundred and fifty pounds.

The asylums are also recognized by the Royal Colleges of Physicians and Surgeons as institutions at which clinical instruction may be received, and the Schools of St. Bartholomew's, Westminster and St. George's so availed themselves.

The pathologist's report will be read with relief, coming though it does in the midst of an uncouth bundle of printed matter, 13 x 8½ inches and 150 pages thick. The relief is the greater if one has entered into the details of which the report is largely composed, the cost and varieties of coals used, the contract prices for provisions—like Whitely's catalogue.

Even the superintendents' reports are unnecessarily meagre. The names of Doctors Claye-Shaw, Moody, Jones, Seward, Alexander, are well known, but their reports are for the most part devoid of scientific interest.

It is quite true that these authorities do seek other channels for their scientific observations, but the committee would be well impressed if it were at least suggested that some such work is being done.

For all these reasons then the account of Dr. Mott's research is a relief. It would appear that Dr. Mott himself has had to initiate the recording of the clinical history of the new cases. Of great interest is the observation that in 70 per cent. of the cases of general paralysis, fatty degeneration of the usual muscles—heart, diaphragm and the adductors of the arm—was found. This is analogous with the condition found in diphtheritic paralysis, and leads to the interesting enquiry as to whether general paralysis is not also due to a toxæmia.

Dr. Mott was struck by the frequency with which syphilitic lesions were found. At the autopsies in the Verdun, Montreal, Asylum, last year, it was noted that in 20 per cent. of the cases venereal disease was the cause of the mental condition and death of the patient.

Dr. Mott's work has been systematic, and has dealt with

the evidence of toxic agents in the blood and cerebro-spinal fluid ; the possible influence of those agents in producing death by degeneration of the heart and other muscles ; the relation of syphilis to general paralysis; relation of congenital syphilis to general paralysis ; relation of syphilis to disease of the cerebral vessels, membranes, and brain substance; degeneration of the neuron, owing to premature decay, influence of toxins, influence of defective nutrition by cutting off the blood supply ; a number of cases, such as tumours, infective diseases, ex-ophthalmic goitre, morphœa, herpes, cerebral aneurisms.

Work was undertaken by Mr. White to show if there was any connection between the presence of micro-organisms and certain mental conditions. In this enquiry the extreme unreliability of bacteriologic conclusions was demonstrated. Micro-organisms were found in 40 per cent. of the cases, but when more careful methods were adopted the percentage was reduced to sixteen.

Dr. Mott has now under his direction an efficient corps of workers, and intends issuing regular bulletins, which promise to be of great value to persons having an interest in neuro-pathology.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, April 23rd, 1897.

GEORGE WILKINS, M. D., PRESIDENT, IN THE CHAIR.

ABSCESS OF THE PELVIS.

Dr. F. J. SHEPHERD exhibited the pelvis of a male dissecting room subject, half of which was shown as a dry and half as a moist preparation.

There were sinuses in the lumbar, sacro-iliac and gluteal regions, and in the thigh and groin of both sides. The pelvis and sacral regions were filled with pus. On examination, the specimen showed beautifully how the disease was bilateral and what a small amount of original disease there was. The original disease was altogether confined to the intra-vertebral substance between the 4th and 5th lumbar vertebræ, and an abscess cavity was found here which had spread laterally down each psoas muscle and also down the sacrum into the pelvis. There was no spinal deformity whatever. The dry specimen showed new bone throughout about the lower lumber vertebræ and the sacrum but no sacro-iliac disease. The moist preparation beautifully demonstrated psoas, pre-sacral, and lumbar abscesses, all proceeding from the original disease between the 4th and 5th lumbar vertebræ. Dr. Shepherd said this case explained one of the puzzles met with in the surgical wards,

where sacro-iliac disease was suspected and abscesses were found on both sides. In the present case the disease could only be searched or in front.

Subacute Lukæmia.

Dr. J. G. Adami showed the organs and described the post-mortem appearances in a case of this disease.

Polydactilism.

Dr. Shepherd exhibited skiagraphs of a case of supernumerary fingers and toes in a girl æt. 17. He found the skiagraphs most useful in operating, and by them he was enabled to have a much more useful hand than he otherwise could. In both hands was a prepollex and in both feet a prehallux. In the feet there was also on each foot a post-minimus, the post-minimus in the hands had been removed in infancy. There was no history of any such deformity in the family.

An Alleged Case of Uterine Air Embolism.

Dr. Wyatt Johnston related a case in which he had acted as expert for the defence in a recent murder trial, where the victim died suddenly, pregnant at the 4th month, and bore marks of attempted instrumental abortion. The cause of death alleged was as above, the air being assumed to have entered the sinus left open at a partial detachment of the placenta, but the autopsy was performed in an unskilful manner, the pelvic organs having first been removed and dissected before the chest was opened. On opening the chest the heart was ligatured, and on opening it after removal sufficient air to give a distinct puff, audible to three medical witnesses, was noticed on puncturing the left ventricle. No air was noticed in the right heart, and none was observed in the uterine pelvic veins or vena cava or the veins elsewhere in the body, though the examination in this respect was incomplete, and the whole autopsy was done in so slovenly a manner that the brain, lungs, intestines and liver were not removed, and none of the important vessels were slit open. The brain, lung and liver were described as being pale, and the heart free from blood or clot. As air embolism shows a distension of the right heart and veins with air and little or no air in the left, Dr. Johnston maintained that if only in the left heart, the air obviously must have entered the heart post mortem. The removal of the heart before the air was looked for afforded it the necessary opportunity to enter from the outside while the vessels were being tied off, and the evidence stated that a long narrow bladed knife had been plunged vertically down in opening the thorax, possibly cutting the carotid or innominate artery. Dr. Johnston had found that the heart when empty can be made to behave like a bellows, and that air can be forced in and out at will by holding the organ in a certain manner. If the heart is compressed between the finger and thumb in the plane of the septum, the ventricles are bound to assume a spherical form, and air enters in sufficient quantity to give a distinct puff when held in the hand and punctured. When the heart is compressed perpendicularly to the plane of the septum air was always squeezed out. This depends

on the physical law that if the circumferences are equal, circles and spheres enclose more space than ovals. This fact was demonstrated to the meeting by means of a calf's heart. In the case under consideration there was no record of any defect of the septum or patency of the transverse ovals.

The jury had returned a verdict of acquittal.

Stated Meeting, May 7th, 1897.

WESLEY MILLS, M.D., IN THE CHAIR.

CEREBRO-SPINAL MENINGITIS COMPLICATING PNEUMONIA.

Dr. A. D. BLACKADER reported this case and Dr. WYATT JOHNSTON exhibited the pathological specimens.

Dr. W. F. HAMILTON asked if the enlargement of the spleen was associated with softening.

Dr. WYATT JOHNSTON, in reply, stated that the spleen was very rarely enlarged in pneumonia due to pneumococci, but when due to streptococci, enlargement was the rule.

Dr. MILLS pointed out that the failure of the respiration prior to the heart was suggestive. The relation between the cardiac, respiratory and vaso-motor centres was very close, and as the tendency in pneumonia was to watch the heart, one might take an erroneous view of the cause of death.

BRONCHIECTASIS.

Dr. F. G. FINLEY reported this case, of which Dr. WYATT JOHNSTON exhibited the pathological specimens.

THE VALUE OF MODIFIED MILK IN INFANT FEEDING.

Dr. D. J. EVANS read the paper.

Dr. A. D. BLACKADER congratulated Dr. Evans on the excellent *resumé* of the facts which he had given, but he was disappointed that in the paper Dr. Evans had presented no statistics of his own, although this modified milk had been employed in the Foundling Home for more than a year. Unquestionably this modification of cows' milk was the only scientific method for the artificial feeding of infants, and in his opinion it certainly was the duty of every physician to master the general principles on which its successful employment depended. Once acquired they were afterwards easily carried in the memory. He was glad to hear the use of only a small proportion of the proteids recommended. Unquestionably there was a very distict difference in digestibility between the proteids of cows' milk and those of human milk, the latter being much the more soluble. This was a factor that could not afford to be disregarded. In his experience, in many cases of disturbed digestion in infants the proteids were the source of trouble, and in young infants it was often necessary to reduce the percentage of them very much, even so low as 50 or 60 per cent. Even with all the advantages supplied by the modified milk, we did occasionally meet with infants in whom even this small proportion of the proteids seemed to make trouble, the infants still

passing curds, which immediately disappeared on a suitable wet nurse being supplied. The one great objection to modified milk at present was the expense. It was the food for the rich and well-to-do, not for the poor. Dr. Blackader had for some time past advocated the establishing in various parts of the city depots for the supply of proper Pasteurized milk or cream of known strength suitable for home modification. He was convinced that such could be supplied in jars at reasonable expense, and mothers be taught to do the necessary mixing themselves.

Dr. J. C. CAMERON agreed with Dr. Blackader in his remark that this milk was for the rich and not for the poor. He thought the whole profession should bring this matter before the charitably disposed public in order that the milk might be placed within reach of the poor. He was surprised to hear that there was a sort of undercurrent of suspicion against modified milk as a possible source of rickets. This was not so, and Dr. Evans' paper had certainly shown its value.

Dr. KENNETH CAMERON felt that one reason that modified milk was not more used was the difficulty in understanding how to prescribe it. He had found that it was not an easy matter to write a prescription that one could make up oneself if necessary. The statistics of the Montreal Foundling and Infant Nursery showed that this method of feeding was vastly superior to any other that that had been tried in that institution.

Dr. G. G. CAMPBELL agreed with the previous speakers as to the value of this milk. He had found its expense the great drawback, and had had considerable success in a method of home modification based upon it. He used a Florence flask fitted with a perforated rubber cork containing a chemical thermometer for Pasteurising, and obtained the necessary proportions of cream and milk by having the patients receive their supply of milk in the ordinary glass bottles and syphon off the quantity directed.

Dr. J. B. MCCONNELL considered that physicians did not thoroughly understand the method of prescribing this milk. The great majority of children were overfed, and advice and instruction to parents concerning the amount of food he felt would be of more importance than determining the minute division of the constituents.

Stated Meeting, May 21st, 1897.

F. J. SHEPHERD, M.D., IN THE CHAIR.

TWO CASES OF MYOCARDITIS.

Dr. W. F. HAMILTON reported two cases of the above disease.

Case I. H. G., male, æt. 44, was admitted to the Royal Victoria Hospital on three occasions between November 22nd, 1895, and March 13th, 1896, complaining each time of shortness of breath. The heart, though enlarged, showed no evidence of endocarditis, the limbs were œdematous, and the urine on one occasion contained a trace of albumin. Cheyne-Stokes respiration developed, but rest in bed and a vapour bath benefited him so much that he insisted on leaving hospital. Readmitted three days later with complaints as before, he showed on examination the same condition, and again

had a trace of albumin but no casts in the urine, which amounted to twenty fluid ounces *per diem*. Digitalis and rest again effected a marked improvement, and after sixteen days' residence he was discharged for the second time. Two and a half months later he was admitted for the third time with Cheyne-Stokes respiration and signs of cardiac failure of much more marked extent than before, cyanosis and pulmonary œdema having developed. The urine contained no albumin. A fatal attack of erysipelas occurred after twelve days in the hospital. Post mortem the heart was found enlarged (hypertrophy with dilatation) and free from endo- or pericarditis. Microscopically the heart muscle showed generalised interstitial myocarditis. The kidneys were passively congested.

Case II. W. S., male, æt. 46, was admitted to the Royal Victoria Hospital on March 26th, 1896, complaining of paroxysmal attacks, pain in the chest, back and right shoulder, and "turns" of dizziness and faintness. The onset of these symptoms dated three months back, and followed "overlifting." On examination little was made out beyond slight enlargement of the heart to the left and an irregular pulse. On the fifth day of his stay in hospital he experienced one of the attacks, became pale and anxious looking, vomited once or twice, and died within a few minutes. A diagnosis of probable angina pectoris from coronary artery disease was made. At the autopsy the heart was found enlarged and the orifice of the left coronary artery much narrowed, and patches of atheroma on the walls of the vessel. The area supplied by this artery contained patches of myomalacia—irregular, turbid and greyish in colour, and with several small hæmorrhages into the muscle. There was no endo- or pericarditis; general arterio sclerosis, but no changes in the kidneys. Dr. Hamilton emphasized the following points in discussing these cases:

1. The very great danger of making a wrong diagnosis in patients suffering from this disease.
2. The comparatively early age at which such marked changes may be found.
3. The freedom of endocardium and pericardium.
4. The influence of digitalis in one case of advanced fibrous myocarditis.
5. The possible common cause—alcohol.

Some Debatable Points in the Technique of Appendectomy.

Dr. G. E. Armstrong read a paper on this subject.

Dr. A. Lapthorn Smith agreed with Dr. Armstrong in preferring a glass tube to gauze for drainage purposes, advocated drainage through the flank in suitable cases. He thought the proper method of removing the appendix was to cut it off and invert the serous surfaces, as he could not believe that two mucous surfaces would unite. He had had two or three cases of fæcal fistula following a simple ligature. Judging from his experience in the removal of pus-tubes, one should not only remove the appendix but also the inflammatory exudate, wash out the peritoneum and leave it dry, but in order to do this a large incision would be necessary.

Dr. A. E. Garrow asked if there was any difficulty in maintaining the position of the drainage tubes. In one or two cases he

had used the method of drainage through the flank with good results.

Dr. J. Alex. Hutchison emphasized one or two points made by Dr. Armstrong. The occurrence of secondary abscess in the pelvis should always be kept in mind, and the part carefully explored. He cited a case in which this was the cause of death after an apparent recovery after operation.

Dr. F. J. Shepherd said it had been the custom of most surgeons lately when the abscess was found behind the cæcum to drain through the flank, and also in all cases to search the pelvis. The question of drainage was a vexed one. Punjee silk was recommended by Dr. McCosh. The speaker thought the object of gauze was to alter the lymph current rather than to drain. He considered that Dr. Armstrong's record of four recoveries in general peritonitis was most remarkable, and asked whether he had washed out the peritoneum. Dr. McCosh, in a paper read recently at Washington, reported saving six out of eight cases of general peritonitis by turning out all the intestines, and while an assistant washed these, washing out the abdominal cavity and closing with the intestines floated in saline solution. He also injected directly into the ileum two ounces of saturated solution of magnesium sulphate, and closed the puncture with a Lembert's suture. Dr. Shepherd stated that he had never seen a case in which there was diarrhœa which had not recovered.

Dr. Armstrong in reply said that he had practised all the devices for removing the appendix, and found that the tying it off with cat-gut was just as satisfactory as the more complicated methods. Silk was likely to become infected, keep up the discharge, and not heal until it came away.

In answer to Dr. Garrow, he said he had had no difficulty in introducing the tube, that a soft rubber tube laid in the abdomen without causing pain or interfering with the peristalsis. He preferred this plan to drainage through the flank, as it obviated the necessity of a second cut, and answered the purpose just as well.

In answer to Dr. Shepherd, he stated that with one exception he had washed out all of these cases. The washing must be done through a tube inserted into the furtherest part of the abdominal cavity, so as to secure an outward flow. The cavity could not be washed by pouring water from a pitcher.

Acute Leukæmia.

Dr. G. D. Robins reported this case.

Stated Meeting, June 4th, 1897.

Geo. Wilkins, M. D., President, in the Chair.

The Certification of Insanity.

D. T. J. W. Burgess, in introducing this subject, dwelt largely on the many errors made by the general practitioner in filling up the prescribed form for the commitment of patients to asylums, errors often leading to delay in the reception of patients.

One of the mistakes most commonly made was in the case of married women, whose legal names, in this Province, were not those

of their husbands, but their maiden names. In this respect, the law here, based on the Code Napoleon, differed from that in Ontario, where a woman's married name was her legal name.

Another respect in which certificates were often lacking was that the *facts* on which the diagnosis of insanity was based were not stated.

Two points were to be clear in the mind of every certifying physician: 1st, that the patient was really insane, and, 2nd, that he was a proper person to be confined in an asylum. Insanity alone did not necessarily constitute a ground for the deprivation of liberty.

The *facts* on which these opinions were based should be stated in full. Merely to say that a patient was insane, or that he had delusions or hallucinations, was not sufficient. The reasons for judging him insane and the nature of the delusions or hallucinations must be stated, as also any insane conduct on the part of the patient, and the reason for placing him in confinement, viz., that he was or might be dangerous to himself or others, or that he might be benefited by hospital treatment. As an example of a certificate sent him, and one which he had been obliged to refuse, Dr. Burgess instanced a case in which the only information was, "patient tells lies." Here the patient truly did tell lies, but they were insane lies, in other words delusions, and this fact, with the nature of the false insertions, could just as easily have been stated in the first certificate furnished, had the doctor chosen to exercise a little care, as in the second, which he was obliged to supply ere his patient could be received.

As all forms required for the admission of lunatics to asylums are statutory, any mistakes such as the foregoing, and others instanced made therein, rendered them null and void, and physicians should not feel offended if asylum officials refused to receive papers not properly filled, as by so doing they would render themselves liable to severe penalties.

Dr. VILLENEUVE continuing the subject said that the full bearing of the registration of the insane may be best understood by citing the articles of the revised statutes of the Province of Quebec pertaining thereto. The insane for the purpose of registration are divided into two classes, viz.: 1st, *Private patients;* under this heading come the insane, idiots and imbeciles, who can pay for their own maintenance, treatment, etc., either by themselves, their tutors, curators or persons bound in law to support them; 2nd, *Public patients*, those who must be supported by the public. The law places no legal restriction on the admission of private patients; article 3188 simply says that the proprietors may receive insane persons, idiots or imbeciles.

With regard to the medical certificate referred to in the case of private patients, article 3189 says: "The persons above mentioned cannot be admitted, unless the proprietors of the asylum are furnished with an application according to form A, and a medical certificate according to forms B and C, signed by two medical men, who are neither partners, nor brothers, nor in the relation of father and son to each other, to the proprietors of the asylum or to the patient, and who have each separately and personally examined the patient before the application for his entry into the asylum. The forms A, B and C must be attested under oath."

The following article, 3190, enacts that the physicians who sign the medical certificate (forms B and C) must state precisely the facts resulting from their own observations and the information received from any other persons, on which they have based their opinion that such a person is insane.

Proceedings for the admission of *public patients* are a little more complicated; article 3195 covers the case and enacts as follows: "The following persons may be admitted to lunatic asylums at the charges of the government, and of municipalities, of incorporated cities, or towns, or of counties:

1. Insane who have not themselves, or through some persons bound in law to provide and care for them, the means of paying, in whole or in part, the expense of their custody, maintenance and treatment, in one of such asylums;

2. Idiots or imbecile persons, when they are dangerous, a source of scandal, subject to epileptic fits or afflicted with any monstrous deformity, and are unable, wholly or in part, to pay their custody, board, maintenance and treatment therein. In the case of a public patient, two points must be made out: 1st. That the patient comes within the meaning of the law which unlike for private patients restricts the admission of public patients to stated cases; 2nd. That he must be supported by the public. This latter point is borne out by certificates signed, on statutory forms, by the clergyman, and the mayor and secretary-treasurer of the municipality to which the patient belongs (forms D, E and K respectively, vide article 3195a)."

According to the same article 3195a, the medical certificate is made according to forms B and C, by one physician only, testifying as to the mental condition of the patient, indicating the particulars of his disease, the necessity of his being treated in an insane asylum, and of his being there detained.

In the case of idiocy or imbecility, the physician shall further declare whether the patient comes under the category of idiots or imbecile persons, who may be admitted to or detained in an asylum, and shall specially indicate the reasons upon which he bases his opinion. Such certificate cannot be received, if the physician who signs the same is related or allied to the third degree inclusively, to the proprietors of the asylum, or to the person applying for the admission, or to the insane person. The physician must be one who habitually practices his profession.

If the applicant is unable to write, form A must be sworn to before the mayor or a justice of the peace of the domicile of the patient. The medical certificate (forms B and C), clergyman's (form D) and secretary-treasurer's (form K), must be sworn to before a justice of the peace, a commissioner of the superior court, who may act as such for all the certificates in the same brief, but who must not have signed any of the certificates either as physician, mayor, secretary-treasurer, or as applicant, as these persons are debarred by the law from acting as justice of the peace or commissioner of the superior court.

Also the same person must not sign two of the forms herein above mentioned, forms B and C, which constitute the medical, excepted.

All the certificates are null if they have been prepared more than twenty days before being sent to the medical superintendent.

All the certificates must be filled up on statutory forms which are supplied by the medical superintendents on demand. After they have been all prepared they must be returned to the medical superintendent for approval and permit to transfer the patient to the asylum.

Dr. J. B. McConnell felt that the diagnosis of insanity was of greater importance than the subject under discussion. He felt that in all cases one should have the advice of an expert. People who were only feeble and weak were often declared insane on the evidence of a friend.

Dr. T. Glover Lyon, of London, England, could not understand the difficulties in filling out the certificates complained of by the first speaker. He agreed with Dr. McConnell that the real difficulty lay in the diagnosis.

Dr. H. A. Lafleur drew attention to the fact that in this province imbeciles could not be admitted to an asylum unless they showed dangerous symptoms.

Dr. F. Buller thought the information received was exceedingly practical and valuable, and pointed out several difficulties he had met with in complying with the legal forms.

Dr. Wesley Mills hoped that before long sufficient would be known of the nature and cause of insanity to render the diagnosis more easy.

Drs. D. J. Evans, A. L. Smith, W. F. Hamilton and C. F. Martin asked some questions regarding specific cases, which were replied to by Dr. Burgess.

Dr. J. C. Cameron could not see why the physician should be required to give a definite opinion in doubtful cases, and by so doing expose himself to an action for damages. He advocated having a place of detention, where, before being committed to the asylum, patients could be observed, and the question of their sanity or insanity settled.

Stated Meeting, June 18th, 1897.

Geo. Wilkins, M.D., President, in the Chair.

Sporadic Cretinism.

Dr. E. J. Semple showed a case of this disease.

Aneurysm of the Subclavian Artery.

Dr. C. F. Martin exhibited an enormous aneurysm of the left subclavian artery, and gave some notes of the history and autopsy, which were briefly as follows:

The patient, who had entered Dr. James Stewart's ward in the Royal Victoria Hospital, June, 1896, was a man of 54 years, a laborer by occupation, and born in England. He had always been accustomed to heavy manual labor, was fairly moderate in the use of alcohol, and had never acquired any venereal disease. His health had been good up to two years before death, when for the first time there appeared some pain in the left shoulder, running occasionally down the arm and up to the back of the neck. It was

at first regarded as rheumatism, but soon the pain became more severe, the lower part of the neck became swollen, and so also the left arm, which grew distinctly weaker and colder than the right. These symptoms all gradually increased, and the pain was so severe and persistent as to cause insomnia.

Physical examination on admission showed a rounded prominence in region of clavicle, from the insertion of sterno-mastoid to the junction of the middle and the outer third of clavicle, pulsating and giving a systolic bruit on auscultation. Dulness on percussion was manifest over the tumour, and naturally over the apex of the left lung to the first interspace. P. 72. The right pulse was full, regular and collapsing in character, with capillary pulsation visible in the finger nails. The left radial pulse could just be felt indistinctly. No pulse could be obtained in the left temporal or facial arteries. There was marked general arterio-sclerosis. The heart was enlarged to the left and right, and the sounds were best heard in the fifth interspace within the nipple line. There was a faint, soft systolic murmur at the apex, and a soft, short, diastolic murmur. At the base, double murmurs were detected at both orifices and traced down the right border of the sternum. The left pupil was smaller and less sensitive to light than the right, while the left vocal cord was paralysed. During the patient's prolonged sojourn in the hospital the condition progressively increased, except during a few weeks when it was thought the administration of potassium iodide in doses of 15 grains three times daily was having a beneficial effect. Soon, however, the pulsative tumour grew larger, the clavicle became distinctly eroded, and the swelling of the arm very much more marked. The skin latterly became discoloured, and the extension of the aneurysm seemed to threaten external rupture, so thin was its outer and upper covering. On August 24th the swelling measured 9½ x 9 ins. Dyspnœa, pain, swelling and weakness rapidly increased during the last month, and the patient died on December 12th suddenly, the aneurysm not having yet ruptured.

The autopsy showed that there was much emaciation. The pupils were equally contracted. The left shoulder measured in girth 53 c.m. as opposed to 41 c.m. on the right side. The skin over it was bluish-red and parchmented. On examination the swelling was seen to be due to a large aneurysm commencing from the left subclavian artery, which showed already a dilatation at its origin 4 c.m. in diameter. Immediately after, the aneurysm spread out abruptly into a large sac, in which could be felt the eroded first rib, still attached to the sternum, but with its vertebral end splintered. The clavicle was bared of periosteum for two-thirds its length, and the articulation eroded and ragged, while the acromial end was splintered and fragmented. The acromion process itself was likewise bared of periosteum. The glenoid cavity was normal, as also the head of the humerus. In addition to these bony changes there was erosion of the second rib and the bodies of the first and second dorsal vertebræ. These contained, besides loose pieces of bone, some firm and loose clots. The wall was of varying thickness, the thinnest immediately over the shoulder. The aneurysm had markedly atheromatous walls in front, but behind it seemed to have dissected into the surrounding prevertebral tissues

for some distance, as no definite wall could be detected. The aorta itself was dilated in the ascending portion, though not so much as the descending thoracic division, which measured 12 c.m. in circumference, though by the time the cœliac axis was reached its calibre was of normal proportions. Calcified plates existed throughout its whole length. The branches had features of some interest. The opening of the innominate artery was distinctly dilated, that of the left common carotid quite obliterated. On tracing up the brachial artery to the subclavian, it was possible to meet near their junction a dissection of the inner and median walls, where a commencing progression of the aneurysm was evident in this way. The brachial artery itself was small and thin, the radial still smaller and thinner, indeed more like a vein. In their corresponding veins there were numerous varices and thromboses, some as large as cherries. The heart was dilated and hypertrophied, and showed chronic aortic and mitral endocarditis. There were elsewhere no features of the autopsy of special interest in connection with the aneurysm.

THE

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Editorial.

IMPROVEMENT OF BRAIN FUNCTION BY SURGICAL INTERFERENCE.

Surgical aid is sought for now in many instances in which heretofore only the ordinary medicinal means and other non-surgical methods of treatment were available. The various internal organs of the body which were considered the almost exclusive field of the physician have been invaded by the ever widening reach of surgery, and many conditions which were considered hopeless from a therapeutic point of view have been placed under control, and untold numbers of lives rescued from impending dissolution. A less conspicuous, but probably a wider department of surgical work is that, the object of which is to relieve distressing conditions and conserve or improve the functions of various organs or portions of the body.

An article on these lines by Ernest Laplace, M. D., LL.D., Professor of Surgery and Clinical Surgery in the Medico Chirurgical College, Philadelphia, appears in the *Medical Bulletin* for October, 1897, in which his experience in improvement of brain function by surgical interference is given. As in all other regions of the body, aseptic methods have permitted of accurate results in the surgery of the brain and meninges. The title of his paper was chosen on account of the fact, "that in the vast majority of instances pres-

sure is the cause of the interference, and the relief or restoration of function will depend upon our ability to diminish or entirely remove the permanent or transitory compressing cause." He limits himself in this paper to general pathological conditions as diagnosed, and the application to the brain of the same principles of surgical therapeutics as would have been resorted to to fulfil similar indications in other portions of the body. The leading symptoms of brain trouble are pain and interference with function, and are caused chiefly by chemical, physical, biological, and mechanical irritation. Loss of function is usually associated with some alteration of structure, or in the relation of one part to another, which may only be the abnormal crossing or touching of two fibres, just as derangement would follow the crossing of two telephone wires. To get good surgical results, the technique must be free from fault, so that no portion of failure may result from this cause. No death must ensue from shock, hæmorrhage or sepsis. In regard to shock, so liable to occur in operations on the brain, a skilled assistant should relieve the operator from the necessity of watching the pulse, for reasons of asepsis. And if the pulse becomes wavering and rapid, then hypodermic injections of strychnine, hot-water bottles, the head placed in a dependent position, and high enemata of warm water are indicated. The most frequent indications for surgical interference are in cases of concussion or contusion, which result in shock and congestion and unconsciousness, which in case of recovery may result in epilepsy or insanity. The indications are in unconsciousness which lasts more than a few hours to relieve the congestion by draining the cranial cavity.

Dr. Laplace in these cases makes a transverse craniectomy, removing a strip of skull one-fourth of an inch wide. The dura mater is then incised the full length of the wound, except over the superior longitudinal sinus. The groove is then packed with two narrow strips of sterilized gauze, each one extending from the temporal region to the vertex; the scalp is sutured, leaving the ends of the strips of gauze protruding on each side. This insures perfect drainage, without risk of hæmorrhage or sepsis. The gauze drain is left eight days *in situ*, during which time the symptoms gradually dis-

appear. At the end of this period the stitches are removed and the gauze withdrawn. This he believes to be the safest and surest way of restoring brain function with the least risk of after-effects, when contusion of the brain, resulting in indefinite compression, has been diagnosed. Of course, the same procedure, modified to suit the case, is to be resorted to, when extra- or intra dural hæmorrhage exists, and the clot being removed and the hæmorrhage stopped, the case is then transformed into one similar to the above. During the last four years he has treated twenty-two cases after this manner with a uniformly good result.

He recommends the local brain drainage in all cases where the brain congestion cannot be speedily relieved by purgatives, blood-letting or other derivative measures.

In cases of syphilitic gummata he has found that craniectomy with separation of the adhesions between the dura and skull, and incision of dura, has in cases where the specific treatment has not availed been followed by immediate benefit when the treatment was again subsequently begun.

The counter-irritant effects of operation are beneficial in the so-called idiopathic affections, as epilepsy and insanity. In fifteen cases of epilepsy treated in this way six only were benefited, but in all, the mental condition was improved. In four cases of insanity following injury to the anterior portion of the head, craniectomy with separation of adhesions was followed by recovery. In microcephalus and idiocy there was improvement in some cases, not in others. In tardy or arrested development, marked improvement in intellect has followed this operation. "If, therefore," he states, "we have not had as flattering results as we anticipated, it may be from the fact that the operations performed were not sufficiently extensive, or else were not performed upon the intellectual area. Our operation consists in trephining over the temporal fossa and removing a strip of skull over the coronal fissure, about one-fourth of an inch wide, directly across the vault to the opposite temporal fossa; then opening the dura throughout except over the longitudinal sinus. This certainly creates an impression on the brain, during which it is nourished into better function. Whatever may be the criticism to the mode of procedure, the results speak for themselves. We

do not claim anything but so altering the nourishment of the brain in these patients and rendering them able to appreciate and retain impressions more easily than without the operation. In other words, this procedure is in no way opposed to or intended to do away with the training which these children get in schools for the feeble-minded. On the contrary, the purpose is to put to the greatest usefulness such brain-capacity as is there, so that the children might improve and benefit by the training at school to a greater extent than if no surgical interference had awakened their limited intelligence to its fullest capacity."

It is reasonable to suppose that if the brain is in any way interfered with by pressure, or if undue resistance is offered to the expansion connected with its ordinary development, that any operation which relieves this condition must, other conditions being normal, be followed by improvement. This rational surgical attack on the last medical citadel gives promise of marking another advance for scientific medicine.

A NEW DISPENSARY ABUSE.

Langsdale's Lancet, Oct., 1896, contains the following from the *Medical Record:* "A report comes to us as we are about to go to press (as the *County Weekly* puts it) to the effect that a physician has been dismissed from one of the most fashionable dispensaries in a neighboring city (of course it could not occur in New York) for abstracting a fifty-dollar banknote from the purse of a patient.

"The pocketbook was left upon the dispensary desk, it is said, while the lady entered an adjoining room to prepare for examination. The plea made to the governing board by the physician was that he had been overworked, having treated over four hundred patients at the dispensary during the three days preceding the temptation which caused his fall, and that during this time he had been unable to procure but one full meal. Hunger and the means at hand to appease it may have proven too strong a combination for his overwrought nerves, but this naturally did not weigh with the board. The *clientele* of the institution must be made to feel that while a patient is undergoing treatment his valuables are safe. The argument was used by one of the governors that if the patients'

money is to be taken from them, they might as well go to a physician's office and be done with it.

"The crime of robbing a dispensary patient cannot be too severely punished, since such acts would soon deter many persons of wealth from patronising these institutions. It is therefore most fitting that the culprit in the present instance will be forced to take his chances for the future in private practice.

"There is something to be said on the other side. It seems unwise for applicants to carry with them and display at the dispensary large sums of money, diamonds, and the like. It would surely seem to be in the nature of contributory negligence if in the future applicants for free treatment put temptation in the way of doctors, who after all are only human and often hungry."

Circular No. 4.

LABORATORY OF THE BOARD OF HEALTH,
OF THE PROVINCE OF QUEBEC,
MONTREAL, October 1st, 1897.

To the President of the Board of Health of the Province of Quebec:

Sir,

The simple technique recommended by this Laboratory for the serum diagnosis of Typhoid, by means of dried blood, has been found, after a year's trial, quite satisfactory for the practical work of diagnosis.

At the same time (as was recently explained by a Committee of the American Medical Association, of which I was a member) although for routine diagnostic work even the very simplest methods may give good practical results, yet for recording scientific observations quantitative methods should be selected. This is especially necessary in reporting exceptional cases at variance with the general results of others, or where the observations are made the basis of generalisations.

I have found that good uniform quantitative results can be readily obtained with the dry blood method by taking in the first instance drops of uniform size, collected by means of a wire loop (I use 20 guage copper wire 2 mm. inside diame-

ter), which is returned with the outfit, and used subsequently to obtain dilutions of known strength. The method has been described more fully in a joint paper by myself and Dr. Harold Thomas before the British Medical Association at Montreal, on Sept. 2nd, 1897.

For quantitative work, the blood is dried on an ordinary glass slide, or non-absorbent paper can be used if preferred. One of the outfits will be sent, when a quantitative estimation is desired, or to any who are practically interested in the matter. As already stated, I do not find quantitative work necessary for routine diagnosis, preferring to employ cultures having a sensitiveness so low as to give no reaction at all with non-typhoid blood.

In addition to the previous observations made by myself and Dr. D. D. McTaggart as to the use of attenuated cultures, I wish further to call attention to the importance of paying special care to the reaction of the test culture media. Bouillon cultures showing after 24 hours growth of typhoid at 37° C. a slight uniform cloudiness only, and quite free from scum or sediment, offer the greatest security against pseudo-reactions. I find that such cultures can be obtained by using bouillon just on the verge of litmus acidity, giving no blue whatever to the red paper. From 3 per cent. to 4 per cent. of normal alkali are required to make this bouillon neutral to phenol phthalein.

Cultures which give a heavy bouillon growth are the ones which are most liable to give pseudo-reactions, *i.e.*, to clump in a deceptive manner spontaneously or with non-typhoid blood. If the culture is too acid the reaction may be defective. With a proper culture, I have never met with the typical reaction apart from typhoid fever. On the other hand, by employing certain incorrect methods of preparing the culture I can obtain at will very perplexing pseudo-reactions with a large proportion of non-typhoid bloods. This may be the explanation of a number of anomalous published results, though the difficulties can be also doubtless avoided by other means than those indicated here.

I have the honour to be, Sir,

Your obedient servant,

WYATT JOHNSTON,

Bacteriologist to the Board.

Book Reviews.

A Manual of Clinical Diagnosis by means of Microscopic and Chemical Methods, for Students, Hospital Physicians and Practitioners. By Charles E. Simon, M. D., late Assistant Resident Physician Johns Hopkins Hospital, Baltimore ; Fellow of the American Academy of Medicine. Second edition, revised and enlarged, in one very handsome octavo volume of 530 pages, with 133 illustrations on wood and 14 colored plates; cloth, $3.50. Lea Brothers & Co., Philadelphia and New York, 1897.

Books on diagnosis are numerous, some of them massive and bulky, and calculated to appall the student with the magnitude of what has to be learnt in order to master this important department of Medicine. The number there are to choose from is an indication of the demand for works of this kind. Among those published recently, that of Dr. Simon's, which appeared last year, has received the approbation of a large number of readers and critics, and the proof of its merits is still further seen in the appearance of this second edition within a year of the first. It comes to hand in a much improved form, so much so that those who failed to get the first edition will have a considerable advantage over those who purchased the first. It is even a question if second editions should not always be waited for. In the present instance, the parasitology and bacteriology of the blood, saliva, fæces, urine and vaginal discharge have been almost entirely re-written, new methods of chemical examination have been embodied, and numerous additions made throughout the text, increasing the number of pages by about fifty. The latest work on the cerebro-spinal fluid has been added, and some illustrations replaced by more accurate ones, and new ones added, the whole making a substantial and important addition to the edition of less than a year ago. The book is printed with clear, well-leaded type, very neatly bound, profusely illustrated ; not repellant, owing to being too large or in the closely packed style, but open, with the headings and sub-divisions of the subject represented in large noticeable type. It covers the ground of one of the most interesting departments of modern medicine—microscopical and chemical methods of diagnosis—and does the work admirably. Dr. Simon has elicited information for this work from many sources, including the best European laboratories and those connected with the Johns Hopkins Hospital, and is therefore eminently qualified to give the latest and best methods now available for identifying disease, by scientific, exact and practicable procedures. Every page is replete with interest and instructiveness. The subjects considered are the blood, secretion of the mouth, gastric juice and gastric contents, fæces, nasal secretion, sputum, urine, transudates and exudates, cystic contents, cerebro-spinal fluid, semen, vaginal discharge, and the secretion of the mammary glands. Minute directions are given for carrying out the

various methods. Cuts of the different kinds of apparatus required are given, and illustrations of much of what the microscope reveals are given, so that, with this book, the student can without a teacher become initiated into the secrets of this fascinating department of exact medicine. The colored plates are striking for beauty and correctness. Anyone fitted out with a good microscope and the other requisite instruments and apparatus with this volume to guide him, can soon make himself familiar with methods of diagnosis without which he can only be drifting amid uncertainties. It is an ideal book for the student, and should be at the elbow of every hospital worker.

A New Classification of the Motor Anomalies of the Eye. The prize essay of the Alumni Association of the College of Physicians and Surgeons, New York, for 1896. By Alexander Duane, M.D. New York, I. H. Vail & Co., 1897.

Dr. Duane presents in his prize essay, which constitutes the contents of this book, a very valuable addition to the literature on the motor anomalies of the eye. He starts with the statement that the present nomenclature is faulty in as far as it merely infers a symptom without any regard to its causation. For instance, the common terms trabismus means simply an ocular deviation due to defective action of a muscle or group of muscles, but from this term we cannot infer if the ocular deviation be due to an increased or diminished activity of a muscle or muscles. The same fault applies also to Stevens' terms of heterophoria, esophoria, etc,, etc. Dr. Duane proposes to substitute the terms hypokmesis, or diminished action, hyperkmesis or overaction and parakmesis or irregular action of the muscles. The book contains an elaborate dissertation on the functions of the various muscles and groups of muscles, and also their various anomalies, which is really very valuable, and indicates a vast amount of observation and study on the part of the author. It is a very useful and thorough book.

About Children. Six Lectures given to the Nurses in the Training School of the Cleveland General Hospital in February, 1896. By Samuel W. Kelly, M.D., Professor of Diseases of Children in the Cleveland College of Physicians and Surgeons (Med. Dept. Ohio Wesleyan Univ.), Pediatrist to the Cleveland General Hospital, Consulting Physician to the Cleveland City Hospital, President 1896 and 1897 Ohio State Pediatric Society, Editor Cleveland *Medical Gazette*. 180 pages. Price in buckram $1.25. The Medical Gazette Pub. Co., Cleveland, Ohio, 1897.

These lectures contain much that is of interest to the medical student and physician, although written specially for nurses, and may be read with advantage by parents and teachers. The six lectures cover most of the points peculiar to children's affections and their management: such as peculiarities of anatomy in infancy and childhood, various pathological conditions, deformities, diseases, and accidents; symptoms and their interpretation; nursing and general management of sick children, artificial feeding, etc.

The writer has had an extensive clinical experience with the

medical and surgical diseases of children, and has written numerous articles on kindred subjects, besides being an eminent and successful teacher in the department of diseases of children. The lectures abound in useful hints and numerous aphorisms, and contain a vast amount of information rendered in a pleasing style, and were all nurses made acquainted with what is here taught, much better results would follow in their management of children.

We notice an important omission in the treatment of ophthalmia neonatorum, that of not warning the nurse to avoid touching the eyelids in the frequent opening that is required, but to draw them open from the bony edges of the orbit.

Transactions of the American Pediatric Society, Eighth Session, held in Montreal, Canada, May 25th to 27th, 1896. Edited by Floyd M. Crandall, M.D. Volume VIII. Reprinted from the Archives of Pediatrics, 1896.

This volume is neatly bound in cloth, and contains 242 pages. There is a list of the presidents, present officers, and council, the various meeting places and the members. A photogravure of Joseph O'Dwyer, the late president, appears just before his annual address, the subject of which was, The Evolution of Intubation.

Following this is the report of the American Pediàtric Society's collective investigations into the use of antitoxin in the treatment of diphtheria in private practice.

Other papers are: Comparative Results of the Treatment of Diphtheria with and without its Antitoxin in the District of Columbia, by Sam. S. Adams, M.D.; Nasal Feeding in Diphtheria, by Henry Jackson; Puncture of Subarachnoid Space, by A. H. Wentworth, M.D., and a number of other interesting papers which appeared throughout the year in the Archives of Pediatrics.

Hare's Practical Diagnosis. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Laureate of the Medical Society of London, of the Royal Academy in Belgium, etc. New (2d) and revised edition. In one octavo volume of 598 pages, with 201 engravings and 13 full page colored plates. Cloth, $4.75. Philadelphia, Lea Brothers & Co., Publishers.

This is one of the recent works which has received much favor at the hands of the profession. It is the second edition, the first having appeared in August, 1896. It adopts a novel method of presenting the salient points of diagnosis instruction, claiming for it the merit of being logical and scientific. Symptoms are first taught, those which belong to various regions of the body. A knowledge of these permits of their being applied to any case at the bedside with a greater likelihood, in a natural way, of making a diagnosis. This is claimed to be much better than learning the symptoms of various diseases as units, and applying these groups of symptoms seriatum to the case under consideration. There is an introductory chapter and two parts. In the first the manifestation of disease in organs is considered, and in the second the manifestation of disease by symptoms. In the introduction general diagnos-

tic considerations are discussed. The expertness of experience and observation which enables the physician to grasp the essential details of a case almost at the first glance is an insight gained by the gradual appropriation of the knowledge which comes from repeated noting of the value of symptoms.

It is pointed out here what can be learned from the clothing, gait, build, voice, expression, manners and position of the patient, and how to most skillfully question him; also how to gain the confidence and friendship of children, and interpret the symptoms and evidence of disease which are displayed in their cases without the help of the patient's description as in those of more advanced years. The indications of disease to be learned from the face and head are first described, such as from the expression, paralysis, spasm, movements of head and neck. Cuts are presented of a mouth breather, of general anasarca, a cretin acromegaly, myxœdema ptosis, and exophthalmic goitre. Then the hands and arms are discussed in a similar way, many of the deformities being illustrated, and several radiographs still further enhance this method of imparting facts. The appearances of the tongue in disease are fully described, and some of its appearances illustrated by four beautiful colored plates.

The many interesting points in connection with the eye are fully detailed, and the methods of utilizing its various manifestations in disease made plain and amply illustrated by cuts and colored plates.

The skin is considered in regard to eruptions, gangrene, ulcers and sloughs, scars, sweating, dryness, œdema, hardness, anæsthesia, hemianæsthesia, paræsthesia, hyperæsthesia and itching. The three colored charts showing the distribution of the spinal nerves, by Thorburn, Starr and Head, are reproduced here from the International Medical Annual, 1896.

The thorax and its viscera, and the abdomen and its viscera, are treated in the same way, and all the points usually found in works on physical diagnosis are here taken up. The chapter on the blood is quite up to date. We have the beautiful plates illustrating the malarial parasite seen now in most of the latest books of this kind, as well as the pretty and instructive plates which those showing the variations in the blood corpuscles afford.

The latest centrifuge with hæmatocrit attachment is shown, and among other recent works that of Martin and Mathewson on pseudo leukæmia, and Wyatt Johnston's modifications of Widal's test for typhoid fever is given.

The urinary bladder and the urine, bowels and fæces receive similar consideration.

In the second part the manifesation of disease by symptoms is given. Fever and subnormal temperature and their significance is taken up. The character of the various forms of fever is described and illustrated by numerous charts. Then follows descriptions of headache and its causes, vertigo, coma, convulsions, vomiting, its causes and character, and appearances of vomit; the varieties of cough and character of sputum; the kinds of pain and its significance, tendon reflexes and speech. The index of this work is also made to be studied, for under the name of any disease we find reference to most of its symptoms, and under the name of any symptom we find the names of all the diseases in which it occurs.

We consider the plan here adopted admirable for one in search of a diagnosis; finding one or more marked symptoms he can with this work readily make out their significance, and finally make a correct diagnosis; but that done we fancy the next move would be to consult a work which would have the symptoms of the disease all grouped together, rather than seeking them out in a dozen or more places throughout a whole volume. The object of this method is, however, only that of helping in a practical way to make a diagnosis, and certainly the scheme here carried out does in a facile and unerring manner fulfil the claim, and is superior to any method heretofore planned.

International Clinics. A quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and specially prepared articles on treatment. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by Judson Daland, M.D. (Univ. of Penna.), Philadelphia; J. Mitchell Bruce, M.D., F.R.C.P., London, England; David W. Finlay, M.D., F.R.C.P., Aberdeen, Scotland. Vol. III. Seventh series. 1897. Philadelphia: J. B. Lippincott Company, 1897. Montreal agent, Chas. Roberts, 593a Cadieux St.

The articles in this volume are quite up to the standard of those in previous volumes. There are thirty-seven papers. Among those of special interest are the following:

Opium; its Use and Abuse, by Herman D. Marcus, M.D. The Treatment of Injuries of the Eyeball, with special Reference to the Prophylaxis of Sympathetic Ophthalmia, by Freeland Fergus, M.D.; Clinical Observations upon Senile Heart, with remarks on treatment, by Henry Bates, jr., M.D.; Hæmoptysis and its Treatment, by Thos. J. Mays, A.M., M.D.; Diagnosis and Treatment of Hypertrophic Nasal Catarrh; the Climatic Treatment of Phthisis Pulmonalis, by E. L. Shurly, M.D.; Treatment of Infantile Uric Acid Infarction; Toilet of the Infantile Penis; Treatment of Enuresis, by W. C. Hollopeter, A.M., M.D.; Hæmaturia, by James Tyson, M.D.; Addison's Disease, by Edmund Neusser, M.D.; Pyothorax; Bilharzia Hæmatobia; Angina Pectoris, by Wm. H. Porter, M.D.; A Case of Localized Spasm affecting the Foot-Muscles and followed by Loss of Consciousness; the Differential Diagnosis of ordinary Epilepsy and of Jacksonian Epilepsy; the Treatment of Epilepsy, by Byrom Bramwell, M.D., F.R.C.P. (Edin.), F.R.S. (Edin.); The Therapy of Suppurative Kidney, by Thomas H. Manley, M.D.; Bleeding in Pregnancy and Labor, by A. H. Freeland Barbour, M.D., F.R.C.P. (Edin.); Displacement of the Kidney in Obstetric Practice, with Notes of a Case of Floating Kidney in a Mother and her Infant, by J. W. Ballantyne, M.D., F.R.C.P.E., F.R.S.E.; A Novel Method for the Use of Dry Heat in Middle-Ear Disease, Otalgia, etc., by E. L. Vansant, M.D.; Mycosis of the Tonsils; Nasal Mucous Polypi; Intumescent Rhinitis; Mediastinal Tumor, by E. Fletcher Ingalls, A.M., M.D.

Les Poussieres Atmospheriques. (Atmospheric Dust). By J. R. Plamondon. Price 2 fr. Société d'Editions Scientifiques, 4 rue Antoine Dubois, Paris.

This little book of 130 pages gives one a very good idea of the nature of particles floating in the atmosphere whether they be of volcanic, maxine, industrial, vegetable, animal, microbic or explosive origin.

It treats in a special way of the microbe laden atmosphere in and about cities and within hospitals or public buildings, and will be found very useful to the physician who has to deal with sanitation and allied subjects.

PUBLISHERS DEPARTMENT.

SANMETTO IN CYSTITIS, PROSTATATIS AND GONORRHEA, AND IN ALL IRRITABILITY AND INFLAMMATION OF THE GENITO-URINARY TRACT.

In my practice the administration of Sanmetto has given excellent results. I have found it unequalled in cases of cystitis and prostatitis and in all cases of irritability and inflammation of the genito-urinary tract. In many cases of gonorrhea I have used it with excellent satisfaction. I am pleased to recommend Sanmetto to the profession as a preparation which has proven invaluable to me in treating the above-named conditions.

Jackson, Mich. C. W. SHAVER, M.D.

SANMETTO IN GONORRHEA WITH EPIDIDYMITIS—ALSO IN SPECIFIC VAGINITIS WITH SALPINGITIS, ETC.

I take pleasure in testifying to the admirable therapeutic effects of Sanmetto. I used it in a case of gonorrhea with epididymitis, and the result was, if I may say, astonishing. I also used it in a case of specific vaginitis followed by the usual sequelæ, salpingitis, etc., and the symptoms were very much ameliorated by its use.

Columbia City, Ind. J. W. WORDEN, M.D.

SANMETTO IN INFLAMMATION OF BLADDER, OVARIES OR UTERUS.

Sanmetto is an excellent remedy for all bladder troubles caused by inflammation. I find it acts nicely with tinct. opii. to allay pain and inflammation, especially when the ovaries or uterus are affected. The physicians generally, about here, prescribe Sanmetto.

Bradford, Mass. LORENZO SARGENT, M.D.

"GRIP."

C. A. Bryce, A.M., M.D., Richmond, Va., editor of *The Southern Clinic*, in writing upon the above subject during an epidemic of *la grippe*, said:

"For the past four weeks or more, we have met with five times as much grip as anything else, and the number of cases in which the pulmonary and bronchial organs have been very slightly or not at all involved have been greater than we have noted in former invasions. On the contrary, grippal neuralgia, rheumatism, hepatitis and gastric congestions

have been of far greater frequency, while, in all, the nervous system has been seriously depressed.

"The fatalities from pneumonia, meningitis and other complications have been fewer, showing plainly that we are gradually gaining an immunity from this zymotic invader. With each succeeding visitation of this trouble we have found it more and more necessary to watch out for the disease in disguise, and to treat these abnormal manifestations; consequently we have relied upon mild nervous sedatives, anodynes and heart sustainers rather than upon any specific line of treatment. Most cases will improve by being made to rest in bed and encourage action of skin and kidneys, with possibly minute doses of blue pill and quinine or calomel and salol. We have found much benefit from the use of antikamnia salol in the stage of pyrexia and muscular painfulness, and later on, when there was fever and bronchial cough and expectoration, from antikamnia and codeine. Throughout the attack, and after its intensity is over, the patient will require nerve and vascular tonics and reconstructives for some time."

THE LIVING AGE FOR 1898.

In another column will be found a prospectus of this standard periodical, founded by Eliakim Littell in 1844; it has steadily maintained the reputation gained with its earliest issues of being the most complete representative of foreign thought as expressed by its greatest exponents. It is to-day a faithful reflection of almost all that is substantial and truly valuable in the passing literature of the world, embracing, as it now does in its monthly supplement, American as well as foreign literature.

While its pages show the same wise and judicious discrimination which has ever characterised its editorial management, the scope of the magazine has been widened, its size increased and its price reduced, so that increasing years seem only to add to its vigor and value.

To those whose means are limited it must meet with especial favor, for it offers them what could not otherwise be obtained except by a large outlay. Intelligent readers who want to save time and money will find it invaluable.

The Living Age is published weekly, and the price is now but $6.00 a year. To all new subcribers for 1898 are offered free the eight numbers of 1897, containing the opening chapters of the new serial, "With All Her Heart," described in the prospectus.

LITERARY NOTE.

Klemperer's Clinical Diagnosis, by Dr. G. Klemperer, Professor at the University of Berlin; first American from the seventh and last German edition; authorized translation by Nathan E. Brill, A.M., M.D., Adjunct Attending Physician, Mt. Sinai Hospital, and Samuel M. Brickner, A.M., M.D., Assistant Gynæcologist, Mt. Sinai Hospital Dispensary, is announced for early publication by The Macmillan Company.

Dr. Klemperer's work on *Clinical Diagnosis* is widely known, and all English readers will be rejoiced to find within their reach this very comprehensive but condensed manual. Its chapters deal with the inspection and examination of the patient, the diagnosis of the acute infectious diseases, diseases of the nervous system, digestive diseases, each under its special symptomatology, diseases of the respiratory apparatus, the heart and circulation. Two chapters are devoted to urine analysis and to the diseases of the kidneys. The four concluding chapters deal with the disturbances of metabolism, the diseases of the blood, the Röntgen rays as diagnostic aids, and animal and vegetable parasites including such bacteria as are of clinical importance.

No book so complete, short of a text-book of medicine, is before the American medical public. It has passed through seven editions in its original language (German) in as many years. The German school leads in clinical diagnosis, and this little work is an exquisite example of its methods.

Perhaps the most interesting, and certainly the most instructive to the Anglo-Saxon, of Prof. Ripley's papers on *Racial Geography*, in *Appletons' Popular Science Monthly*, will be that in the December number on *The British Isles*. He describes the racial history of Great Britain and Ireland, and devotes considerable space to the curious language survivals in the Gaelic, or Goidelic, which is still common in parts of Scotland and Ireland; and the Kymric, or Brythonic, still spoken in Wales.

The October (1897) number of the *Alienist and Neurologist* contains: "Neurasthenia Essentialis and Neurasthenia Symptomatica," by F. X. Dercum, M.D., Philadelphia; "President's Annual Address," by Dr. Martin W. Barr, M.D., Elwyn, Pa.; "Neurasthenia," by C. C. Hersman, M.D., Pittsburgh, Pa.; "Tremor and Tremor-like Movements in Chorea," by Dr. J. H. Wallace Rhein, Philadelphia; "Suicide," by C. H. Hughes, M.D., St. Louis, Mo.; "Syphilis of the Central Nervous System," by Sydney Kuh, M.D., Chicago; "The Action of the Nervous System over the Nutritive Processes, in Health and Disease," by Beverly O. Kinnear, M.D., New York; "The Significance of Degeneration to the General Practitioner," by Haldor Snévé, St. Paul, Minn.; "Insane Confessions, Errabund Lunatics, The Corpus Delicti and Crime," by Jas. G. Kiernan, M.D., Chicago; besides the usual Selections, Editorials, Reviews, Book Notices, etc. C. H. Hughes, M.D., Editor, 3857 Olive St., St. Louis, Mo. Subscription: $5 per annum; single copies, $1.50.

A GREAT MAGAZINE FEATURE.

The *Ladies' Home Journal* has secured what promises to be the great magazine feature of 1898. It is entitled "The Inner Experiences of a Cabinet Member's Wife." In a series of letters written by the wife of a Cabinet member to her sister at home, are detailed her actual experiences in Washington, frankly and freely given. The letters were written without any intention of publication. They give intimate peeps behind the curtain of high official and social life. They are absolutely fearless, they study Washington life under the search-light as it has never been before presented. The President and the highest officials of the land, with the most brilliant men and women of the Capital, are seen in the most familiar way. As these are all actual experiences the name of the writer is withheld. The letters will doubtless excite much shrewd guessing by readers and study of internal evidence to discover the secret. The "Experiences," which will be beautifully illustrated, begin in the December number and will continue for several months.

APENTA WATER

IN THE TREATMENT OF OBESITY AND ITS INFLUENCE ON CHANGE OF TISSUE.

(Observations in Professor Gerhardt's Clinic in the Charité Hospital, Berlin.)

The *Berliner Klinische Wochenschrift* of March 22, 1897, publishes a Report upon some experiments that have been made under the direction of Professor Gerhardt, in his Clinic in the Charité Hospital at Berlin, demonstrating the value of Apenta Water in the treatment of Obesity, and its influence on change of tissue.

"Such experiments," it is observed, "could not be carried out until "quite recently on account of the inconstant composition of the bitter "waters coming into the market. In this respect the Apenta Water is "favourably circumstanced," and it was chosen for these observations because of its constancy of composition.

The conclusion arrived at as to the value of Apenta in the treatment of obesity, and as to its influence on tissue-change, was that it "succeeded "in producing a reduction of fat in the body without detriment to the ex-"isting albumen," and that "the general health of the patient suffered "in no wise, and the cure ran its course in a satisfactory manner."

A translation of the Report may be obtained on application to Messrs. Charles Graef & Co., 32 Beaver Street, New York, sole agents of "The Apollinaris Co., Ltd.," London.

CANADA
MEDICAL RECORD

DECEMBER, 1897.

Original Communications.

EXPERIENCE OF TWO HUNDRED AND FORTY-EIGHT CASES OF ABDOMINAL SURGERY.*

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. ENG.

Fellow of the American Gynæcological Society ; Professor of Clinical Gynæcology Bishop's University ; Gynæcologist to the Montreal Dispensary ; Surgeon-in-chief of the Samaritan Hospital and Surgeon to the Western Hospital, Montreal.

From Jan., 1890, to Nov., 1897, he had opened the abdomen 248 times with 17 deaths, or a mortality of 6¾ per cent. for the whole eight years. In 1892 he had lost 2 out of 12 operations, or nearly 17 per cent., but in 1895 he had lost two out of 57, or a mortality of only 3½ per cent. In 1896 his death rate had been low, loosing only 2 out of 60, or a little over 3 per cent. 93 of these operations were performed at his private hospital, 79 at the Samaritan, 66 at the Western, and the remainder at private houses and other hospitals. The death rate at the Samaritan for laparotomies was 5 per cent., and for the same at the Western six and a half per cent. Many of the operations were of the most serious nature, such as two of removal of large tumors of the kidney without a death; 11 large ovarian tumors with two deaths; 14 abdominal hysterectomies with 4 deaths; 9 ventral and umbilical hernias without a death; 62 for double pus tubes with five deaths; and 99 ventrofixations with one death, which, however, had nothing to do with the ventrofixation as it occurred in a bad pus tube case. He referred to the charge sometimes brought against gynecologists that they often operated unnecessarily. This certainly could not be said in his

* Abstract of paper read before the Medico-Chirurgical Society of Montreal, 12th Dec., 1897.

case, as he had complete notes of 4,300 cases besides many others which he had seen in consultation with other doctors, and out of these he had only opened the abdomen 248 times. He felt sure that there were at least as many more who would have been greatly benefited by such an operation, and who were on the contrary dragging out a miserable existence while under palliative treatment. He had at least a hundred women under local treatment for diseased tubes who were having recurring attacks of pelvic peritonitis at intervals of from three months to two years, and most of these women would he believed eventually decide to have the cause of their sufferings removed. He found that this delay greatly increased the difficulties of the operation. If these tubo-ovarian abscesses were allowed to break into the rectum, bladder or vagina they became very dangerous to life. He had been called in consultation to a lady in Halifax in whom this condition existed, but she died from hectic fever, being too far gone for operation. He had also a great many cases of cirrhotic ovaries under his care, and these women he believed suffered much more than was generally supposed. Many of them had begged him to remove their ovaries, but it was his custom to decline to do so until they had first been treated for one year by other means. He thought that he had been too conservative, as many of these sufferers had reproached him for keeping them in misery so long when the operation was followed by immediate relief. In some of the greatest sufferers from chronic ovaritis, the ovaries were so small that they could hardly be felt, and yet the day after their removal the patients claimed that they were entirely free from the pain from which they had suffered for years. In eight years he had only opened the abdomen 36 times for diseased ovaries and had lost only one of them. In about a dozen cases he had left the ovaries in after cutting out cysts and removing tubes. His experience, however, of conservative surgery of diseased ovaries was on the whole unsatisfactory. All the women with two or three exceptions reproached him for not having removed both ovaries completely. He thought that he would be more radical in future for the patients' sake as well as for his own reputation. It was a mistake to

believe that women were never really well after ovaries had been removed; in the majority of cases the operation has completely restored them to health. Among the most interesting cases was one of obstruction of the bowels ten days after removal of very adherent tubes and ovaries. The abdomen was reopened nine hours after fœcal vomiting had begun, and the intestine was found kinked and adherent; it was detached and straightened out, and the patient recovered. He considered the management of tubal pregnancy was one of the most brilliant advances in abdominal surgery. He reported a group of seven cases, all of whom recovered. They had all been sufferers for years from tubal disease, and two of them had been urged to have their tubes removed several years previously. In four of the cases the diagnosis had been correctly made and the other three were mistaken for pus tubes. In two of the cases a live child was floating about in the intestines and in the third it was lying in the ruptured tube. In these three cases there were from one to three quarts of blood in the abdomen. The symptoms in these seven cases were not exactly the same as those described in the text-books. Most of these women had had their periods regularly, but in all the breasts were enlarged. He thought that when we had these three symptoms: enlarged breasts, irregular flow and a painful rapidly enlarging mass in one side of the pelvis, we might suspect tubal pregnancy. If this is followed by an attack of syncope we might almost be sure of it, and should loose no time in operation, thereby saving every case. He thought that it was a disastrous policy to let them alone. Some of the nine cases of ventral and umbilical hernia were exceedingly difficult, it being necessary in some cases to leave at least one layer of the abdominal wall on the bowels which were adherent to the sac. They were nearly all closed with buried silk or worm gut sutures, which were left in. Although he had had a few cases of hernia following his early operations, during the last three or four years he had not had a case. This was owing he thought to leaving in the sutures for one month, a plan which he was the first to advocate. Since he had the Trendelenburg posture he did not use drainage,

either glass, rubber or gauze, because it was unnecessary. He took great care to have the bowels well prepared so that they were rarely seen during the operation, and never handled. He was a firm believer in the value of flushing or washing every coil of intestines with salt solution ; and he usually left from one quart to two gallons of it in the abdominal cavity to prevent adhesions and to satisfy thirst, as well as to wash out the kidneys, as it was rapidly absorbed, strengthening the pulse and preventing the distressing aching all over the body. In emptying very large tumors he always left about two gallons of salt solution to support the abdominal veins. He never used iodoform because of its smell, its cost and danger of poisoning, several cases of fatal poisoning having been reported here and elsewhere. He used nothing for disinfecting except permanganate, oxalic and bichloride, consequently there was no hospital odour. In eight cases the vermiform appendix was firmly adherent to the right tube. He laid great stress on the method of removing the appendix even with the cæcum, and then closing the hole in the bowel as you would a bullet hole with two rows of Lembert sutures, instead of leaving a stump. He knew of several cases in the practice of other surgeons in which the leaving of a stump had caused a troublesome fistula. He hoped that this suggestion would be generally adopted by those who were doing this life-saving operation more often than he, and he offered it as a small contribution towards the improvement of the technique of the operation.

250 Bishop st., Montreal.

THE SECTION OF PSYCHOLOGY.

By R. M. BUCKE, M.D.

Medical Superintendent of the Insane Asylum, London, Ont.

Mental Evolution in Man.—About sixty years ago now, in the time of the Millerite excitement, a man who believed that the world was about to end expressed his fears to Emerson, who replied that it was really a matter of little consequence, " for," said he, " we can do very well without it." There are wise men who teach that each man creates the world he lives in, and as he gives in its substance so also does he give in it its quality, insomuch that it is good or bad as he is good or bad. Be this as it may, it is certain that each one of us is of more consequence to himself than is all the outside world, be it

shadowy or be it solid; be it created by each inhabitant, or be it independent and self-existent. Not only so, but the essential part of each man is what we call his mind, in comparison to which the body is an insignificant factor.

The Study of Psychology—This being granted, it would seem to follow that psychology ought to be the most interesting of all the sciences, and, as a matter of fact, it undoubtedly is so, though it has been greatly discredited by the imperfection of the method by which it has until very lately been studied. That imperfection is so great that it would hardly be an exaggeration to assert that nearly all the study and thought expended upon it down to the beginning of our own age has been fruitless and as good as wasted, except inasmuch as it has at last made clear the impossibility of the route men have sought to follow, the route, namely, of introspection. For we might as well study the human body alone without reference to that of any other creature, and attempt in that way to decipher its genesis, development and meaning, as to attempt to comprehend a single human mind without including in our examination not only other human minds in all stages of evolution, but equally all other minds to which our own is related—that is to say, all minds other than human belonging to our kinsfolk the animals, minds which stand to-day like mile posts along the almost infinite length of the path which our mind has followed in its upward march across the immensities and eternities from its remote infancy to the present hour; minds in which a thousand faculties represent to us everywhere, in infinite sameness and variety, replicas of our own or of parts of our own, showing us, as the poet says, tokens of ourselves which we "negligently dropped as we passed that way huge times ago."

Comparative Psychology—As man's bodily life rests upon and grows from that of countless prehuman ancestors; as man includes in his structure the heart of the reptile, gills of the fish, as well as the forms in outline of innumerable still lower races, so is his so-called human mind rooted in the senses and instincts of all his ancestral species; and not only so, but these senses and instincts still live in him, making up, indeed, far the larger part of his current every-day life; while his higher psychical life is merely the outgrowth and flower of them.

As truly as the plant is an embodiment of inorganic matter vivified by the transmuted forces, which in the non-vital world about us we call light and heat, so truly is man's mind made the outcome of—the expansion and culmination of—the imperfect sensation of the worm, the rudimentary sight, hearing and taste of the fish and reptile; and the simple consciousness which, springing from these,

passed to us after almost infinite ages of slow evolution and amelioration through tens of thousands of generations of placental mammals, our immediate progenitors.

In the growth of mind, whether that of the race or of an individual, we recognise two distinct processes: First, the very gradual evolution to, or toward, perfection of faculties that have already come into existence; and, secondly, the springing into existence (as new branches start from a growing tree) of faculties which had previously no existence. For it is clear to the least thoughtful student that no faculty (as no organ) came into mature and perfect life at once. Hearing and sight, we are told, developed by slow degrees from the sense of touch; and in the region of the intellect conceptual life was born from ages of receptual, and that from millenniums of perceptual.

Mental Growth in the Individual and in the Race—Let us now suppose mind growing for millions of years in the way set forth. It begins, we will say, as mere excitability; to that after a long time is added what may be called discrimination, or choice and rejection of, for instance, different kinds of food. After another long interval of almost infinitely slow advance sensation appears, and with it the capacity of pleasure and of pain; then, still later, memory; by and by recognition of offspring; and successively thereafter arise reason, recognition of individuals, and communication of ideas. Concurrently with these intellectual faculties, certain moral functions, such as fear, surprise, jealousy, anger, affection, play, sympathy, emulation, pride, resentment, grief, hate, revenge, shame, remorse, and a sense of the ludicrous have also arisen in the nascent mind. We have reached now the mental plane of the higher animals, which is equally that of the human being at about two years of age. Then occurs in the child the mental expansion which separates man from the higher mammals—for something like a year the child mind steadily grows from the status of the latter to the status of the human mind. This year in the individual during which it walks erect but possesses a receptual intelligence only, not having yet the power of forming either concepts or true words, represents in the race the age of *alalus homo*, the period of perhaps a hundred thousand years, during which our ancestors walked erect, but not having self-consciousness had no true language. At the average age of three years in the individual self-consciousness is born, and the infant, from the point of view of psychology, has become a human being. But we all know that after the attainment of the distinctly human faculty, self-consciouness, the child has still much to acquire both in the way of expansion of already possessed

faculties and in the acquisition of new ones before it is mentally a mature man. Of the numerous faculties it still has to acquire I shall only mention here the colour sense, the sense of fragrance, the human moral nature, and the musical sense. A consideration of these four and of self-consciousness will occupy the short time allotted me to-day.

And first a word as to the basic and master human faculty, self-consciousness. It occurs, as said, at about the average age of 3 years; but when it first made its appearance in the race it must have done so at full maturity; perhaps at the age of 20, both life and childhood being shorter at that time than they are to-day. You will see at once why I say self-consciousness must have occurred at first at maturity. Its acquisition at a given epoch supposed a higher mental life than had hitherto existed—such higher life on the part of the race could not have come to the individual before his maturity. To suppose that would be (if you think of it) a contradiction in terms. The human mind attains its high mark at maturity (that is what the word means), and one generation could not reach before maturity what the preceding had not reached at all. Well, but self-consciousness occurs to-day at 3 years of age, and we only reach full mental maturity (on the average) at the age of 35. The advance then made by the individual from the age of 3 to that of 35 represents the advance of the race between the date of the appearance of self-consciousness and to-day, the mental status of the 3-year-old child to-day being the mental status of the adult when self-consciouness first appeared. How long has it taken the human mind to grow from mere self-consciouness to its present stature? Not less certainly than several hundred thousand years. Whatever the time required is the time during which man has inhabited the earth.

Of all the mental faculties below self-consciousness each one has its own time for appearing in the human infant—as, for instance, memory and simple consciousness appear within a few days after birth, curiosity ten weeks after, use of tools twelve months after, shame, remorse, and a sense of the ludicrous—all of them 15 months after birth. Now, it is to be noted that in every instance the time of the appearance of a faculty in the infant corresponds with the stage at which the same faculty appears (as far as can be at present ascertained) in the ascending animal scale; for instance, memory and simple consciousness occur in animals as primitive as the echinodermata, while the use of tools is not met with below monkeys, and shame, remorse, and a sense of the ludicrous are almost, if not entirely, confined (among animals) to the anthropoid ape and the dog.

To turn now to the true subject of this paper I want to say in the first place that as in prehuman so in human psychology each superadded faculty was acquired in the history of the race, and that that historic period corresponds with the time in the life of the individual into whom the faculty is born to-day. For instance, self-consciousness appears in the individual at the age of about 5 years —it appeared in the race several hundred thousand years ago. It has been proved by Geiger and others that our color sense has been acquired by the race not more than about thirty thousand years ago. Well, it is acquired by the individual at the age of about 5 or 6. It is thought that the sense of fragrance was acquired by the race later than the colour sense; it is also acquired later by the individual. Some considerable study of history has led me to the conclusion that our human moral nature cannot be more than ten thousand years old. For a careful consideration of the records that have come down to us from the early Romans, Hellenes, Hebrews, Egyptians, Assyrians and Babylonians would indicate, I think, unmistakably that, as we go back into the past, this faculty tapers down towards the vanishing point, and that if it continues so to taper as we ascend the ages, all of what we distinctively call our human moral nature would certainly have disappeared by the time we had gone back the number of centuries mentioned—that is ten thousand years.

Well, to-day the human moral nature in the individual, instead of being born at the age of 3 years as is self-consciousness, or at 5 or 6 as is the colour sense, does not come into existence before the average age of about 15 years. As to the musical sense, it is almost certainly less than five thousand years old in the race, and, when it occurs at all, is not usually born in the individual before adolescence.

There are three other laws, each well worthy of notice, which govern the acquisition of new faculties by any given race. They are as follows:

1. The longer a race has been in possession of a given faculty the more universal will that faculty be in the race. This proposition scarcely needs proof—every new faculty must occur first of all in one individual, and as other individuals attain to the status of that one they too will acquire it, until after perhaps many thousands of years the whole race having attained to that status the faculty shall become universal.

2. The longer a race has been in possession of a given faculty the more firmly is that faculty fixed in each individual of the race who possesses it. In other words: The more recent is any given

faculty the more easily is it lost. High authority, such as that of Charles Darwin, could be quoted in support of this proposition; it is almost, if not quite, a self-evident proposition.

3. A study of dreaming seems to reveal the fact that in sleep such mind as we have differs from our waking mind, especially by being more primitive; that in fact it would be almost strictly true to say that in dreams we pass backward into a pre-human mental life; that the intellectual faculties which we possess in dreams are, especially, recepts, as distinguished from our waking concepts; while in the moral realm they are those faculties, such as remorse, shame, surprise, along with the older and moral basic sense functions, which belonged to us before we reached the human plane, and that the more modern and mental faculties, such as colour, sense, musical sense, self-consciousness, the human moral nature, have no existence in this condition, or if any of them do occur it is only as a rare exception.

Let us now compare, one with the other, a few of the faculties which have been already mentioned in the light of the rules laid down. To do this will give us, more clearly than perhaps anything else could, a definite notion of the growth of mind by the successive addition of new functions. For this purpose we will take simple consciousness, colour sense, the human moral nature, and the musical sense.

Simple Consciousness.—Simple consciousness makes its appearance in the human infant at the age of a few days; it is absolutely universal in the human race; it dates back certainly to the earliest mammals, and probably much earlier; it is only lost in deep sleep and coma; it is present in all dreams.

Shame.—Shame is said to be born in the human infant at the age of 15 months; it is a pre-human faculty, being found in the dog and in apes, and undoubtedly existed in our pre-human ancestry; it is almost universal in the race, being only absent in the lowest idiots; it is very common in dreams.

Self-Consciousness.—Self-consciousness makes its appearance in the child at the average age of 3 years; it is not present in any species, but the human; it is, in fact, that faculty the possession of which by an individual constitutes him a man. It is not universal in our race, being absent in all true idiots: that is, it is permanently absent in about one in each thousand human beings born into the world. In our ancestry it dates back to the first true man; a race, we are told, unclothed, walking erect, gregarious, without a true language, to a limited extent tool-using, destitute of marriage, government, or of any institution, animal, but in virtue of its highly

developed receptual intelligence, king of animals, which developed self-consciousness, and by that fact become men. It is impossible to say how long ago it was when this event occurred, but it could not have been less than several hundred thousand years. This faculty is lost much more easily and frequently than is simple consciousness. We lose it in coma and also often in the delirium of fever; in certain forms of insanity, as in mania, it is often lost weeks, even months at a time; and lastly, it is never present in dreams.

Colour Sense.—I have elsewhere written at large on the colour sense, and have only space here to give the facts which bear on the present inquiry. That these are facts, the argument referred to, I think, demonstrates. This faculty appears in the individual at the average age of about 5 years. It is absent in one adult human being out of every forty-seven; it appeared in our ancestors, as Geiger has shown from linguistic paleontology, in the Aryan period, probably less than 30,000 years ago. It is seldom present in dreams, and when it does occur, that is when any colour is seen in a dream, it is generally that colour which for good reasons was first perceived by man, namely, red.

The following occurrence illustrates (I think in a striking manner) the usual absence of the colour sense during the partial consciousness which occurs in sleep. A man whose hair is white dreamed that he was looking in a glass and saw that his hair was not only much thicker than he knew it to be in fact, but instead of being white, as he also knew it to be, it was black. Now, he well remembered in his dream that his hair had never been black. It had, in fact, been a light brown. He wondered (it is worth mentioning here that wonder or surprise is a pre-human faculty, and is common in dreams) in his dream that his hair should be black, remembering distinctly that it had never been so. (I may say here that memory is a pre-human faculty, and is common in dreams.) The important thing to note about the dream under consideration is that, though it was clear to the dreamer's mind that his hair had never been black, yet he did not remember that it had been brown. For some reason (and I think the reason is quite clear) there was a difficulty in calling up before consciouness any colour.

Moral Nature.—The human moral nature belongs to a much later stage of evolution than any of the faculties so far considered. It does not make its appearance in the individual before the average age of 15 years. It is congenitally and permanently absent in at least forty human beings out of every thousand. It would seem clear, as stated already, from a consideration of our historic ances-

tors, from the fact that this faculty rapidly fades out as we ascend into the past, that it cannot have existed in the race more than 10,000 years at the most. It is far more unstable in the individual than the older faculties such as self-consciouness. It is never present in dreams.

Musical Sense.—Finally, the musical sense (a faculty which is now in act of being born into the race) does not appear in the individual before the average age of about 20 years. It does not exist in more than half the members of the race. It has existed less (perhaps considerably less) than 5,000 years in the race. It is never, or almost never, present in dreams, even in the case of professional musicians.

The Scheme of Mental Evolution.—You see now clearly the scheme upon which I suppose the mind (as far as we have got) to have been built. I say advisedly "as far as we have got," because, if the mind has grown in the way set forth, it is still growing and is not built, but is in the act of building. No man can ever say positively that his theory (of any fact) is the true one, but I am prepared to say of the above hypothesis that, if it be accepted, it will enable us to understand something of the phenomena of mind as we observe it, whereas if we should prefer to hold, as many do, that the human mind was created independently of any that preceded it by a fiat and *per saltum*, then I say deliberately that there is and can be no such thing as a science of psychology, and that every attempt to investigate or explain, to comprehend or divine the rationale of the facts observed as to its origin and growth in the individual must remain for ever futile. And if I could find the right words I would bring home to each one who hears me the inextinguishable conviction that in this idea of evolution lies enfolded the mystery of the past, the explanation of the present, and the sure prescience of the future—what we were, what we are, and what we shall be.

The Atavistic Theory of Idiocy and Insanity.—In conclusion, I desire to refer briefly to two corollaries which flow from this hypothesis. The first is, that if it is correct, then all forms of insanity, including all forms of idiocy, are nothing more nor less than cases of atavism. In this view insanity is due to congenital absence or imperfection (leading to breakdown) of some faculty or faculties, such absence or imperfection being due to more or less complete reversion to an ancestral type. In my opinion this view explains insanity and its numerous forms more completely than these can be explained from any other point of view, and is therefore of great value to the thoughtful student of these phenomena. Upon this view, the comparatively recent origin and rapid evo-

lution of the human mind, and especially the rapid mental evolution of the so-called Aryan peoples in the last four or five thousand years, is almost solely responsible for the large number of cases of insanity in the modern civilized world, since the stability of any form, function, or faculty in any race is dependent upon the time it has existed in that race, and therefore the more recent a faculty is in a race the more frequently will it be found absent, defective or unstable in the individuals of the race.

Future Development of Mind.—The second corollary, which is even more important than the first, is that, upon the view here set forth, the human mind at present is not formed, but forming; is not completed, but in process of construction. By slow and dubious steps taken in darkness our remote ancestors wearily climbed to simple consciouness. After another immense interval they reached self-consciousness. But that cannot be the end—the cosmic process cannot stop there—cannot indeed stop anywhere. Evolution, as far as we can see, has always gone on, is going on to-day, and will always go on. Our old mental faculties are some of them fading out, others advancing toward greater perfection, and alongside of them new ones are springing up, some of which will, without doubt, be of over-shadowing importance in the future.

So-called telepathy and clairvoyance seem to be specimens of such nascent faculties. I place in the same class the phenomena of what is often named spiritualism. The labours of the Society for Psychical Research have made it to me plain that these phenomena, as notably in the case of W. Stainton Moses, really exist. And I think that a study of the above-mentioned case, together with that of Mrs. Piper and that of Mary J. Fancher, of Brooklyn, would compel any unprejudiced person to make the same admission. But to me these are not cases in which outside agents are acting on or through a human being, but are cases in which a given human being has faculties which are not commonly possessed. Whether any given faculty, such as one of those now alluded to, shall grow, become common, and finally universal in the race, or wither and disappear, will depend upon the general laws of natural selection, and upon whether the possession of the nascent faculty is advantageous or not to the individual and to the race.

But of infinitely more importance than telepathy and so-called spiritualism (no matter what explanation we give of these, or what their future is destined to be) is the final fact to be here touched upon. This is that superimposed upon self-consciouness, as is that faculty upon simple consciouness, a third and higher form of consciousness is at present making its appearance in our race. This

higher form of consciousness when it appears occurs, as it must, at the full maturity of the individual, at about the age of 35, but almost always between the ages of 30 and 40. There have been occasional cases of it for the last 2,000 years, and it is becoming more and more common. In fact in all respects, as far as observed, it obeys the laws to which every nascent faculty is subject. Many more or less perfect examples of this new faculty exist in the world to-day, and it has been my privilege to know personally, and to have had the opportunity of studying, several men and women who have possessed it. In the course of a few more milleniums there should be born from the present human race a higher type of man possessing this consciousness. This new race, as it may well be called, would occupy, as toward us, a position such as that occupied by us toward the simple conscious *alalus homo*. The advent of this higher, better, and happier race would amply justify the long agony of its birth through the countless ages of our past. And it is the first article of my belief, some of the grounds of which I have endeavoured to lay before you, that a race is in course of evolution.

Selected Article.

THERMOTHERAPEIA, OR THE HOT-AIR TREATMENT, AND ITS USES AND POSSIBILITIES.

By ELLWOOD R. KIRBY, M D.,

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The effects of heat upon the human body are, of course, for the most part the opposite of cold. By surrounding the body with a temperature higher than its own the destruction of the tissues by oxidation is considerably diminished; and many curious facts have been discovered, but with few exceptions these facts still remain to be explained.

For the first knowledge of thermotherapeia the medical profession is indebted to Mr. Urquhart. He found that the treatment was adopted in various parts of the world, and that its use was almost universal in cold and temperate climates, but absent in the tropics. By the people among whom it was found the application of hot air was employed as a luxury and

a religion—the religion of physical purity—but not as a remedy against disease. It was left for Urquhart to apply highly heated air as an agent for the relief of pain and disease, with the most signal benefit.

The capacity of the human body for bearing dry air at a very high temperature is a matter of common observation; we see it in the daily occupation of copper smelters, puddlers, and stokers. In well ventilated rooms a temperature of from 170° to 200° is not only bearable but absolutely soothing and agreeable.

The essence of the quality of a high temperature is its dryness, and when absolutely dry a temperature of 400° has been borne for several minutes. If the air be moist, a temature of 130° or 140° will begin to scald. The great value of dry heat we can clearly see by the universal use of the Turkish or Russian baths; but the application of high degrees of dry heat to the entire human body is dangerous at times.

It has been only within the past two years that any attempt has been made in the use of a definite apparatus, by which a high degree of dry heat at a known temperature can be applied to a part of the human body without the dangers of serious or accidental results from the disorganization of tissues. It is a well-known fact that heat applied to the human body will relieve pain and also abort many simple inflammatory conditions, but just how this is brought about is rather difficult to explain. It has been determined experimentally that a temperature of 140° F. applied to a motor nerve will produce motion in parts supplied from direct irritation, and that a temperature of 212° F. is capable of producing the most violent tetanic contractions, which are entirely due to the disorganization of the nerve tissue.

The apparatus used in the following experiments is one constructed by Lentz & Son, of Philadelphia, and is a most admirable one for its simplicity of construction and its price. The actual space required for the machine is 3 x 2½ feet, and with chair for the patient the total space is 5 x 2½ feet. The gas-jets are used for ordinary pressure; these will bring up the required temperature of 300° to 400° F. in from forty-five minutes to one hour. The actual cost of running the apparatus is about two cents per hour. It is entirely portable, its total weight being under forty pounds.

Technique of Application.—The temperature of the machine is allowed to reach 200° F.; the patient's limb is then carefully but loosely surrounded by a large blanket, special care being taken to allow a considerable air space between the blanket and toes or fingers, and also that the limb just within

the iron rim of the machine be thoroughly protected to prevent burning from the heated metal. The canvas hood is now made tight about the limb. For experimental purposes the pulse, respiration, and temperature were taken before and after applying the heat, and in all joint conditions the circumference of the same was taken before and after. The average treatment should last from forty-five minutes to one hour, and the temperature should be slowly increased until the full limit of the patient, so far as his sensations are concerned, is reached.

The guide in the matter is the sensation of the patient, who at first usually experiences pain in the toes and fingers, but this is not excessive; and when the temperature becomes intolerable to these parts, as noticed by the very sharp, stinging pain, the temperature is quickly reduced 10° or 15° by opening the valves at the top of the machine or opening the machine door, or a procedure which we are commonly in the habit of adopting, of opening the door of the apparatus and quickly throwing an ordinary towel into the cylinder. This will absorb a certain amount of heat, thus relieving the distressing pain. After this the temperature is gradually allowed to rise again, until the limit of tolerance is reached, and then lowered. Some surgeons have recommended covering the limb with a piece of lint, or with absorbent cotton, and a bandage. This substance is entirely too thin, and does not absorb the perspiration quickly enough, or may be quickly saturated with moisture; hence in quite a few cases very severe scalds have resulted. When the blanket is used, however, no such injury is possible, if the ordinary amount of care be exercised. Another point in favor of the use of a blanket to encase the limb, rather than lint or gauze, is that the limb is thoroughly protected from the canvas covering of the magnesium; for, although the heat cannot go through the magnesium, it is forced directly through the flues of the apparatus in such a manner that the canvas becomes as hot as the surrounding metal and asbestos, and hence might readily scald.

The thermometer should be pushed down as far as the limit of the metal guard, as this is continuous with the irno of the apparatus; the instrument will register proportionally higher than the true interior temperature actually is. With a temperature of 380° as registered by the thermometer the temperature in the exact center of the cylinder will register but 350° to 360°, while beneath the first fold of the blanket about 335° to 340°, and directly next the skin but 230° to 250°; so we can therefore notice that quite a difference exists between the temperature as registered by the thermometer of the apparatus and the actual heat in direct contact with the skin.

Immediately after the application the limb or part exposed to heat is washed with alcohol and quickly dried, and the patient allowed to follow his usual avocation. The treatment should be applied daily in acute cases; in chronic cases at longer intervals.

After applications the limb or part is extremely red and hyperemic, bathed copiously with perspiration, skin soft and pliable, and pain, if present before, entirely relieved or much improved. In the lower extremities patients often complain of a peculiar numbness of the limb, a fact which is entirely due to the position in sitting; the limb is markedly extended, and simple extension of the sciatic nerve will produce this condition either in or out of the machine, and has nothing to do with the action of heat upon nervous tissues. Often the circumference of the limb was considerably reduced; at times it was unchanged, a condition which no doubt depends upon the presence of subcutaneous œdema or effusion. The explanation as to the relief of pain is rather difficult. Ringer has shown that heat impedes or destroys the electrical currents of nerves, whence it may be fairly presumed that when subjected to this influence they are less able to conduct impressions to or from the brain. The action of the heat in such cases is a temporary one. If the case was allowed to rest with one application the patient might be entirely free from pain for several hours, and when it did return the pain would not be quite so severe as before the treatment. If the treatments are continued for any length of time there is a progressive loss of flesh and strength, amounting in one of our cases to seventeen pounds for thirty heatings. This case was one of double hydrops articuli of the knee, the patient refusing operation. He was led to try the hot air by way of an experiment. The result in this case will be given under the list of cases.

The greatest temperature applied at one time was 400°, and the lowest 270°, the average treatment being about 320°.

A short time after applications have been made we find that there is an elevation of the central temperature, the highest in our list of cases being 100.1° and the lowest 98.7°. The average increase of temperature was 1.2° F. The pulse is at the same time somewhat increased in frequency, the greatest being 120 and the lowest 92, showing an average increase in the pulse-rate of thirty-three beats per minute.

When very high degrees of heat are applied to the human body there is at first a violent vasomotor contraction and an increase of blood-pressure, but when a temperature of 380° F. of dry heat is applied there is a vaso-

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Composition :

Caffeine, 1 gr. Bromide of Sodium 30 grs.

Useful in Nervous Headache, Sleeplessness, Excessive Study, Over Brainwork, Nervous Debility, Mania, etc., etc.

DOSE.—A tablespoonful in half a glass of water, to be repeated once after an interval of thirty minutes, if necessary.

It is claimed by some prominent specialists in nervous diseases, that the Sodium Salt is more acceptable to the stomach than the Bromide Potassium. An almost certain relief is given by the administration of this Effervescent Salt. It is also used with advantage in indigestion, depression following alcoholic and other excesses, as well as nervous headache. It affords speedy relief for mental and physical exhaustion.

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(ENGLISH STYLE.)

This Antacid and Laxative preparation is largely used in Great Britain and on the Continent, under the above title ; and is identical with the foreign product : it is made from the Sulphate of Magnesia and sold under the designation of Citrate of Magnesia, and should not be confounded with the regular Eff. Citrate of Magnesia of the United States.

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SALICYLATE OF LITHIA.

DOSE.—A teaspoonful, containing ten grains of the salt.

A convenient and pleasant remedy in Gout and Rheumatism.

This preparation is intended for Physicians' use, and will be found to possess advantages over Salicylic Acid, being less irritating to the stomach, and combining the efficacy of Lithia and Salicylic Acid.

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Each dessertspoonful contains

Salicylate Lithia, 10 grs. Bromide Soda, 10 grs.

Bromo Lithia is an extremely potent remedy, in the treatment of Rheumatism, Rheumatic Gout, and Gouty Diathesis, originated by Wm. Warner & Co. It consists of Salicylate Lithia, 10 grains, and Bromide Sodium, 10 grains, in each dessertspoonful.

It will be found to possess advantages over Salicylic Acid, combining, as it does, the efficacy of Lithium in combination with Salicylic Acid, as well as the sedative properties of Bromide of Soda.

Dr A. Garod, the well-known English authority on Gout, who was the first physician to use the Salicylate of Lithia in the treatment of the Gouty Diathesis, believes that its action is materially increased by being administered in a freely diluted form.

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CITRATE OF MAGNESIA.

DIRECTIONS.—For a purgative effect take two or more tablespoonfuls added to a small glass of water, and drink while effervescing. As a laxative, one or two tablespoonfuls taken in the same manner. One or two tablespoonfuls, in sweetened water, produce a delightful, cooling drink in summer.

This granular Citrate of Magnesia is pleasant and efficient has advantages over the liquid form, and affords a fresh and effective preparation and for household use.

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(Seidlitz Mixture, U. S. P.)

An excellent aperient and refrigerant, very acceptable to the stomach.

DOSE.—One tablespoonful in a glass of water.

Like the Citrate of Magnesia this preparation is a more convenient and agreeable form of an aperient medicine than is usually obtainable.

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INGLUVIN

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(WARNER & CO. ONLY.)

A Powder prescribed in the same manner, doses, and combinations, as Pepsin. Also in Tablets, where it is regarded as more convenient and pleasant.

PROF. BARTHOLOW'S work on Therapeutics.

Edition 1889. INGLUVIN is a * * preparation said to be made of the gizzard of the domestic chicken (*ventriculus callosus gallinaceus*). Dose, gr. v.— ·) j. Ingluvin has the remarkable property of arresting certain kinds of vomiting—notably the *vomiting of pregnancy*. It is a stomachic tonic, and relieves *indigestion, flatulence, and dyspepsia*.

Recent investigations have shown that Ingluvin owes its curative effects, not to any ferment corresponding to pepsin, but to a *peculiar bitter principle*. This result is the more satisfactory, since such an organ as the gizzard could hardly furnish the necessary quantity of a digestive ferment to effect the results now known to be produced by Ingluvin.

Under ordinary circumstances, and when the object of its administration is to promote the digestive function, it should be taken after meals. When the object is to arrest the vomiting of pregnancy, it should be given before meals.

But only the successful use of this agent and the apparent sincerity of the composition as given to the public would seem to justify its mention here.

A potent and reliable remedy in 5 to 10 grain doses for the cure of

INDIGESTION, DYSPEPSIA, SICK STOMACH, MARASMUS & CHOLERA INFANTUM.

It is superior to the Pepsin preparations, since it acts with more certainty, and effects cures where they fail.

A SPECIFIC FOR VOMITING IN GESTATION.

The dose in such cases is 10 to 20 grains, mixed with water or Sherry wine, in preference to placing the dry powder on the tongue.

I have used Messrs. Warner Co.'s Ingluvin with great success in several cases of Dy-pepsia and Vomiting in Pregnancy. In one case of the latter which I was attending a few weeks back, Ingluvin speedily put a stop to the vomiting, which was of a very distressing nature, when other remedies has failed.—ROBERT ELLITHERON, M.R.C.S., Lancaster House, Peckham Rye, S.E.

Dr. F. W. Campbell, of Montreal, Canada, says that with INGLUVIN he cured three out of four cases of VOMITING in PREGNANCY.

Dr. C. F. Clark, Brooklyn, N.Y., has used INGLUVIN very extensively in his daily practice for more than a year, and has fully tested it in many cases of VOMITING in PREGNANCY, DYSPEPSIA, and SICK STOMACH, and with the best results.

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In fact, were we to note all remarks of the profession and our experience in relation to this remedy, and report to you the cases in detail, we could fill a volume with expressions as to its great efficacy in the troubles for which it is recommended.

PRESCRIBED BY THE MOST EMINENT PHYSICIANS.

PREPARED ONLY BY **Wm. R. WARNER & CO., Philadelphia.**

motor dilatation, as borne out by the increased action of the sweat glands, the increase of temperature, which is almost always associated with dilatation of the capillaries, and finally by the flushed appearance of the skin.

Sonnenburg says the temperature rapidly rises shortly after the application of heat, and considers this rise of temperature consecutive to the overheating of the blood. It is incontestible that when the cutaneous surface of man and beast is subjected in totality or in a greater part to the action of an intense heat, the entire blood distributed to the periphery not only becomes hotter, but is considerably altered, and the overheated blood which flows back to the central structures must of necessity be followed by an elevation of the central temperature ; but there is in animals a considerable difference, which can be easily appreciated when one takes into consideration the size of the subject. We have frequently observed that in those cases in which the superficial fat was well developed there was less immediate relief experienced from pain ; and the elevation of the central temperature is less demonstrable than in those subjects whose muscular and fatty layers are particularly thin.

Sonnenburg states that if a burning substance be brought in contact with the cutaneous surface there is primarily an attempt at self-defense on the part of the organism by an immediate vasoconstriction which prevents the blood from flowing through the burned area, and thereby causing internal congestions. In our series of cases we have noticed on the contrary a vasomotor dilatation with its consequent hyperemia and fall of blood-pressure, the rapidity of which depends upon the intensity of, and the duration of the application of the heat, results which are clearly due to a paralytic exhaustion of the vascular tonicity. The red blood-corpuscle can scarcely pass through the vessel, while on the contrary the venous dilatation is so great that they occupy one-third more space than in their normal state. Miline-Edwards in his work on comparative anatomy has also studied this phenomena : the action of cold produces a contraction of the arterioles and intense heat produces the same effect, while a moderate heat dilates the vessels. Salviola confirmed these results by actually measuring the diameter of the vessels before and after the application of heat.

We have noticed from a series of microscopical examinations made of the blood by Dr. Geo. A. Muehlick an excess of accumulation of red blood corpuscles resulting from the action of the high temperature.

During the past nine months we have treated something over 300 cases at St. Agnes Hospital, with a grand total of

910 heatings for all cases, including 157 cases of recent sprains, eight of the shoulder-joint, seven of the elbow, twenty-two of the wrist, eighteen of the knee, fifty-five of the ankle, twenty-four of the thumb, and twenty-three of the fingers, with most excellent results.

In cases of traumatism of the shoulder it was impossible to get the full effects of the heat because of the difficulty experienced in getting the shoulder within the cylinder of the apparatus; in general, however, applications to the upper extremity are followed by good results. Each case was treated for from forty minutes to one hour, with a general average of five heatings. In none of these cases was any retentive dressing applied, with the exception of the ankle; in all other joints the full limit of heat was applied for forty-five minutes for small joints, as the fingers and thumbs, and one hour for the larger joints. Our best results were obtained in sprained ankles, all of these cases being heated for a full hour, at a temperature ranging from 300° to 380° F. After each application of heat a Coterell dressing was applied, and the patient told to use the joint as much as possible. The majority of the cases were treated daily; some every third day. Usually one application gave perfect ease from pain; in some cases two applications were necessary before the pain was entirely relieved; and in the great majority of cases three applications were necessary to restore perfect function of the joint. In some of our cases the rapidity of cure seemed marvelous.

We have noticed that in subjects with an excessive amount of subcutaneous fat the first application seemed to be followed by an increase of pain and discomfort: this, however, rapidly wears away within a few hours, and the usual relief of pain is then experienced. This we especially noted in a medical *confrère*, and to use his words, the pain and discomfort were greatly increased after the application of one hour, but within three hours he experienced a most delicious sensation of comfort and freedom from pain; the second application was followed by complete relief of all symptoms, and he was able to walk after the fourth day of treatment, the function of the joint having returned to the normal state. In this case the gentleman weighed something over 220 pounds. Of course in this class of injuries the intense heat prevents the extravasation of blood and the exudation of lymph between the tendon and its sheath, and if blood or lymph be present they are rapidly absorbed.

CASE II.—A strikingly successful case. L. E., aged forty, who after a fall of twenty feet sustained a very severe sprain of his right ankle; was suffering excruciating pain when

brought to the hospital. Heat was applied to the limb for one hour, until the full limit of tolerance was reached ; limb was removed from the apparatus, a Coterell dressing applied, and the pain was entirely relieved. This process was continued for one hour on three consecutive days, the patient walking out of the clinic on the third day.

CASE III.—Alcoholic ; received a severe sprain of ankle two days before admission to hospital. Heat was applied for two hours, through the carelessness of the attendant. Patient was lost sight of for two weeks, at expiration of which time he returned with Coterell dressing intact, stating that he had experienced no pain during the interval, and had been walking on the injured member from the time of the first application.

CASE IV.—W. B., while walking on a coke bank, turned on his ankle with such force that a hole was torn in right side of shoe at the site of the external malleōlus. He was taken to the hospital in the ambulance. Heat was applied for one hour, after which a Coterell dressing was applied, and the patient was walking on the third day.

CASE V.—Jenette C. while walking the street slipped on a banana peel and received a severe sprain of left ankle. When brought to the hospital she was suffering intense pain and the joint was greatly swollen. A single application of heat was made and a Coterell dressing applied, and the patient left the hospital immediately, walking on the injured limb.

CASE VI.—Marie M., aged twenty, fell from a bicycle, receiving a sprain of the right ankle. When admitted to the hospital her limb was enormously swollen. Heat was applied for four consecutive days ; after the fourth application a Coterell dressing was applied, and the patient walked home without much effort.

Numerous other cases were treated in like manner, with the same gratifying results. In the great majority of cases pain was relieved in a marvelous manner, and the function of the joint was restored to the normal in all cases after the fourth application. We have experienced the same good results with the treatment of smaller articulating surfaces ; the following case serves to illustrate :

CASE VII.—Mrs. C., after a severe fall, in an attempt to save herself threw out her right hand, injuring thumb. Rapid traumatic plastic synovitis followed the injury, with adhesions locking the thumb under the index finger. Unsuccessful attempts had been made on several occasions to relieve the condition. Heat was applied to injured member, at a temperature of 340° for one hour, after which the adhesions

were forcibly broken up, and patient was enabled to use her thumb freely.

We have not experienced the same uniformly successful results in chronic joint injuries. This is to be explained in part by the fact that in acute injuries the excessive application of heat causes a vasomotor dilatation, thus relieving engorgement of capillaries and in consequence pain. In chronic cases, on the other hand, the exudate organizes into a low grade of fibrous connective tissue; there is not the same capillary dilatation, and the same relief from pain is not experienced. We have also observed in simple hydrops cases that the infusion in the majority of cases is rapidly absorbed, although the time required for treatment is considerably longer than in acute conditions. In those cases of sprains showing the peculiar tendency to plastic formations of comparatively recent date, the same good results were obtained as in the acute conditions, but when of very long duration little good resulted from the applications.

These results are decidedly an advancement over the older methods of treatment of sprains. Formerly a sprained ankle required from five to six weeks of active treatment, with serious incapacitation of patient for active duties, and the patient almost invariably suffered pain, discomfort, and swelling of the limb for several months afterwards.

Careful measurements of the joints were made, and a decided diminution in diameter occurred within a period of twenty-four hours afterwards.

In chronic synovial effusions of joints our experience has been limited to four cases, in one case of hydrops articuli of both knees, for which operation was refused by patient. Thirty applications of heat were applied by way of experiment. Accurate measurements of the circumference of each joint were made, with a marked diminution in the size and effusion. After the thirtieth application there was still some fluid in the joint. In this case we noticed a marked decrease in the weight of the patient, and treatment was discontinued. The remaining three cases were not of such long standing; while they were benefited in many respects by the treament, yet the results were not so gratifying as in the treatment of the acute cases. In these three cases the joint was fixed in the interval. Treatment was discontinued after ten applications, and the usual treatment for these conditions was carried out.

We have met with unvarying and remarkable success in the treatment of acute synovial effusions, the patient experiencing a rapid relief from pain and progressive diminution of the effusion.

Our experiences in these cases coincide in every way with the experience of Professor H. C. Wood in his article, in which he says: "The application of dry heat is of very little value in chronic joint conditions."

Tuberculosis.—We have been very much interested in the application of hot air to the treatment of tubercular arthritic affections. We have been unable to secure sufficient material as a basis for positive statements; we thought that we might in some way be enabled by the application of a very high temperature to destroy the tubercle bacillus. It is a conceded point that the tubercle bacillus is easily affected by comparatively low temperatures, and its activity destroyed at 160° F. Taking for granted a child with tubercular arthritis, the joint of course very small, if the temperature of the apparatus be raised to 380° F., or an interior temperature of 350°, it seemed to us possible that with a temperature of 230° in actual contact with the skin sufficient heat might be brought to all parts of the joint by continuity and contiguity of tissue, and that we might thus destroy the organism. Unfortunately we were only able to experiment upon one suitable case; this was one of tubercular skin infection in a veterinary surgeon of Downingtown. Sections of the ulcer were made by Dr. Raven, of the University of Pennsylvania, and tubercle bacilli were found. Five applications of from 380° to 390° were made at intervals during six weeks. The ulcer promptly cicatrized, all induration disappeared, and the Doctor writes that he has had no further trouble for the past four months, and is evidently cured.

We have as yet not been able to experiment with oher local non-pyogenic infections. We think, however, if the heat could be applied that its curative effects upon lupus would be quickly demonstrable. Of course, it is needless to say that sufficient heat could not be applied to the skin for the purpose of destroying pyogenic organisms, as these microbes are only killed by such temperatures as would entirely disorganize the human tissues.

In acute rheumatic cases we have met with gratifying results in the use of dry heat. The patient experiences an immediate sense of relief from pain, and a marked diminution in the swelling of the part. In one case we have in mind the usual treatment had been thoroughly tested for two weeks without result; the pain was very severe, and patient experienced her first relief from pain after the use of the apparatus. Six other acute cases seemed to be completely cured, while the remaining eight were greatly improved. Of the chronic cases we treated thirty; all experienced a relief from pain, but there was no permanent improvement manifested. This seems to be the experience of all observers.

Rheumatoid Arthritis.—Our experience with the treatment of rheumatoid arthritis has been disappointing. We experimented upon one man of twenty-eight years in whom nearly all the joints of the body were involved; the patient was unable to walk without the aid of crutches. The case was one of fifteen years' duration, and all forms of treatment known had been tried unsuccessfully. Accurate measurements were made of the joints before and after treatment; pulse, respiration and temperature were carefully noted. Both lower extremities were exposed to a temperature from 300° to 320° F., each limb being permitted to remain in the apparatus for a period of one hour. We were led to expect brilliant results after the second heating, the patient being able to walk out of the clinic without the aid of his crutches, and his general condition seemed improved. After about ten days, however, he became anemic, lost eleven pounds, and was forced to discontinue treatment, and since then the patient's condition has been much worse than before the treatment was begun. From the experience of Professor Wood it would seem that the hot-air treatment is absolutely contraindicated in rheumatoid arthritis, and in fact in cases of simple rheumatism with any bony exostoses about the joints; and little or no good may be expected from the treatment of these cases.

Leg Ulcers.—Nine cases of the ordinary callous ulcer of the leg were subjected to the application of heat. Assuming that the circulation is increased in the part, we hoped by the resulting lymphatic stimulation to obtain granulation tissue reaction, and thus by favoring a better metabolic exchange in the tissues to hasten the cure of these otherwise obstinate conditions. These cases were somewhat improved, and in several the ulcers rapidly took on a healthy granular appearance. The callous area is rapidly softened and the ulcers look clean, and the granulations when formed have the normal healthy appearance. We concluded that this will be an excellent preliminary procedure in the treatment of these conditions.

Elephantiasis.—In the one case of elephantiasis subjected to this treatment we had hoped to stimulate the lymphatic system, and thus bring about a certain amount of improvement. Patient discontinued treatment voluntarily after the third application, and no definite conclusions could be drawn.

Fractures.—Thirty fractures, including seventeen Colles, six of tibia and fibula, seven of fractures of the lower end of the humerus, were subjected to the hot air after the dressings had been removed. It is usually stated in text-books that

the average cure of a broken bone requires about six to eight weeks; this only includes the time the fracture is uniting, but many weeks and sometimes months are required to limber up joints and tendons before the normal function is restored. Colles's fracture is of very frequent occurrence, and it is well known the disability that follows this fracture often extends over a very long period. We hoped the hot air would so soften the adhesions that a rapid absorption would speedily follow and the function of the joint be rapidly restored. We were right in this surmise. In every case after the splint was removed the part was subjected to heat to the point of tolerance, which we observed to be considerably below the usual limit, which is in all probability due to the defective nutrition of the part, and the excessive amount of engorgement of the lymph channels.

In every case the function of the limb was rapidly restored, œdema and swelling rapidly disappeared, and the patient was enabled to follow his usual avocation much earlier than in cases treated by massage and electricity. Massage combined with the hot air treatment might still further hasten a cure, but this procedure was eliminated from our cases for experimental purposes only.

Dislocations.—We treated a number of dislocations of various joints and met with uniformly good results, in causing the absorption of the lymphatic adhesions between the articular surfaces and a rapid disappearance of the swelling. Heat was applied when the dressing was removed and the capsular ligament supposed to be entirely healed.

Tenosynovitis.—Eight cases of tenosynovitis were treated; all were of traumatic origin, seven being about the wrist-joint and one at the elbow; four were acute and four chronic. Of the acute cases all were promptly relieved by four treatments; splints were applied in these cases after the application of the heat. In the chronic cases improvement was slower; the pain was promptly relieved, but crepitation could be felt for some time afterward. After seven heatings patients were cured and able to return to work. The heat seemed to be of special value in these cases, and when the exudate about the tendon was not excessive it was rapidly absorbed. In those cases in which the exudation was excessive the use of an antiseptic seton was combined; the improvement was rapid, and permanent cure soon resulted.

Assuming that the theory in regard to the destruction of the tubercle bacillus by the application of a high degree of heat is correct, we think that the treatment should be followed by the most brilliant results in cases of tubercular tenosynovitis.

Ankylosis.—Seven cases were treated—two of elbow,

three of knee, and two of shoulder. All these cases were of traumatic origin and of long duration. As many as twelve or fifteen applications were required in each case before permanent improvement was noticeable, but in all the final results, with the exception of one elbow, the range of motion was increased to a remarkable degree. The elbow case discontinued treatment of its own accord.

In conclusion, we believe that the application of dry heat will find its greatest use in those cases of acute origin, such as sprains, tendinous inflammations, acute muscular strains, acute rheumatic conditions, and as an after-treatment of fractures and dislocations, to promote and aid the elimination of effete substances through the skin, by sweating and through the lymph channels, increasing the blood-supply and thereby the nutrition of the part. We think it is absolutely contraindicated in cases of rheumatoid arthritis, and of but little value in chronic rheumatic affections. We believe with Dr. Wood that the general sweating has something to do with the relief of these cases. Little experimental work in the line of tuberculosis has been done, but the brilliant results obtained in our one case encourage one to further investigate this matter. We are now doing some experimental work with the view of ascertaining whether the application of a high degree of dry heat will in any way facilitate the penetrating power of ointments. One can readily see the boon to syphilographers if the permeability of inunctions be furthered, thus enabling one to rapidly saturate the system with physiological doses of mercury.

Our experiments also have led us to believe that if an apparatus could be constructed enabling one to adapt this method of dry heat in pulmonic congestions, the vasomotor dilatation ensuing, literally bleeding one into his own arteries, many distressing and dangerous symptoms, as cyanosis and dyspnea, might be relieved or mitigated. It seems to us that this subject is well worth further investigation.—*Therapeutic Gazette.*

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

Associate Professor of Medicine and Neurology, and Professor of Clinical Medicine University of Bishop's College; Physician Western Hospital.

CIRRHOSIS OF LIVER AND INTEMPERANCE.

The United Kingdom is by no means a temperate country as regards the consumption of alcoholic drinks, though the Briton is far better conducted in this respect than he was at the date of the Queen's accession, an epoch when the law was less solicitous for his welfare than it is at present. Through learning culled from popular works and temperance lectures the public have an idea that the drinker of spirits dies miserably with a hob-nailed liver, the result of chronic alcoholic poisoning of that organ. The profession substantially supports this idea, for though British physicians recognise other forms of fatal disease due to intemperance, they still understand "hob-nailed liver" and "gin-drinker's liver" to be synonymous with cirrhosis, and they still teach that neat spirits are more potent in causing cirrhosis than wine or malt liquors.

There is a source of fallacy in this theory. Gin-drinking was once very prevalent amongst the classes who seek hospital relief, classes who yet consume other spirituous liquors too often in excess. Their fatal malady could be traced beyond death, and diagnosis was verified by the medical registrar and demonstrator of pathology. The Briton who can afford to drink wine does not often die in a hospital, nor do his friends allow of pathological research. Hence it is too much taken for granted that abuse of wine does not frequently cause cirrhosis

Professor Lancereaux quite recently brought forward some remarkable facts and theories before the Paris Académie de Médecine. He proved that undeniably cirrhosis of the liver, common amongst the poor of the French capital, is very often caused by intemperate indulgence in wine and in wine alone, the well-known *vin ordinaire* of the wine shops. An Englishman might conclude that the wine of the *estaminet* or *tapis franc* may be fortified with cheap spirit for inspiriting the proletariate, just as the *vin ordinaire* for the

benefit of tourists at hotels is doctored with logwood and aniline. But Lancereaux says nothing about the Paris workman's wine being "fortified." He insists, however, on another form of adulteration, to which the Académie devoted much attention—the addition of plaster-of-Paris in order to give a "dry" flavor. On the strength of this fact he goes so far as to advance a new theory. Cirrhosis of the liver, he believes, is not due to alcohol, but to certain salts which are in solution in intoxicating drinks. His own statistics seem to us to include the same source of fallacy as is found in English statistics. Out of 210 cases of cirrhosis under his own care, where the patient was clearly intemperate, the "especial vanity," as Mr. Weller, senior, would say, was distributed as follows: Excess of wine, alone, 68 cases; excess of wine, brandy, rum, and absinthe more or less combined, 126 cases; excess of wine and beer, 12 cases; and excess of wine and cider, 4 cases. Hence he concludes that in Paris wine is the efficient cause of hepatic cirrhosis, as excess of that alcoholic drink was marked in all his cases, and often was the sole agent in causing the disease. On the other hand, Parisian workmen all drink cheap wine, whilst the British inebriate in humble life nearly always takes spirits. Hence we have no evidence that spirits may not be a yet more "efficient cause" of cirrhosis.

Still there remains Lancereaux's theory, that cirrhosis is due to mineral salts, and not to alcohol. Gin is not doctored, we believe, with mineral salts. Of the "plastering" of cheap claret, however, there can be no doubt. The epicure loves the flavour of a naturally dry wine for its own sake. On the other hand, it is not certain that the uncultured sot and the coarse drinker in any class look on dryness as a sweet sensuous delight. They choose a sham "dry" wine because their stomachs are disordered, and they hate anything sweet. Thackeray loved to see a man of forty eat a jam tart with relish, and we know what he meant. The drinker cannot tolerate sweetness, whilst he knows that acidity will upset him. Hence the "dry" flavour is preferred as being, to the drinker, neither nauseous nor irritant. Therefore plaster is freely put into cheap claret for the Paris poor. Lancereaux now demonstrates that it is the sulphate of potash, which exists in considerable quantity mixed with the sulphate of lime, that damages the liver so as to cause the well-known cirrhotic changes. He and Couturieux have found that sulphate of potash mixed with articles of diet undoubtedly causes the well-known changes of the connective tissue of the liver which bring about the appearances characteristic of cirrhosis. The administration of pure alcohol in the higher

animals never seems to cause hepatic cirrhosis, though all observers find that it produces true and typical fatty degeneration. This change, it appears, is seen in absinthe drinkers. Lancereaux gives us a bit of information specially important when this subject is considered in a general sense, and beyond the banks of the Seine. "The proportion of salts of potash," he states, "is relatively strong in certain wines and in some beers."

The distinguished French pathologist is doubtless more or less correct in his conclusions about wine and hepatic disease in Paris, and it would appear that "some" kinds of beer contain the noxious salt. Unfortunaiely, we once more face negative evidence. He implies that spirits, especially absinthe, do not contain the salt. Absinthe drinkers do not get cirrhosis. What, however, causes the disease in the British drunken operatives; do some spirits, like "some beers," contain sulphate of potash? The matter is worth investigation. Till it is made clear, we doubt if British physicians will abandon the theory that spirits—at least British spirits—cause cirrhosis through the direct injurious action of alcohol on the liver.—*British Medical Journal.*

THE CLIMATIC HEALTH RESORTS OF CANADA.

In an editorial in the *British Medical Journal*, Nov. 13th, 1897, it is stated that one of the good results which it may be expected will flow from the visit of the British Medical Association to Montreal will be a better understanding of the climate of Canada. Canadians resent that their country should have been apostrophised as "Our Lady of the Snows," and Rudyard Kipling is not a name to conjure with at the present moment in the Dominion. Extending from east to west, from the Atlantic to the Pacific Oceans, and modified at its two extremities by the influence of these oceans, and in its central portion by the great inland lakes, Canada, of course, presents many varieties of climate, and it would be absurd to expect as yet any detailed knowledge of all the variations which latitude, elevation above the sea, or proximity to the oceans must produce. Some sort of general or preliminary notion may be obtained, however, by observing that of the settled parts of the Dominion the eastern part is roughly in the same latitude as southern Germany, and the western part in that of northern Germany.

In spite of its eastern indented coast line, Canada as a whole has a continental climate—a well-marked winter usually with long-lying snow, and a warm summer. In the

maritime provinces, wanting the influence of the Gulf Stream and suffering from that of the polar current, the winter is cold, and apt to to be damp and foggy. The summers are bright and not hot, owing to the same cooling agency. The coasts of Prince Edward's Island, Nova Scotia, and New Brunswick thus offer many bracing seaside resorts, subject, however, to very much the same vicissitudes of weather as make a visit to a British seaside place rather a lottery. The greater part of the province of Quebec has a more constant climate, and the city of Quebec itself, though in the same latitude as Central France, is on the same isotherm as Stockholm. The climate of the eastern part of the province of Ontario is somewhat less constant, the summer hot but the winter less steady. From the great lakes eastward to the Atlantic, therefore, the climates of Canada present few striking points of interest or advantage to Europeans. The only exception which may at present be suggested is the district of the Muskoka Lakes, where special local conditions render the climate bracing and the air free from dust.

In the Rocky and Selkirk Mountains, however, Canada possesses a vast extent of country which has a summer climate presenting the well-known Alpine characters in their most marked form. As to the winter climate we have not as yet sufficient information to express any opinion, but in summer the climate appears to be all that can be desired, especially in the middle of the summer season—mid-July to the end of August. At Banff there is ample accommodation for visitors, who can there obtain all the comforts and many of the luxuries of civilisation, while at other points along the Canadian Pacific Railway, as at Field in the Rocky Mountains, and at Glacier in the Selkirk Mountains, there are well-managed mountain hotels.

The climate of the prairie country east of the Rocky Mountains possesses certain valuable characteristics. From Brandon, the western centre of the wheat-growing country of Manitoba, where the elevation is 1,150 feet, the prairie, which is all open and usually undulating, rises imperceptibly, until at Calgary, the western centre of this ranching country, the elevation of 3,388 feet is attained. Here the rainfall is low (11.54 inches), the proportion of sunny days, with a maximum in winter, is high, and the snow does not lie deep. The air all the year round is bracing and stimulating, and everything, both in the climate and the customs of the inhabitants, encourages the resident to live an out-of-doors life. Neither the social surroundings nor, perhaps, the climate are adapted to persons who are actual invalids; but for those young men for whom a change of climate is recommended rather as a pre-

cautionary measure these western prairies of central Canada offer advantages which it will be well to bear in mind. One distinct advantage of a minor kind is that the journey from, say, Calgary to England can easily be accomplished in less than a fortnight.

Westward of the Selkirk Mountains, and at a much lower elevation than the prairies on the eastern side of the Rocky Mountains, is a remarkable "dry belt." Its most accessible town is at present Kamloops, on the main line of the Canadian Pacific Railway. The rainfall is low (11.05in.), and the air, in spite of the fact that the district is traversed by several fine rivers, remarkably dry. It is proposed to erect here a sanitarium, and there is every reason to believe that the climate is specially suitable to the treatment of consumptive patients in all the earlier stages of the disease, The chief danger to be guarded against appears to be dust, but this is only likely to be troublesome on roads and in settled parts, and due regard will doubtless be had to this in the choice of a site. Southward of this district is the country in and about the Okanagan Valley, which possesses a similar climate, while affording a somewhat more varied scenery.

It will be seen that the Dominion of Canada affords climatic conditions calculated to be of use in the prevention or treatment of various diseases, and that there is good reason to believe that a great future awaits certain specially favoured localities.

MASSAGE IN PRURIGO.

Murray, of Stockholm, found (*Hygiea*) that massage had a good effect in a case of prurigo in a boy aged eleven. The procedure had no effect on the process but relieved the intense itching. Hatscek (*Arch. f. Derm. u. Syph.*) had an opportunity of trying the method in Kaposi's clinic in eleven cases (nine males, two females). Of these, seven were suffering from prurigo ferox, and four from prurigo mitis. Most of them were young, but one of them was aged sixty-two. Nine were treated exclusively by massage ; in two cases this was for a time supplemented by carbolic acid pills. To exclude sources of fallacy, massage was used in the form of dry effleurage. Stroking was moderately firm, and was made in a centripetal direction. The duration of each sitting was at first ten to fifteen minutes ; after a time this was shortened to five, and later to three, minutes. In all the cases the itching was markedly relieved ; in some after two or three sittings, in others not till after some weeks. The treatment is more effectual if vaseline is employed.

The method had no direct effect on the disease process, but it was noticed that new nodules, developing while the patient was under treatment, itched less than had formerly been the rule, and rapidly disappeared. In some cases recurrence of the pruritus took place. To prevent this, massage must be continued to a greater or less extent throughout the patient's life.—*British Medical Journal.*

DIETARY CRANKS.

According to the daily prints Dr. Kellogg, of Battle Creek, Michigan, recently delivered a lecture before a large audience in the Y. M. C. A. Hall of this city. Among other things he is said to have urged abstention from meat as an article of diet, on sanitary grounds. The comparative method is especially favorable in the study of fads and crank systems. Saulsbury and Kellogg added together furnish a plentiful dietary, subtracted the one from the other they reduce themselves to the absurdity of annihilation. Exclusive systems of diet result from the application of observations on disease to the regulation of the body in health. It is only necessary to change the disease which is on view to get an entirely new set of requirements. There is no doubt of the efficacy of raw meat, dry bread, and hot water, exclusively, in the very common acid-dyspeptic states. Plethoric individuals with the irritated kidneys and neuralgic twinges of the uric-acid condition fly with joy to the grains and nuts of Battle Creek. A sect has lately arisen which, if we are informed aright, largely discounts the very moderate restrictions of the two schemes mentioned above. It has evolved a theory which is truly ponderous in the way in which it tramples down the joys of the table. The Ralston Club has solved the mystery of arterio-sclerosis. Their logic is simple. The arteries calcify ; the lime-salts cause calcification ; all foods except fruits and all natural waters contain lime-salts ; *ergo :* eat nothing but fruit, drink nothing but distilled water. They apparently assume that with this one mighty brain-throb they have solved the problem of life, and that they have left men no shadow of an excuse for dying under two hundred years of age. The monkey, the nearest of kin to the hairy progenitor of man, is appealed to as a touching instance of plain living (we wish we could add high thinking, but though the apostles of Ralston may believe it they do not expressly say so). The monkey, they tell us, eats only fruits, and never drinks water with his meals. Presumably the reason why he fails of the double-century mark in respect of age, is because he does not drink distilled water.

The Ralstonites pause in their consideration of the animal kingdom with the monkey. This is unfortunate. The raven, for instance, lives to be one hundred years old. He lives on carrion. The next army of cranks may be encouraged to follow his example.

The fruit-eating craze is possibly the most degenerate of the many recent fads. The fruit-eating and pot-bellied natives of the tropics and their next lower relatives, the apes, are truly inspiring objects of imitation by civilized man! not even their outdoor and arboreal lives save them from the consequences of a meagre and irritating regimen. It is truly pitiful to see the army of neurasthenics, dyspeptics, rheumatics, starving their tissues and acidulating their blood at the beck of a few, to put it charitably, hare-brained enthusiasts. It is fair to suppose that a troop of rickety children will later rise up and call them anything but blessed, a fate from which the ape saves himself by abundant potations of river-water.

The fact with regard to fruit is, that although it contains little nourishment, it agrees well with many people endowed with a vigorous gastric mucosa and fairly alkaline blood. To them it brings looseness and joy. In many dyspeptics tates, it is the first food stuff to disagree, and to the ill-nourished neurasthenic it is a miserable substitute for the better tissue-builders.

An appeal to the facts of evolution gives little comfort to the cranks of one dietary idea. Primitive man has as hunter and herdsman thriven on an animal dietary. Nuts and fruits have served his turn as well, and encouraged him to the cultivation of the cereals. There is no evidence to show that the people of any nation have become longer-lived or shorter-lived on account of an exclusively vegetable dietary, or that any association of cranks has increased the longevity of its members by any exclusive system whatever.—*Cleveland Journal of Medicine.*

CROUPOUS PNEUMONIA.

Weismayer (*Zeitschrift fur Klinische Medicin*, bd. 23, Supplement, Medicine) discusses the course of croupous pneumonia. He first briefly reviews the literature on the subject, dwelling particularly upon the work of Finkler, who makes a clear distinction between the pneumonia due to the diplococcus of Fränkel and that due to the streptococcus. Finkler, it will be recalled, recognized three forms of streptococcus pneumonia: an acute pernicious, an acute benignant, and a subacute or chronic form, and contended that both clinically and pathologically the two forms ought to be distinguished. Weismayer has observed thirty-nine cases

clinically, making in each case a bacteriological examination of the sputum. In thirty-four of these cases there was found in the sputum merely the diplococcus of Fränkel. Three of these cases were fatal; one in an aged person, one complicated by fibrinous bronchitis, the third in an alcoholic. All of the cases terminated before the twelfth day, and in all there was a rapid disappearance of the signs of consolidation. In two cases the sputum contained, in addition to the diplococcus, the streptococcus. One of these cases, complicated by diabetes and peritonitis, terminated fatally on the nineteenth day; the second, after a febrile course of thirty-seven days, made a slow recovery. In three cases merely the streptococcus was found in the sputum. Symptomatically these cases differed but little from typical frank pneumonia. The physical signs, however, were peculiar in that in one case dulness with the other evidences of consolidation did not appear before the ninth day and remained to the thirty-first. In the other cases resolution was made out as complete on the twenty-fifth and nineteenth days. In these three cases of true streptococcus pneumonia the physical signs resembled in every particular those of croupous pneumonia. The chief characteristic was the unusually late disappearance of the exudate.

Weismayer concludes that the examination of the sputum in cases of pneumonia is of practical importance, both as regards prognosis and the duration of the disease, the prognosis being in general more unfavorable where streptococci are found, as it increases the length of the illness and adds to the danger of abscess formation and of secondary infection by tubercle bacilli. With the statement of Finkler that a streptococcus pneumonia is always a lobular pneumonia he does not agree. The cases that he observed appeared always to be lobar pneumonia. He believes that many cases recorded as true streptococcus pneumonia may really be cases of diplococcus pneumonia in which a secondary infection by the streptococcus has taken place.

GYNÆCOLOGY.

IN CHARGE OF

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What is to be done for the myomatous uterus? The answer varies all the way from curetting to electricity, to

removal of ovaries, to removal of the myoma without removing the ovaries or the uterus, to total hysterectomy by the vagina or by the abdomen, according to the more or less radical or conservative tendencies of the doctor. Dr. Hunter Robb in the September number of the *American Journal of Obstetrics* makes a strong plea for the conservative treatment of the myomatous uterus, meaning thereby the removal of the myoma from the uterine wall without injuring either the uterus or the ovaries. The method which he advocates is that employed by August Martin, of Berlin, which is briefly as follows, and which is entirely bloodless :—

1. The vagina and uterine cavity are disinfected and packed with gauze.

2. The abdomen is opened.

3. The uterus is lifted out and laid upon a gauze napkin.

4. A rubber ligature is passed round the uterus close to the cervix to control hemorrhage.

5. The uterine cavity is opened and the tumor is shelled out.

6. The uterine wound is brought together by sutures and the uterus is returned into the abdominal cavity.

7. The abdominal incision is closed.

The Surgical Technique of Operations for Pus in the Pelvis is the title of a paper by Dr. I. S. Stone, of Washington, in the above-mentioned journal of the same date. He thinks that the correct treatment of acute salpingitis is the thorough irrigation of tube and its return to pelvic cavity without loss of either tube or ovary. He is opposed to operating for pus tubes on patients who are not in good condition ; he is opposed to the small incision. The patient must be in the Trendelenburg position, and the cornu of the uterus is to be clamped, as also the ovarian artery. The tube should be removed without rupture. The uterine artery below the cornu is tied and the cornu is then exsected, and the peritoneum united over it. He is entirely opposed both to flushing of the peritoneum and to the use of drainage tubes.

Dr. Hawkins, of Denver, in the same journal reports thirty-five cases of vagino-abdominal section with one death. He claims that the danger of the operation is lessened by first opening the vagina and freeing adhesions, and afterwards opening the abdomen. During the course of this paper he states that he resorts to a preliminary vaginal section in every instance where it seems likely that drainage or gauze packing will be required. As drainage and gauze packing are almost completely abandoned, being no longer necessary, he states that he has met with a great many ventral hernias

and long persisting sinuses, all of which resulted from gauze or glass drainage. By the aid of the Trendelenburg posture we are able to see what we are doing and ligate all oozing points. The best point which the author makes is when he says: "When the conditions as determined by the vaginal incision permit, we may forego abdominal incision, and thus greatly lessen the risk." In some of these cases he tapped cystic ovaries and in others emptied tubes filled with water. In another case he emptied and enucleated quite a large pus tube which was lying low down in Douglas' *cul-de-sac*. In three cases he enucleated a ruptured tubal pregnancy. In these latter cases, as the abdomen is generally full of blood, we prefer to deal with it by abdominal section.

Dr. Baldy, of Philadelphia, reports a case of removal of the broad ligament or a considerable part of it, together with the left ovary and tube, with apparently good results. As is well known, the left ovarian vein has special difficulties to encounter in its course up to the left renal and thence into the vena cava, so that varicocele of the left broad ligament is quite a frequent condition. Dr. Baldy points out that when the patient is lying down there is absolutely nothing abnormal to be seen.

Dr. Wesley Bovee, of Washington, reports a case of retroperitoneal ectopic pregnancy at full term. The patient died on the thirteenth day. The author points out the danand folly of waiting a single day after the condition had been diagnosed. In the same paper he reports another case which was supposed to have been cured by electricity, from which he removed a fœtus and cured a woman. In the first case the pregnant tube ruptured into the folds of the broad ligament and then went on growing until the ninth month. It would have been much better for the woman if it had ruptured, as it most often does, into the abdomen, for in that case her condition would have been recognized, and in order to save her from dying from hemorrhage it would have been compulsory to open the abdomen. As nearly every one of these cases recovers, even when the abdomen is found with several quarts of blood in it, and as nearly every one dies who goes to full time, it is evidently better to let no woman go a day longer than is required to recognize the case. In both of Dr. Bovee's cases there was the usual history of sterility for several years followed by irregularity in menstruation, and then the fainting fit with pain at the time of rupture. Dr. Joseph Price has pointed out that the child need not be considered, as it is always either dead or deformed.

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Editorial.

NEURASTHENIA ESSENTIALIS AND NEURASTHENIA SYMPTOMATICA.

Very undefined and vague ideas exist in regard to what is really meant by neurasthenia among physicians generally, and even among neurologists and alienists, and a recent writer in Germany, Binswanger, in a treatise on the pathology and therapy of neurasthenia, groups under this title "all neuropathic appearances which rest on a basis of a general functional disease of the nervous system, but which cannot be placed in the same category with the fully developed psychoses and neuroses because of their incomplete character." Dr. F. X. Dercum, in a paper read before the neurological section of the American Medical Association, Philadelphia, June, 1897, which appears in the *Alienist and Neurologist* for October with the above title, in mentioning these facts, takes exception to such vague and unsatisfactory definitions, and laments the lack of interest taken in the affection. He considers it one of the most interesting affections for study, as it has a syndrome as definite and fixed as that of any other disease, with sharply delimited boundaries. "The various symptom groups occurring in neurasthenia, though differing widely in detail, always present the same essential features, and, from whatever standpoint they are approached, a harmonious, clinical whole."

Its essential features are persistent diminution of nervous energy and increased mental and physical irritability. The misconception in regard to it arises, he states, from the fact that the symptoms are largely subjective, and the objective ones are not so striking as in other functional diseases. And the symptoms which belong to other diseases have been described as belonging to this affection, such as the symptoms of anæmia, chlorosis, the nervous syptoms of pelvic, gastric and other visceral affections.

He proposes to designate these neurasthenic symptoms as neurasthenia symptomatica.

True neurasthenia he names neurasthenia essentialis. The symptoms are primary and those of secondary importance, the latter sometimes becoming unusually prominent, which has led to wrong classification. Charcot has divided the symptoms into cardinal or neurasthenic stigmata and accessory symptoms; the former were: headache, sleep disturbances, rachialgia, and spinal hyperæsthesia, muscular weakness, digestive and sexual disturbances and mental symptoms. The accessory symptoms, which were those that were not essential to the diagnosis, included giddiness, disturbances of special senses and of respiration, circulation and secretion, and of motility and febrile conditions. This classification of symptoms places the most prominent clinical features as essential. Dr. Dercum simplifies matters in regard to a correct understanding of the true pathological nature of the affection. He regards the fundamental symptoms to be fatigue and irritability and all other symptoms are secondary, and he describes the primary and non-essential symptoms of neurasthenia as manifested in different parts of the body. In sensory disturbance, there is the primary symptom of fatigue generally, or local, which, when exaggerated, becomes aches of different kinds, and occurring in parts most frequently used. If headache is the symptom, such sensations as fullness, lightness, distension, throbbing, increased coughs, and other ill-defined feelings of distress are all of secondary value, and the same condition of primary fatigue and ache and a number of non-essential adventitious symptoms applies to the various parts of the body.

In the eye of neurasthenics fatigue and irritability are the prominent symptoms, while seeing things as through a mist, objects appearing exceedingly dull or unusually bright, etc., are secondary. Hearing, taste and smell present a similar grouping of symptoms. In the motor system muscular weakness, the amyosthenia of Charcot, is the primary and tremors are secondary.

Dr. Dercum refers in a similar way to the disturbances of digestion, the sexual organs and circulation. In the latter, feeble pulse and cold extremities are the primary expressions of neurasthenia; disturbances of rhythm, heart murmurs, and loss of vasomotor tonus, evidenced by involuntary flushings, aortic pulsation, etc., are secondary.

In regard to psychic symptoms, that of exhaustion on slight mental effort is the most prominent feature. Others in the primary group are lack of power of concentrating the attention, lack of spontaneity of thought, a diminution in the strength of the will, a condition of general indecision and mental and emotional irritability, while fears of different kinds, which are such prominent features in some cases are to be regarded as secondary.

"Neurasthenia is not a vague and ill-defined affection, as Binswanger would have us believe. I contend that it is an affection with a syndrome as well defined, as well established, as any with which we as clinicians have to deal. The moment we regard neurasthenia in its true light, namely, that of a *fatigue neurosis*, much of the mystery passes away, and, as pointed out, the essential symptoms, those directly expressive of fatigue, stand out boldly and prominently and give to the disease its clinical features. The failure to assign to the secondary symptoms their proper value has been a prolific source of error and misconception. Often these secondary symptoms are quite prominent and striking, but they should not throw us off our guard. If the case be one of neurasthenia some of the fundamental or primary symptoms can always be found."

Dr. Dercum further alludes to a condition which he has called neurasthenia terminalis a stage in which the functional derangement is followed by tissue changes. These changes, such as hypertrophy of the heart from palpitation, atheroma of the vessels, all suggest premature senescence, and until these are accentuated in some one organ, they should be regarded as the terminal form of neurasthenia.

"My object in this brief paper was merely to present in as condensed a way as possible my own interpretation of the symptomatology of neurasthenia, and was prompted especially by the publication of Binswanger's untenable and retrogressive views. I intended mainly to point out the difference between true neurasthenia and spurious or symptomatic neurasthenia, and also to give to neurasthenia its proper position in our nosology as a *fatigue neurosis*."

We have given a *résumé* of Dr. Dercum's very interesting paper, which is one of great value. The aspect which it gives of this vague disease will materially advance our possibilities of comprehending, analyzing and grouping its various symptoms, and place us in a better position in regard to the therapeutical management of these cases.

REFILLING PRESCRIPTIONS.

The *Medical and Surgical Reporter* refers to this subject in a recent editorial :

"We have an old prescription which had been carefully treasured in the family for at least two generations before it fell into our unappreciative hands. It is undoubtedly an orthodox formula of the old-time physician, containing numerous vegetable ingredients, of which burdock is, perhaps, the most alarmingly medicinal. How often has every practicing physician had a patient produce from a wallet a prescription not much less ancient, and ask if it is not applicable to his present ailment, or compare it with the one just received with the air of a connoisseur judging the relative merits of two works of art. An old friend relates a rather discouraging experience in the way of a repeated prescription. He once gave a formula for a quinine mixture to a canal boatman. Years afterward, he happened in a drug store where, from a copy of the original prescription, the clerk was just dispensing the preparation to one of the next generation of boatmen, afflicted with plasmodia many generations removed from those of the original patient. Entering into conversation with the purchaser, our friend was informed that the formula was one of 'Old Doctor ——' (his own name) who was long since dead, but whose good works lived after him in that that prescription 'had cured all the

ague on the canal for the last thirty odd years.' And the doctor refrained from asserting that he was still alive, and from kicking from the loss of practice that the unauthorized refilling of the prescription had cost him.

" Somewhat recently it has been decided—or re-decided —in court that the written prescription is the property of the druggist who fills it, and that he is at liberty to refill the prescription at any time, but that in so doing he acts purely as a merchant and on his own responsibility. That is to say, the physician cannot be held for any harm resulting from the unauthorized issuance of medicine. Whether the druggist could be held for damages in case of bad effect from repeating a prescription at the solicitation of a patient or his friends, is, we believe, an undecided point, and one on both sides of which much might be said. A pharmaceutic journal, commenting on this topic, suggests that the physician should not fail to write 'Do not repeat' on any prescription which would become dangerous from too long use. The editor expresses the opinion that few druggists would take the responsibility of renewing a prescription so marked. This is doubtlesss true, yet, from personal experience, we can testify that there are some who will repeat distinctly dangerous prescriptions even when marked 'Do not repeat.'

" The matter of repetition of prescriptions involves two distinct principles, the commercial interest and the right of the physician, and the safety or, at least, the welfare of the patient. Some things are, by their nature, purchased for indefinite use, others for use only at one time. Thus, a man purchases admission to a society and gains the right of entry for a year or a lifetime ; he purchases admission to a place of amusement, and he is a thief if he re-uses his ticket. No general rule can be laid down, but each must be decided by the common sense of values transferred. In deciding the business ethics of the repetition of a prescription, two questions must be asked : Is the formula something which is of value to the purchaser on one or an indefinite number of occasions? and, Is the price which he pays a fair compensation for use at one time or whenever he chooses ? The same questions would apply to the single or multiple use of

a railroad ticket, a postage stamp, or any other commodity, and to a professional reader we need scarcely say why the latter question should be answered in the same way for the prescription as for the ticket and the stamp. The laity fail to distinguish between the purchase of a formula for some common domestic or mechanical use and for use medicinally. It seems to us that the essential difference is that the former represents information which, in the nature of things, must be subject to indefinite use, while the prescription does not carry any adequate information to the patient. For example, a housewife wishes some cement which will stick together two parts of a broken utensil. The indications for its use are perfectly clear to her, she knows how to apply it, she simply lacks information on the single point of ingredients. The patient buys a prescription—or rather he looks at the transaction in that way—but he does not know the indication which his case presents except in a crude way that may be entirely misleading to him; he does not know the method of application nor the *modus operandi* of the medicines, in most instances he does not even know what those medicines are. In short, he is not buying information at all, but carries the prescription to the drug store as an utterly irresponsible if very much interested agent.

"A pharmacal contemporary, in discussing the proposed legislation in a middle-western State to forbid repetition of prescriptions, emphasizes the disfavor which will fall upon the medical profession on account of such legislation, taking the ground that patients will consider themselves defrauded and will change physicians tilll they find one who will consent to the indefinite repetition of a prescription without additional charge. This contemporary suggests that however careful physicians may be to put forward the welfare of the patient, their own self-interest will become manifest. It seems to us that the best way to deal with this problem is to carry the war into Africa. Instead of leaving the patient to detect the self-interest of the physician, put that interest to him frankly. Let him understand, as in any other transaction that has the business element in it, that such transaction involves approximately equal values. Entirely aside

from the fact that he cannot tell what kind of a cough or dyspepsia or fever he has and cannot estimate the exact indications for medicine, ask him plainly if a dollar, more or less, is an adequate fee for the treatment of any one ambulant malady throughout an indefinite period, and not only for himself but for any one with whom he chooses to share his prescription."

LANGSDALE'S LANCET.

Dr. John M. Langsdale, editor of *Langsdale's Lancet*, has now associated with him as co-editor Dr. Samuel Goodwin Gant, the well-known author of "Diseases of the Rectum and Anus."

THE PHILADELPHIA MEDICAL JOURNAL.

This is the title of a new weekly Medical Journal which is to appear in January, 1898.

A company has been organized with a capital of $30,000. The management of the company is entrusted to a Board of Trustees in which are representatives of leading medical schools. Those selected to serve for the first year are: Daniel Baugh, Esq., of the Jefferson Medical College; Charles William Bergner, Esq., of the Medico-Chirurgical College; Robert R. Corson, Esq., of the Woman's Medical College of Pennsylvania; W. W. Keen, M.D., of the Jefferson Medical College; J. Ewing Mears, M.D, of Philadelphia; S. Weir Mitchell, M.D., of the University of Pennsylvania; Thomas S. K. Morton, M.D., of the Philadelphi Polyclinic; Joseph Morwitz, Esq., of Philadelphia; John H Musser, M.D., of the University of Pennsylvania; William ler, M.D., of Johns Hopkins University; William Pepper, M.D., of the University of Pennsylvania; William Potter, Esq., of the Jefferson Medical College; John B. Roberts, M.D., of the Philadelphia Polyclinic; Charles E. de M. Sajous, M.D., of the Medico-Chirurgical College; William Thomson, M.D., of Philadelphia; James Tyson, M.D., of the University of Pennsylvania; Barclay H. Warburton, Esq., of Philadelphia; James C. Wilson, M.D., of the Jefferson Medical College; The President of the Philadelphia County Medical Society.

"The editorial management has been entrusted to Dr. George M. Gould, whose high reputation as a medical editor guarantees a vigorous, high-toned, and interesting publication."

"It will be conducted solely in the interests of medical science and the medical profession. The editorial columns and the advertising pages will occupy the same high plane of clean, independent journalism, free alike from the undue influence of individuals, of firms, or of schools."

The subscription price will be placed at three dollars per annum, with a view of ensuring a large circulation. One would imagine that the field for medical journalism had been pretty well occupied from the fact that some three hundred are published in North America. It would be to the advantage of medical journalism if the number was less and the literary efforts were put into larger journals which would more likely have wider circulations and could be kept at a more moderate price. With such a board of management as is indicated above, and so eminent a writer for editor as Dr. George M. Gould, together with the low subscription price, we should be ensured a first-class journal, and they a successful enterprise.

Correspondence.

Editor CANADA MEDICAL RECORD (Montreal).

SIR,—When, at the Ontario Medical Association Meeting in June, the subject of the "Victorian Order" for providing District Nursing was discussed, I was in full sympathy with the resolution passed by the Association in respect to that subject. Why? Because the object of the nursing project, from having been misunderstood, and perhaps in a measure, unwittingly, misrepresented, I was under a false impression in respect to it.

Since Dr. Worcester, of Waltham, Mass., who has made a special study of the subject both in Europe and America, and has had much practical experience in district nursing amongst the poorer classes in Massachusetts, has been in Ottawa and explained the working of such a system and its excellent results, my views have changed; as also, I particu-

larly desire to state, have the views of a number of the medical practitioners of this city with whom I have had converse on the subject.

To be brief, three special advantages may be named as almost certain to result from the proposed nursing scheme if carried out, as follows :—

First,—It would be a decided advantage (rather than a disadvantage) to our already somewhat considerable army of regular nurses, by increasing, probably, in a little time, quadrupling the demand for these "Ministering Angels."

The new order of nurses would go forth amongst the sick and distressed of the poorer classes, *visit* them only say for an hour or so (never remaining, as for a day or a week) for a small sum paid to the Home, not to the nurse.

One of them would be sent out, say, to a woman at the commencement of labor by the physician engaged, she would take the place at the bedside and in the room of the very incompetent neighbor or friend, or even mother, of the patient, now commonly in attendance. With a knowledge of the requirements of the case, with kindly sympathy, tender and *clean* hands, she would arrange everything for the comfort of the patient, the prospective baby, and also for the coming physician ; and in the best possible manner, very different from that in which they are now commonly arranged ; sometimes providing from the Nurses Home certain necessaries not obtainable in the patient's house.

If properly chosen or selected as naturally adapted to this sort of semi-mission work, the district nurse would bring such a stream of sunshine (really and figuratively, with fresh air), such confidence, cheerfulness, hope and comfort as would not only produce a favorable individual effect on the patient, but cause her family and neighbors to make great efforts on other occasions of the kind to employ a regular outside nurse for some days or a week or two in order to have the benefit of a nurse's constant attendance instead of only visits.

So in a case of pneumonia, of enteric fever, of acute rheumatism, pulmonary tuberculosis or any other disease. The very natural results of this sort of nursing would be, and as appears to have been Dr. Worcester's experience in Waltham, to greatly increase the demand for the regular nurse, as now provided.

Second,—The District Nurse is to be sent out only under a physician it appears in all cases, and she cannot fail to prove a very great time and labor saver to the physician in all cases in practice which she attends, especially in midwifery practice. This, Dr. Worcester states, is his experi-

ence. She will let the attending doctor know just when he is needed at the bedside, saving him hours of patient or impatient waiting; or "watching" calls or visits; she will enable him to leave the case sooner, and to know when other after calls would be most needed by her morning visit to the patient and reporting the conditions.

Third,—The District or Visiting Nurse would, by her sympathetic presence and other personal characteristics, and her knowledge and acts, bring into the often unventilated, unclean, perhaps darkened, noisy, ill-managed, unhappy house of the sick, pure air and light, cleanliness, quiet, comfort, etc., and so assist immensely to promote recovery and health, abbreviating the period of illness, preventing suffering, despair, death, in a word, to lessen the mortality by modifying and removing the cause of it, wherever she might be sent.

Trusting the above may help the readers of the CANADA MEDICAL RECORD to a better understanding and appreciation of the proposed "Victorian Order,"

I am, etc.,

EDWARD PLAYTER.

OTTAWA, Nov. 25th, 1897.

Book Reviews.

A Text-Book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia; Attending Physician to the Medico-Chirurgical and Samaritan Hospitals, Philadelphia, etc. Illustrated. M. B. Saunders, 925 Walnut St., Philadelphia, 1898. Canadian agents, J. A. Carveth & Co., 413 Parliament St., Toronto, Ont.

It is no light task to undertake the writing of a book on the practice of Medicine. To cover the extensive ground and to give evidence of even some slight personal observation in the hundreds of various diseases which must be described should mean several decades of persistent study and a large personal experience in hospital and private practice, and the writer should have recorded the various details of the cases treated by him from the beginning of his experience. All this added to a complete résumé of the knowledge on each subject as elaborated by all previous workers up to the time of writing would give us an ideal book and keep the reader completely posted.

In Dr. Anders' new book on Practice of Medicine we have a very good approach to this ideal work. His personal experience

for over two decades is given, and in nearly every page the pronoun I may be ob erved, giving testimony to careful observations and a wise selection and separation of that which he has proved to be true and of value. There is not so much given of personal results in noting the pathological conditions in large numbers of personal examinations, as is such a marked and valuable feature in Osler's practice, and we are called on very often to take the author's opinion for certain views rather than statistical facts in such phrases as "I am satisfied that"; "I am of the firm belief"; "I believe that many of them are ascribable;" "I do not think they were suspected, etc." Undoubtedly the author has been a keen observer, and we may accept these opinions unless tabulated statistical results should be forthcoming which would fail to corroborate them. While almost every article gives evidence of personal experience or the testing or proving of the methods recommended by others, it is everywhere apparent that all the recent and best writers have been quoted from, and that almost every subject is presented in its most modern aspect. Some six hundred diseases are described in twelve hundred and eighty-seven pages in such a way as to give in a brief condensed review a practical *résumé* of the essentials of each disease suitable to the requirements of the practising physician or the student.

A useful feature of the book is the number of differential diagnostic tables distributed throughout in the more important subjects. Most of these are original with the author, and in affections which have an apparent resemblance to each other are very useful in helping to establish a diagnosis, and for the student in memorizing the distinctive details. Another feature which will make this work attractive and popularize it among students is the large number of illustrations in the way of wood cuts, colored plates, charts and skiagraphs. The subdivisions of each subject are indicated in heavy lettering. Numerous formulas are included in the text, which are useful, and suggestive in regard to treatment. Another modern introduction is seen in the terminology and orthography, which is in accordance with that now adopted by a number of the United States standard lexicographers, the æ and œ diphthong are replaced by e, and the termination ide is rendered id. We do not warm to this modification of English, and the author is apparently loth to entirely reject the old methods, as seen in the name purpura hæmorrhagica. We can without hesitation say that Dr. Anders has produced a very creditable book, one that has come to stay and deserves a wide distribution.

Essentials of Obstetrics. By Charles Jewett, A.M., M.D., Sc.D., Professor of Obstetrics and Pediatrics in the Long Island College Hospital and Obstetrician to the Hospital, assisted by Harold F. Jewett, M.D. Illustrated by eighty wood cuts and three colored plates. Cloth $2.25. Lea Brothers & Co., New York and Philadelphia, 1897.

This is a small volume of some three hundred and fifty pages, the object of which is stated by the author to be that of placing the essentials of obstetrics within easy grasp of the student. With this aim in view, conciseness and clearness have been consulted even at

the risk sometimes of being dogmatic, and a systematic and logical arrangement has been observed. Most attention has been given to practical topics. The author thinks that the student succeeds best by first mastering elements, and "the foundation well laid, a complete and systematic knowledge of the subject becomes a matter of comparatively easy attainment."

The eighty chapters into which the book is divided includes the following subjects: anatomy of female genital organs; physiology of pregnancy; physiology of labor; physiology of the puerperal state; pathology of pregnancy; pathology of labor; pathology of the puerperal state, and obstetric surgery. One is surprised how completely the subject of obstetrics has been considered in this concise résumé, and the numerous illustrations make it a very practical and complete instructor in most that is essential in the practice of obstetrics. Not only will it serve its purpose as a means of laying a foundation for the student, but will accomplish much in the way of refreshing the memory of the practising obstetrician, and will in addition teach him a number of things that are new, unless he has been a reader of very recent obstetric works. The directions for the use of forceps, cœlio-hysterotomy, cœlio-hysterectomy, symphysiotomy, the treatment of ectopic gestation and other operations are so clear that it would in emergencies prove a valuable instructor and reminder when prompt action is indicated.

The author's reputation as an authority on obstetric subjects, and the manifest usefulness of a reminder of this kind as an auxiliary to the large text-books for the busy practitioner and for imparting a good foundation for the student, should obtain for the work a large measure of appreciation from those for whom it is intended.

A Text-Book of the Diseases of Women. By Henry J. Garrigues, A M., M.D., Professor of Gynæcology and Obstetrics in the New York School of Clinical Medicine; Gynæcologist to St. Mark's Hospital in New York City; Gynæcologist to the German Dispensary, New York; Consulting Obstetric Surgeon to the New York Maternity Hospital, etc. Containing three hundred and thirty-five engravings and colored plates. Second edition, thoroughly revised. M. B. Saunders, 925 Walnut St., Philadelphia. J. A. Carveth & Co., Toronto, Dominion agents.

In none of the specialties has greater activity and advance been more apparent than in Gynæcology. Many able men have devoted their lives to work in this line, and hence many have contributed to the advances made, and many have given us the results of their experience in text-books which are issued frequently by the various medical publishing houses either as new works or revised editions of those already in the field. Dr. Garrigues' work is one of four or five published during the present year, and for the general practitioner and medical student is undoubtedly the most useful that has appeared for some time. It is an eminently practical work, and arranged with a view of replacing the advantages to be gained by a post graduate course for those that cannot avail themselves of the knowledge to be

picked up at the clinics and demonstrations of these courses; and even for those who have followed instructions of this kind but are away from hospital centres, and for the medical student who has all the details of operation to become familiar with, this work, which is characterized by the great number of illustrations it gives, showing the details in technique required in the various operations, will prove an invaluable reminder of what was witnessed at the clinic, or what may not have been clearly understood at the regular lectures of the College curriculum.

The special anatomy and physiology of the female genital organs are given in very full detail.

In the part on examinations the various positions, methods and instruments used are shown by wood cuts interspersed through the descriptive text. The names of the various instruments are given, a useful point to those not specialists.

All the apparatus used in treatment are shown the same way, and the method of using them made plain.

The bulk of the work is taken up with special diseases of the various organs, and these are so fully described and the details of treatment so minutely described and illustrated, that it becomes an easy matter for one somewhat accustomed to surgical methods to be able to undertake any of the operations in gynæcology with the guidance here given. The comprehensive and reliable detail in regard to both medical and surgical treatment are striking features of the work.

Dr. Garrigues' long experience in hospital work and as a teacher, and his eminent powers of observation and sound judgment, have all aided in enabling the production of a thoroughly modern and practical guide for those who desire to prepare themselves for the intricate work required in the treatment of diseases peculiar to women. The language is concise and pointed; there are very few repetitions. This is overcome by frequent references to parts of the book where the subject has already been considered. In the present edition much new material has been added, and effete and antiquated matter eliminated, and in the appendix some of the chief methods employed in intestinal surgery have been given. As a text book for the student or ready reference work for the general practitioner, and even as a reminder to the specialist, this last edition of Dr. Garrigues' work will fulfil beyond criticism all the requirements demanded by such.

Index Catalogue of the Library of the Surgeon-General's Office, U. S. Army. Second series, Vol. II, B to Bywater. Government Printing Office, Washington.

This work is well printed and comes in neat green cloth binding. It includes 15,732 authors' titles, representing 6,383 volumes and 14,802 pamphlets. It also contains 5,774 subject titles of separate books and pamphlets, and 21,725 titles of articles in periodicals.

Archives of the Roentgen Ray, formerly Archives of Skiagraphy. Edited by M. S. Hedley, M.D., M.R.C.S., in charge of the Electro-Therapeutic Department, London Hos-

pital, and Sydney Rowland, M.A., M.R.C.S. Editorial Committee—Mackenzie Davidson, Esq., London ; John Macintyre ; Thomas Mare, Esq., F.R.C.S., London ; M. J. Morton, M.D., New York ; Campbell Swinton, Esq., London ; J. Lynn Thomas, Esq., F.R.C.S., Cardiff; E. Norris Wolfenden, M.D., London ; Sylvanus Thompson, D.Sc., F.R S., London ; W. White, M.D., Philadelphia. The Redman Pub. Co., Limited, 11 Adam St., Strand, London, Eng. American agent, W. B. Saunders, Philadelphia, 1897. Price $1 per part.

The Archives of Clinical Skiagraphy, of which four numbers appeared during the year ending April, 1897, was edited by Sydney Rowland, B.A. Camb. These numbers contained a number of excellent skiagrams with descriptive text. A history of the subject was also given, the apparatus described, and an account given of the progress made since the discovery of Prof. Roentgen was made public. Under the new form the title is changed and the size increased, and it will appear regularly as a quarterly record of all that relates to the Roentgen ray. The literature of the progress made will be a more prominent feature, and the pictorial record will be full and of the highest standard.

The proceedings of the recently formed Roentgen Society will be regularly published in the Archives, and will doubtless represent all the progress made in this new field. The object of this Society is to discuss the Roentgen rays in their relation to Medicine, the Arts and Sciences ; to discuss and exhibit apparatus and methods in connection with the rays ; to hold periodical meetings for the reading of papers and discussions thereon, with exhibitions of clinical cases, skiagrams and all matters bearing on the Roentgen rays ; to provide a museum, library and Roentgen ray appliances, and publish the transactions in a convenient form. Those subscribing for the Archives will be kept abreast of all that relates to this interesting subject, and will have an elegant collection of illustrations of the greatest clinical interest.

A Text-Book of Practical Therapeutics. By H. A. Hare, M.D. 6th edition, enlarged, thoroughly revised, and largely rewritten. Lea Brothers & Co., Philadelphia and New York, pp. 758 (677 actual text). $3.75 cloth.

This work is a splendid example of synoptical writing, and illustrates how much can be done in the way of condensation without sacrificing intelligence to brevity. Within the narrow limit of 677 pages, we find Part I devoted to General Therapeutic Considerations. Part II to Drugs, Organic and Inorganic. The absence of a string of preparations is welcome and the insertion of formulæ in the text useful. Part III to Remedial Measures other than Drugs, and Foods for the Sick. The former embraces such procedure as acupuncture, kataphoresis, antisepsis, rest cure, climatology, use of cold and heat, etc., etc. ; the latter, the different peptonised foods, diabetic foods, beef teas, etc., and their preparation. The evident suspicion of the author that this little lesson in cookery would not be unwelcome is well founded ; too few, far too few, medical men are able to give the nurse instructions for

the preparation of the invalid's food. It is doubtful if more than ten per cent. could give proper directions for preparing a meat extract or essence. Part IV is devoted to the Medicinal Treatment of Diseases, and occupies 247 pages. It is possible that some of the ills flesh is heir to may have escaped the grasp of the author, but it is doubtful. When we find that in this brief space everything from tetanus to neuralgia, muscæ volantes to worms, corns to gonorrhœa, mosquito-bites and freckles to surgical shock and syphilis, are considered, the marvel is, not that they are brief but that they are readable. In treating of diphtheria, however, I regret that so much stress is laid on the importance of swabbing and spraying with peroxide of hydrogen, and the absence of any note on the use of the sozoiodol compounds, notably the sodium salt, as recommended by Schwartz, of Constantinople. The axiom that whatever over-excites the heart is contra-indicated in diphtheria, is as true as the dictum that whatever disorders the digestion is contra-indicated in tuberculosis pulmonalis. Both the solution of oxygen and Lœfler's Toluol-creolin or Toluol-iron solutions are inferior to the insufflation, in that the application takes an appreciable time, and is almost invariably accompanied by struggling on the part of the little patient. In the treatment of puerperal septic infection exception might be taken, I think, to the advice that "occasionally it may be necessary to repeat the irrigation *and curetting* for several successive days." Curetting should be done once only, and then properly. There is no mention of Marmorek's antistreptoccocic serum. This in spite of the author's statement (Diphtheria, pp. 507): "This is a brief but sufficiently long explanation of the rationale of antitoxin treatment, which opens itself like a beautiful fan over many other diseases than the one we are discussing." In the treatment of actual abortion, the (Pajot's) balls of cotton are inferior in asepsis to an antiseptic gauze bandage carefully packed. The latter offers far less trouble in extraction. In the treatment of burns we would rather have seen some less disagreeable antiseptic than Iodoform used, say Airol or Europhene—both excellent cicatrisants. The article on springs and climate is very incomplete. A very full index of dosage, drugs and diseases closes an extraordinarily complete little manual. That it is well written, the author's name is sufficient guarantee. As a ready reference handbook the alphabetical arrangement is indispensable. It should find a place on every physician's desk. It were a pity, however, were the book, by its charm of diction and conciseness of manner, to prevent our younger graduates from going further afield, and reading works which deal more exhaustively with physiological action and more in detail with therapeutic applications. The press-work is excellent and up to Lea Brothers' standard.

Pathologic Technic. There is a book newly to hand, written by Frank Burr Mallory, Assistant Professor of Pathology in Harvard Medical School, and James Homer Wright, Director of the Laboratory of the Massachusetts General Hospital, also Instructor in Pathology in the same school. The book is called

Pathologic Technic and is published by W. B. Saunders, 925 Walnut St., Philadelphia.

A book upon Pathologic Technic to be worthy of a place in the laboratory must be a book of remembrance more than a teaching book. It must contain not only all that one should know, but everything which one has forgotten or is liable to forget. It is there for an emergency to be of use when it is wanted, like a lens or a blow-pipe. There is no dearth of laboratory guides, but for the most part they do not take sufficient account of the fallibility of the human memory, and they waste their effort in trying to teach a handicraft which every man can and must teach to himself by observation and experiment. The book in question does not try to do too much; it does well what it undertakes. It contains a very complete collection of formulæ for preparing culture media, fixing reagents and staining solutions. The accounts of the various histologic and bacteriologic processes are very clear, and convey an accurate notion of how such work is to be done, even in the absence of previous experience. The book promises to have an extended usefulness to beginners as a guide, to advanced workers as a reference book, and to any one who wishes casually or in an emergency to carry on a pathologic enquiry. It will take the place of many of the less complete works now in use.

Essentials of Bacteriology. Being a concise and systematic introduction to the study of Micro-Organisms for the use of students and practitioners. By M. V. Ball, M. D., Bacteriologist to St. Agnes' Hospital, Philadelphia. Third edition, revised, with eighty-one illustrations, some in colors, and five plates. W. B. Saunders, 925 Walnut st., Philadelphia, 1897. Price, $1. J. Carveth & Co., 413 Parliament st., Toronto, Ont., Canadian agents.

This small volume of some two hundred pages is a concise treatise on Practical Bacteriology, intended chiefly for the medical student for use in the laboratory. It is similar in character to the practical works of Crookschank and Fraenkel, which depict the work as carried on in Koch's laboratory in Berlin. In this edition the subject has been brought up to date. The latest work on the diphtheria bacillus is embodied, and an article on bacteriologic examination of the organs and cavities of the human body is added to the appendix. Some general consideration in regard to bacteria are given and their classification; then their origin and distribution. Then follows methods of examination, stains and staining, methods of culture, the various media, immunity, experiments on animals, etc. In part second, special bacteriology is considered. The non-pathogenic bacteria are first described, then the pathogenic. This portion is profusely illustrated, as is the whole work. At the end of the book are some forty pages of tables devoted to tabulating the chief characteristics of the principal bacteria. Each species has noted its genus, biology, product, culture, characters, actions, habitat, and its discoverer. This addition to "Saunders' Question Compends" may be regarded as a trustworthy guide for the student in one of the most interesting departments of laboratory work.

Lectures on Malarial Fevers. By William Sydney Thayer, M. D., Associate Professor of Medicine in the Johns Hopkins University. D. Appleton & Co., New York, 1897.

We have in this monograph of over three hundred pages an exhaustive account of all that is of interest in connection with malarial fever. This is one of the diseases which has had its pathology elucidated by means of microscopic research. As might be expected in a work of this kind, a minute history is given of the various attempts to find the cause up to the first most plausible theory of Klebs and Tomassi Crudeli, who believed that they had discovered the bacillus of the disease in 1879. Laveran, however, in the following year, proved that the specific cause was not a bacterium, but an animal parasite belonging to the protozoa. The numerous observations and experiments which have followed up to the present time, confirming the discovery, and still further adding to our knowledge of the characteristics and varieties of this parasite, are fully referred to. The method of examining the blood and a description of the hæmocytozoa of malaria is then given. The conditions under which malaria prevails and a clinical description of the varieties of this fever then follows, with the sequelæ and complications, morbid anatomy and general pathology, and finally the diagnosis, prognosis, treatment and prophylaxis. It is interesting to observe how well all the peculiarities of malarial fever have been explained by the characters of the parasite, although a number of problems are yet unsolved. And on many disputed points the various theories held are given, such as those in regard to the cause of the intermittent fever, the most acceptable view being that the parasites which attack and develop in the red corpuscle produce a toxic substance in the circulation which gives rise to the febrile paroxysms, and that these substances are produced at a certain stage in the life history of a group of parasites, that of sporulation. The anæmia is easily explained from the destructive actions of the parasite on the red corpuscles. The jaundice due to the destruction of red cells then are taken up by the liver; an excessive amount of bile is produced, more than can be carried off, and some is absorbed. The importance of the examination of the blood in diagnosing malaria from other affections with irregular fever is dwelt on, and the specific action of quinine is studied and the best time to administer it pointed out. The work is replete with interest, written in an attractive style, illustrated by several colored plates, and a complete resumé of what is known on this subject at the present time.

The Principles of Bacteriology. By Dr. A. C. Abbott.

A fourth edition is at hand, issued in May, 1897, to succeed the third edition issued in November, 1895—an interval of eighteen months. The last edition is enlarged by fifty pages, which number 543. The book is now approaching the dangerous point when by attempting to do too much it may overleap its object. A writer of a manual must judiciously select and be content to omit much.

There is a marked improvement in the description of the var-

ious processes. In the previous editions the details of many of the processes were too meagre to be of value to the unlearned. So elementary a procedure as Gram's method of decolorization was quite unintelligible in the previous editions. The sections upon the bacillus of the bubonic plague, the bacillus of influenza, and the gonococcus are particularly good, especially the first. The staining of flagella still remains the tedious business it always was. The use of "night blùe" finds more favour in many hands. The chapter upon the bacteriologic examination of water is admirable, and well defines the difficulties and limitations of this source of information. It conveys the useful lesson that bacteriology is not a thing that can be done in a corner, and that it is not the easy thing inexact writers and ready talkers who are inexpert would appear to believe.

Dr, Abbott's book has always conveyed the impression that it was the actual result of the experience of a worker highly trained in respect of his mind and his hands—a scientist with skill and ingenuity in his calling. He has also a consoling way in speaking of the difficulties and exasperations which every worker has continually to encounter.

The authors and publishers, Lea Brothers & Company, have entirely rid the book of meaningless photogravures, and have used instead drawings which are often dainty.

The Medical News Visiting List for 1898. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal Grain Leather, $1.25. Thumb-letter Index, 25c extra. Philadelphia and New York: Lea Brothers & Co.

This is a compact visiting list, well printed on good paper. The first 32 pages are replete with medical facts under the headings, doses, poisons and antidotes, and therapeutic reminders. These are invaluable to the fatigued practitioner in a moment of doubt. Other items are, analysis of urine, ligation of arteries, tables, etc.

The system of book-keeping entailed in the visiting list proper is very simple, compact and complete. Convenient record charts for Vaccination, Confinements, Fevers, etc., are found towards the back.

As a whole it is the most complete compact visiting list possible.

Spinal Caries. (Spondylitis or Potts' Disease of the Spinal Column.) By Noble Smith, F.R.C.S. Ed., L.R.C.P. London.

The second edition of this valuable book is published by Smith, Elder & Co., London, and differs from the first edition in the correction of some errors, the description of a new form of

head-piece for cervical disease, in the addition of remarks on forced reduction of the deformity of caries under chloroform, and in being supplied with an index.

The author still holds to the opinion that spinal caries is gen erally a curable disease, *i.e.*, depending upon the accurate support of the spine.

Mr. Smith, in dealing with the treatment of spinal caries, has endeavored to be as practical as possible, and has added special hints of much service to those practitioners who have not the co-operation of the instrument maker. Good illustrations supplement the text, and the work is equally useful to the student and practitioner.

Vade Mecum de Posologie et de Therapeutique Infantiles. (Infantile Therapeutics and Posology.) By Dr. H. Dauchez, Paris. Price 1 fr. Société d'Editions Scientifiques, 4 rue Antoine Dubois, Paris.

This is a short tabulated treatise on infantile posology with remarks upon applied therapeutics in the treatment of infantile diseases.

This small book though very short is concise and up to date dealing with the peculiar actions of some remedies upon children as compared with adults and giving a great deal of valuable information in connection with infantile therapeutics and posology to the busy general practitioner. Symptomatic indications are also dealt with in a clear manner.

Pamphlets Received.

Operative Indications in Appendicitis. By the same author. Reprinted from the *Nashville Journal of Medicine and Surgery.*

Medio-Bilateral Lithotomy. By the same author. Reprinted from the *Nashville Journal of Medicine and Surgery.*

The President's Address. British Medical Association Sixty-fifth Annual Meeting. By Thos. G. Roddick, M.D., Professor of Surgery, McGill University, Montreal. From the *Montreal Medical Journal.*

The Experience of Several Physicians with Sero-Therapy in Tuberculosis. By Paul Paquin, M.D., St. Louis, Mo. Read in the Section on Practice of Medicine at the Forty-seventh Annual Meeting of the American Medical Association held at Atlanta, Ga. Reprinted from the *Journal of American Medical Association.*

Cheyne-Stokes Respiration Phenomena. By N. S. Davis, jun., M.D., Chicago, Ill. Presented in the Section on Practice of Medicine at the Forty-eighth Annual Meeting of the American Medical Association at Philadelphia. Reprinted from the *Journal of the American Medical Association.*

The Cardio-Vascular and Renal Relations and Manifestations of Gout. By the same author. Presented to the Section on Practice o Medicine at the Forty-eighth Annual Meeting of the American Medica Association held at Philadelphia, Pa. Reprinted from the *Journal o f the American Medical Association.*

Sterilized Gauze in Pelvic Surgery. By Thomas H. Hawkins, A.M., M.D., Denver, Colo. Reprinted from the *Medical Mirror*, St. Louis

Epiphora, or Watery Eye; Lachrymal Abscess; Necrosis of the Bony Walls of the Lachrymal Canal; Implantation of a Glass Ball for the Support of an Artificial Eye; Grattage for the Radical Cure of Granular Lids. By L. Webster Fox, M.D., Professor of Ophthalmology in the Medico-Chirurgical College of Philadelphia. Reprinted from *International Clinics*, Vol. II., Seventh Series.

Recurrent Gallstones, Angioma of Spleen, Excision of Cæcum. By John Homans, M.D., Boston, Mass.

The Hemiplegic State, and its Treatment. By Archibald Church, M.D., Professor of Neurology, Chicago Policlinic, Professor of Mental Diseases Northwestern University Medical School, Neurologist to St. Luke's Hospital. Reprinted from *The Chicago Medical Recorder.*

The Standard of Medical Education. By J. M. Bodine, M.D., professor of Anatomy and Dean of the Faculty in the Medical Department of the University of Louisville. The Address of the retiring President, delivered at the regular Annual Meeting of the Association of American Medical Colleges, Philadelphia. Reprinted from the *American Practitioner and News.*

The Cure of Tuberculosis by Oxytuberculine, with Experiments on Patients, Animals, and Cultures. By J. O. Hirschfelder, M.D., Professor of Clinical Medicine, Cooper Medical College, San Francisco, Cal. Read before the Medical Society of the State of California.

The Relation of Oxaluria and Uric Acid Excess to Genito-Urinal Inflammations and Disorders. By Bransford Lewis, M.D., of St. Louis, Professor of Genito-Urinary Surgery and Venereal Diseases, College of Physicians and Surgeons; Genito-Urinary Surgeon to Baptist Hospital; Consultant in Genito-Urinary Surgery to the Missouri Pacific Hospital, the City Hospital, the Female Hospital, and to St. Mary's Infirmary, St. Louis. Read before the American Association of Genito-Urinary Surgeons at Washington.

Atrophic Rhinitis. Candidate's Thesis for the American Laryngological Association. By John Edwin Rhodes, M.A., M.D., Professor of Physical Diagnosis and Clinical Medicine Northwestern University Woman's Medical School. Reprinted from the *Journal of the American Medical Association.*

The Antiseptic Treatment and the Limitation of Climatic Treatment of Pulmonary Tuberculosis. President's Address delivered at the Meeting of the American Climatological Association, Washington, D.C., May 4, 1897. By E. Fletcher Ingalls, M.D., Chicago. Reprinted from the *Journal of the American Medical Association.*

A Distinguished Physician-Pharmacist—His Great Discovery, Ether-Anæsthesia. By Joseph Jacobs. Read at the Forty-fifth Annual Meeting of the American Pharmaceutical Association, held at Lake Minnetonka, Minn., August, 1897.

Susceptibility of Infants to Tuberculosis. An illustrative case. By Louis Burckhardt, M.D., Indianapolis. Read before the Marion County Medical Society, October 6, 1897. Reprinted from the *Indiana Medical Journal.*

Differential Indications in Regard to Choice of Operative Methods in Obstetrics. By the same author. Read before the Marion County Medical Society, April 20th, and at the Terre Haute Meeting of the Indiana State Medical Society, May 21, 1897. Reprinted from the *Indiana Medical Journal.*

Congenital Cystic Degeneration of both Kidneys. By the same author. Reprinted from the *Indiana Medical Journal.*

When to call a Surgeon in Appendicitis. By George W. Gay, A.M., M.D., Surgeon to the Boston City Hospital. Reprinted from the *Boston Medical and Surgical Journal.*

PUBLISHERS DEPARTMENT.

APPLETONS' POPULAR SCIENCE MONTHLY.

Edited by W. J. Youmans, published by D. Appleton & Company, 72 Fifth Avenue, New York. Contents for December:—I. The Racial Geography of Europe. XI. The British Isles, by Prof. William Z. Ripley, (Illustrated). II. Are there Planets Among the Stars? by Garrett P. Serviss. III. Animated Pictures, by J. Miller Barr (Illustrated). IV. Processes of Change in Pronunciation, by Prof. Michel Bréal. V. Principles of Taxation. XIII., by Hon. David A. Wells. VI. Pacific Coast Gulls, by Harry L. Graham (Illustrated). VII. Our Liquor Laws as seen by the Committee of Fifty, by Frederick A. Fernald. VIII. An Early American Evolutionist, by Dr. C. M. Blackford, jun. (Illustrated). IX. Excursions of the Recent International Geological Congress, by Prof. Daniel S. Martin. X. The Fear of Death, by Guglielmo Ferrero. The Symbolism of Salt, by Marie Goldsmith West. XII. The Teaching of Applied Science, by Charles Lauth. XIII. The Life History of Scientific Ideas, by Gustave Le Bon. XIV. Sketch of Joseph Prestwich (with portrait). XV. Editor's Table: The Scientific Advance, The Uses of Education, Parental Neglect as a Cause of Hoodlumism. XVI. Scientific Literature. XVII. Fragments of Science. 50c a Number, $5 a year.

CHRISTMAS LADIES' HOME JOURNAL.

The Christmas *Ladies' Home Journal* opens with a page of pictures of beautiful children selected from thousands of portraits. The children's holiday greeting is a pleasing introduction to the excellent articles pertaining to the great festal season. One of these interestingly describes Christmas in the Palace at Potsdam, telling how the German Emperor and Empress and the Royal children celebrate the day. There are also two admirable short stories, "Christmas at 'The Hollyhocks,'" and "Christmas at the 'Trimbles.'"

A feature that will arouse widespread interest is the first letters of a series giving "The Inner Experiences of a Cabinet Member's Wife." They present an inside view of Washington's political and social life as has never before been done in any magazine. The letters will occasion much surprise. A reading of the first instalment makes obvious the reason for withholding the writer's name.

Every reader of fiction will be delighted to find the opening chapter of Hamlin Garland's new serial, "The Doctor." Mary E. Wilkins carries her readers into her favorite realm, New England, in one of her sketches, "The Christmas Sing in Our Village," and Lilian Bell, in her second letter from London, sums up her studies of English men and women at short range in keen and brilliant epigram.

Edward W. Bok points out how to make pleasanter the Christmas of the youth and the aged, and decries the use of slang by girls, and the habit of talking about one's ills. The only correct and authorized version of "The Lost Chord" ever published in this country appears, with an autograph note by its famous composer, Sir Arthur Sullivan.

Practical articles on Christmas tell of suitable things to make for gifts, and detail games, amusements, etc. Mrs. Rorer, in addition to her cooking lesson, has an instructive article on candy-making, and another on how to set the Christmas dinner-table, and cook and serve the dinner.

The excellence of the illustrations is striking, and in every feature the Christmas *Journal* is attractive and useful. By The Curtis Publishing Company, Philadelphia. One dollar per year; ten cents per copy.

What would you do if war should be declared to-morrow with a European power? How would it change your home life, the lives of your brother and other relatives? How would it affect your business connections and business? What changes would it make in financial, city, state and national affairs? It is these interesting problems which a writer in the December *Cosmopolitan* has undertaken to sketch under the heading of "A Brief History of Our Late War With Spain," at the same time vividly describing the exciting scenes which would attend the opening of hostilities. This same number of the *Cosmopolitan* has an article on "The Well-dressed Woman" by Elsie de Wolfe, a contrast of the characters of Henry George and Charles A. Dana by John Brisben Walker, in another place "The Loves of Goethe," while Wells' story, "The War of the Worlds," which has been so widely read, reaches its conclusion in an unexpected way.

VALUABLE REMEDIES WORTHY OF ATTENTION.

Especially at this season are the tablets of "antikamnia and codeine," each containing 4¾ grains antikamnia and ¼ grain sulphate codeine, worthy of attention in the treatment of pulmonary diseases. This combination is a sedative to the respiratory centres in both acute and chronic disorders of the lungs. Cough, and in fact nearly all neuroses of the larynx are in the vast majority of cases, promptly and lastingly relieved, and often entirely suppressed. In the treatment of *La Grippe* and its sequelae, its value is highly esteemed. In diseases of the respiratory organs, pain and cough are the symptoms which especially call for something to relieve; this combination does this, and in addition controls the violent movements accompanying the cough. To administer these tablets in the above conditions, place one tablet in the mouth, allowing it to dissolve slowly, swallowing the saliva. Exhibited in the grinding pains which precede and follow labor; in the uterine contractions which often lead to abortion; as well as in the nocturnal pains of syphilis, the results obtained are most satisfactory. In the various neuralgias, and in all neuroses due to irregularities of menstruation this combination affords immediate relief, and the relief is not merely temporary and palliative but in very many cases curative. In these last conditions, always instruct that tablets be crushed before taking.

To present the best thought in the whole range of living literature is the mission of *The Living Age*—and how well it has fulfilled this mission for over half a century its record fully testifies. Edited with a sound judgment and a keen literary instinct, it seldom fails to gather within its pages the most valuable expression and record of the world's progress and growth along every avenue of thought and activity, and continually grows in value with the ever steadily increasing stream of periodical literature.

The titles of a few of the papers contained in its latest issues illustrate the freshness, catholicity, spirit and value of this publication: "England and the European Concert," by James W. Gambier, R. N.; "Woman's Place in the World of Letters," by Alice Stopford Green; "The King of Siam," by B. A. Smith; "Newman and Renan," by Wm. Barry, D.D.; "The Dead-Lock in Austria-Hungary," by Austriacus: "Paris in June, 1871," by A. J. Butler; "Royalties," by F. Max Muller; "The Growth of Caste in the U.S.," by Joseph Edgar Chamberlin; "Recent Science," by Prince P. Kropotkin; "Pascal," by Leslie Stephen; "The Sphinx of Modern London," by F. W. Newland; "The Lesser Elizabethan Lyrists," by Stephen Gwynn; "The Sayings of Jesus"; "Jean Ingelow"; "Mrs. Oliphant"; "A Great Country's Little Wars," with choice selections of fiction and poetry, including Kipling's magnificent "Recessional."

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