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Original Contributions.

A CASE OF MYASTHENIA GRAVIS.

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R. J., aged 57, contractor, was sent to me on June 27th, 1905, by Dr. Mulligan, of Petrolca, to whom he had complained of double vision and weakness of muscles at the back of the neck, left arm and lower jaw. Three weeks before, his left upper eyelid began to droop and the left eye to roll up. Double vision and dizzy attacks followed, and pain in the back of the neck and head. The double vision was worse in the afternoon and evening. Power is lost in the muscles of the neck, so that he can scarcely hold his head up. He says that his arms seem weak when behind him, for he cannot button on his collar at the back, but when his arms are in front of him he has full power. Occasionaly he seems to lose power over his lower jaw, so that he cannot chew his food. It tires him out, so that he has to use his hand to move the lower jaw up and down. If he rests a while he can chew again, but soon he must again have the help of his hand. He has had some difficulty in speaking also. When he pushes his jaw forward he feels that he loses power over it and cannot raise it.

To prevent dizziness he keeps the left eye shut; he cannot close the left as tight as the right, nor can he open it as easily against resistance. When he laughs his face draws a little to the left. When the left eye is opened the ball is seen to be higher than the right, and turned in. A prism of 15 degrees base down corrects both the turning up and the convergence. Papillary reactions normal, fundus normal. R. V. 6-9, L. V. 6-9. Examination showed tongue, palate, uvula and larynx to be normal.

His peculiarly motionless, listless, almost mask-like face and his white hair give him an appearance of age beyond his years, not borne out by the condition of his arteries. A year ago he had an epithelioma removed from his lip.

He was engaged in building a fence when he noticed the eye beginning to be affected. This, and the fact that the joints of his hands were stiff, as well as the absence of anything pointing to a central lesion, had caused the diplopia to be considered as due to rheumatic paralysis of the ocular muscles, and treated as such.

An ophthalmoplegia externa, as manifested in the ptosis and diplopia, did not in any way explain the other outstanding symptoms—the peculiar weakness of the muscles of the neck, jaws and arms, then recovery of power after a rest, and their speedy weakening when again set in action—and a tentative diagnosis of myasthenia gravis was made.

He was told to wear a ground glass over the left eye to relieve the dizziness produced by the diplopia.

On July 12th Dr. Mulligan wrote that on the least exertion there was a trembling of the muscles, some thickness of speech at times, and great complaint of his jaw becoming tired when eating, but the wearing of the ground glass had relieved his diplopia.

(As he made no progress toward recovery, he consulted a Chicago neurologist, who diagnosed bulbar paralysis, and told him that he would not recover.)

Toward the end of August he was seen by Dr. Hugh A. McCallum, of London, who writes me: "The muscles of mastication tired out in chewing a piece of meat, so much so that he was unable to move his jaws for a time. They would recover and be as powerful again for a few bites as in the days of his health. his hand-grasp at first was normal, but after grasping for four or five times he lost power in the hand and arm entirely." "Some weeks before I saw him, on attempting to pitch some hay he was suddenly seized with paralysis of the muscles of respiration, and for some few moments it seemed as if his condition would terminate fatally." "Indeed, the muscles of the eye, face, mastication and larynx and many of the voluntary muscles of the limbs were involved. There were marked remissions of the symptoms."

I next saw him on January 11th, 1906, when he had improved greatly, the only symptom persisting being occasional weakness in holding his head up. He told me that after leaving my office on the occasion of his first visit, his knees gave way, and he sank down, so that the myasthenia seems to have attacked the muscles of the extremity. For some time thereafter, he says, he had difficulty in breathing, in swallowing and in talking. After resting he had less trouble in these things, but speedily tired out. He says that after taking one bite he felt played out, and would have

to support his jaw. The weakness of the arms was manifested especially in actions which required them to be raised; *e.g.*, he could not put the bridle on his horse. He had great difficulty in winding the clock, which stood high up on the wall. His ability or inability to do this he used as a test of what progress he was making towards recovery.

On August 28th, 1906, his wife reports that he has no double vision, no weakness of any kind, and is now overlooking some building contracts.

The age of this patient made me doubt whether this might not be a case of bulbar paralysis, but the condition of the tongue, palate and uvula, and the involvement of the arms, negatived that. The non-appearance of atrophy, and, above all, the subsequent history, puts that out of court. The absence of sensory symptoms led me to exclude neuritis.

Although this patient is after a year and a half apparently perfectly recovered, yet it is well not to be too sanguine, for the symptoms have been known to recur after even longer intervals.

The upward rotation of the eye is of interest, especially in view of the statement made by Gowers that a striking difference from the ophthalmoplegia of muscular degeneration is the greater escape in myasthenia of the muscles moving the eye-balls downwards.

Myasthenia cannot be due to any local disease of the nerves. Any organic affection of the governing nerve centres is equally improbable. Moreover, neither gross nor microscopic examination has shown any condition of the nervous or muscular system capable of producing the phenomena of the disease.

The very same phenomena are seen in muscles after undue and prolonged use. We then speak of it as fatigue, and regard it as a normal condition. In myasthenia gravis, however, the phenomena appear after muscular movements not unduly prolonged nor severe.

What is fatigue? What changes take place in the structure of the muscles, or in their intracellular chemistry in fatigue?

Contraction is said to follow on a stimulus carried to the muscle by the nerve, but Langley¹ has shown that even after nerves have been cut, or paralysed by nicotine, the muscle will still contract, so that the nervous impulse does not act directly on the contractile substance of the muscle, but on some accessory substance—called by him the receptive substance of the muscle—which receives the stimuli, and transfers them to the contractile substance.

In all cells two constituents, at least, are to be distinguished: a chief substance which is concerned with the chief function of the cell, as contraction and secretion, and receptive substances

which are acted upon by chemical bodies and in certain cases by nervous stimuli. The receptive substance affects or is capable of affecting the metabolism of the chief substance. The receptive substances are especially liable to change.

Some peripheral tissues are in a constant state of slight activity brought about by nervous stimuli; this causes the tone of striated muscle. Thus there are two factors in producing tone, viz., the intensity of the nervous stimuli, and the responsiveness of the receptive substance.

The receptive substance of cells varies considerably, due to the inherent tendency to variation in the chemical nature of the cells, and may vary in their responsiveness to nervous stimuli. No doubt, also, when a nerve is effective, the frequency with which it is put in action would tend to increase the receptive substance by use. The different degree of tone of the tissues is probably in part due to the responsiveness of the receptive substance.

A cell may make motor or receptive substances, or both, and the effect of a nervous impulse depends upon the proportion of the two kinds of receptive substances which is affected by the impulse.

An increase or decrease of function in a cell brought about by chemical or nerve stimulation depends upon the presence in the cell of different receptive substances. These receptive substances seem to be formed at the myo-neural junction, yet they are not dependent on nerve fibre, for the receptive substance does not degenerate on degeneration of the nerve fibres. It would appear that there must be some chemical change in the muscles causing the early exhaustion of the function of the receptive substance.

It is obvious that in myasthenia the intensity of the nervous impulse is not less, so that it must be that the responsiveness of the receptive substance is at fault. Receptive substances are acted upon by internal secretions.

The quick exhaustion and the quick recovery of the different muscle groups is characteristic of myasthenia. The same thing, but less marked, is seen in multiple sclerosis, polio-encephalitis inferior, polio-myelo-encephalitis, infantile and family bulbar affections (paralyses). In Landry's paralysis there is no temporary recovery of power in the muscles.

The well-marked remissions are also characteristic. Goldflam and Rogowsky² assert that even during these remissions close search will reveal almost always a slight ptosis, palatal, facial or other paresis, showing that the disease is not quite exhausted.

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ETHICS AND DEPARTMENT OF THE PROFESSIONAL NURSE.*

BY DR. JOHN HUNTER.

THERE is in all animate life an innate feeling or instinct, to which the needs of the sick or disabled make a strong and usually a very effectual appeal. It is unfortunately true that vicious habits or sordid selfishness may so influence this feeling or instinct as to prevent it manifesting itself in any way, but this absence of sympathy is a morbid condition, and, therefore, an exception to a universal law that lays the duty of taking care of the sick upon those who are well. In the primitive stage of our civilization the people were so inured to hardships, the needs of the sick were so simple and so easily provided for, that about all that was required of the nurse or attendant were the kindly and willing hands. The development of a higher civilization, by the diffusion of knowledge, has so increased the comforts and purposes of life that not only have the luxuries of one age become the necessities of the next, but the exigencies of domestic, of social, and of business life make the sick not only impatient to seek relief from suffering, but extremely anxious for speedy restoration to health, in order that they may take their place in life's drama. The hurry, flurry and worry of modern life make the care of the sick a very complex problem. An insatiable thirst for knowledge, spurred on by the imperious demands of modern life, evolved the science and art of medicine, which in turn conceived and gave birth to the professional nurse, the legitimate child of scientific medicine.

Like the new members in many of the primitive tribes, who had to win their place in the ranks not only by deeds that called for great endurance and heroism, but also by swearing allegiance to the tribal laws and regulations, the professional nurse has to win her place through a long and arduous course, involving much study and trying experiences, which often call for as calm and dauntless heroism as many an exploit on the battlefield. As soon as the nurse receives her diploma she becomes a member of the order known as professional nurses, and, therefore, subject to the laws and regulations governing this order, or, in other words, to the code of ethics and department of the professional nurse.

ETHICS.

The ethics of the professional nurse may be defined as the principles governing her life as an individual, and also as the laws and regulations governing the complex relationship her work bears to her patient, to the physician, and to her calling. As each nation

* Address given to the Nurses of the Western Hospital.

has its own language by which to express its thoughts, emotions and needs, so each calling has its own code of ethics governing the actions of its members.

Let us briefly consider the relationships referred to above in the order of their importance. The first is that of the nurse to her patient. This relationship on the part of both nurse and patient, but especially on the part of the former, demands a consistent and persistent exhibition of all the characteristics of the so-called Christian graces. Truthfulness is imperative, untruthfulness is absolutely criminal. No matter what mistakes she may have made, or what directions she has failed to carry out, the nurse is bound by the ethics of her calling to be frankly truthful in regard to all she has done or left undone. Mistakes, when promptly confessed, can be forgiven, but a deliberate lie calls for one act only, and that is prompt dismissal with all the disgrace that goes with it.

Gentleness implies the absence of all that is unfeeling or boorish. Its presence in the nurse is manifested in facial expression, in speech and in touch. It does not include weakness or vacillation. The nurse who fails to discharge her duties faithfully and efficiently, lest she finds herself antagonized by the whims of patients, or relatives, or lest she inflicts some pain rendered unavoidable by needed change of the dressing of a wound, or of the position of the body, may be the most cruel of attendants. Gentleness on the part of a nurse involves the faithful discharge of her duties with good-natured inflexibility, the more so when the cry of voices is against her. She must learn to—

“Welcome the rebuffs
That turn earth's smoothness rough.”

Purity must be absolute in thought, word and act. Words and actions which, in the drawing-room might pass uncriticized, or, perhaps, be considered only silly, become utterly improper in the sick-room. It is more than annoying to the physician or relatives of the sick one—when he is the father, or, more especially, when she is the mother—to have him, or her, as the case may be, complain of the conduct of the nurse when the son or some other male relative was in the room. The ethics of nursing sternly forbid any conduct on the part of the nurse that may give rise to parental suspicion or anxiety. The crime is increased a hundred-fold when the conduct of the nurse creates any suspicion of improper familiarity between her and the husband. If the nurse should, perchance, become the second wife, her conduct as the nurse should have been such as to render any such statement as *e.g.*, “Just what we expected when we saw what was going on between them when the first wife was on her death-bed,” impossible or utterly incredible.

Honesty on the part of the nurse is not confined to material

things only, but includes faithful and efficient service. The very fact that you class yourselves as professional nurses implies the possession of the requisite amount of scientific knowledge and training. You have the opportunity of acquiring both of these during your hospital course, but if from any cause you fail to obtain them your ignorance and inability will make it impossible for you to render an honest service. Again, you may have these qualifications, but on account of indolence, of carelessness or of distractions from other sources, you may not give honest service. These subtle temptations are far harder to resist than any of the grosser ones of common dishonesty.

The ethical relationship between nurse and physician claims all the virtues already specified, with the addition of unfaltering loyalty. While you are nursing his patient he, and he alone, is the physician for that patient. Whatever your private opinion may be as to the greater ability of some other physician, your duty is to be loyal to the one in attendance on the case. If you see plainly that something is being overlooked, or left undone, that the physician's attention should be called to, seek a private interview and give the information. It is your duty to help keep up the patient's confidence in the physician, and to dispel, if possible, any doubts as to his ability to treat the case properly. I need not detain you as to the manner of keeping your medical chart, care of the instruments, etc., etc.

The ethical relationship of the nurse to her calling demands the possession on the part of every professional nurse of a broad, mutual faith—not only faith in one another—but faith in all the others. Every calling is judged by the character of its members, by the confidence these place in each other, and by the enthusiasm they put into their work. The duty of maintaining the honor of her calling has just as imperative a claim on the professional nurse as the earning of a livelihood or making provision for the future.

DEPARTMENT.

Assuming that you have acquired the knowledge and skill essential to your calling, and that you possess the character and virtues already discussed, then comes up the problem of how to use all these to the best advantage. The innate instinct or desire to appear attractive should be carefully cultivated by the professional nurse. The conventional uniform and dress should be faultlessly clean and neatly made. The strictest attention should be paid to personal hygiene. The daily bath, wholesome food, sufficient sleep, together with abundance of fresh air and sunshine are essential. Every effort should be made to bring into the sick-room the bright eyes, ruddy cheeks, inoffensive breath, and the graceful, firm poise of body that comes with good health. The nurse should cultivate a musical voice, and she should endeavor to be able to express herself

in good language. Slang should be religiously avoided in the conversation of the sick-room.

Tidiness is very essential in nursing. It must be very disagreeable for the patient, and it is certainly very unpleasant for the physician, or visitor, to find the sick-room a medley of drug store, nursery, and laundry. A place for everything and everything in its place, may be an old precept, but it is a valuable one for the nurse to keep in mind. Again, the nurse cannot be too careful about the disposal of soiled clothing. The bath-room, which is used by the other members of the family, is not a proper place for such articles, especially those removed from the obstetric room. That the bath-room has been made use of is very mortifying to the mothers, when told of it, and it is certainly very unwelcome news to the physician.

Great care and tact must be exercised in the preparation of the patient's food. Sickness puts a very severe strain on the resources of the family, so if the nurse leaves the preparation of many special dishes for others, who feel that they are already overtaxed, or if she obtrude herself into their busy hours, disorder and discord are very likely to follow.

What has been said already in regard to deportment, refers more particularly to nursing during the more or less acute stages of illness, but it is during convalescence that the personality, and resourcefulness of the nurse are given the severest test. When the patient is very ill, the duties of the nurse are largely confined to caring for the physical needs, and therefore are of a somewhat routine character. During convalescence, the psychic or mental perturbations have to be dealt with, and these are very variable, both in intensity and in form. The day is past for setting these psychic disturbances down as mere whims of the patient, for psychology teaches us that there are certain laws governing our mental acts. High literary and musical attainments are of inestimable value to the nurse in dealing with many of the psychological conditions to be met with during convalescence. David assuaged the madness of Saul by playing on his harp. Painting, fancy work, nature study, and games, may enable the nurse to furnish her patient with many helpful and pleasant pastimes.

The time has certainly come, when every hospital staff should provide the nurse with a short practical course on the psychology of the sick room.

My hour is up, and I have only to say in conclusion, that the real value of a short address like this, does not consist so much in what has been said as it does on the thoughts it suggests to the minds of the intelligent listeners. If anything I have said to-night has set you to think for yourselves, the full purport of the address has been realized.

LEUKOPLAKIA LINGUÆ.*

BY JOHN V. SHOEMAKER, M.D., LL.D.,

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Gentlemen,—Here is a patient that presents a typical condition of the tongue that is rare, and which, when present, is often the forerunner of cancerous degeneration of the tongue, gums or mucous membrane of the buccal cavity. The patient is forty-three years of age; nativity, America.

Family History.—His parents both died of cancer. The mother had cancer of the breast, and the father cancer of the stomach. His maternal grandmother died of cancer of the breast, and his paternal grandfather died of cancer of the rectum. Not any of his uncles or aunts died of cancer. He has no brothers or sisters.

Previous Personal History.—As a child he had diphtheria, measles and whooping cough. Other than this he has always enjoyed good health.

Present Illness.—Two months ago his tongue, as he thought, became sore from the irritation of the pipe which he was smoking. Along the tip and edges of the tongue he felt a tingling sensation which seemed to be localized. Upon examination he found that on the tongue and along the edges were a number of whitish areas.

Habits.—He smokes excessively, either the pipe or cigars, and uses alcoholic beverages moderately.

Diagnosis.—This is a typical case of leukoplakia, the diagnosis of which is easy and is made entirely on the objective symptoms. Seldom do these patients experience pain or hypersensation, as in this case, which when present is often followed by anesthesia.

The word leukoplakia means a white plate or spot. The disease manifests itself on the tongue or on the mucous membrane of the mouth in the form of whitish spots or plaques; covered with thickened epithelial cells. There may be only one such spot present, but as a rule there are many, of irregular shape and with ill-defined outline, with a tendency to spread and coalesce. In fact, the entire mucous membrane of the buccal cavity may become involved. The disease may involve any portion of the mucous membrane, and cases have been reported where the plaques occurred on the vulva, the plaques being followed by epithelioma.

Pathology.—Pathologically it is a hyperkeratosis with a

*Lecture delivered in the Clinical Amphitheatre, Medico-Chirurgical Hospital.

downward growth of the rete-mucosum, and an epithelial increase of the interpapillary spaces, thus obliterating the papillæ. When such is the case we have produced a microscopic picture of tubular epithelioma with superficial degeneration due to the interference of the circulation, and malignancy may follow.

Etiology.—The true cause of this disease is not known. The most plausible predisposing cause is any irritation of the mucous membrane. Excessive smoking, as in this patient, syphilis, and rough teeth are said to be among the chief predisposing causes. In fact, I believe that syphilis has no relation with the disease at all.

Treatment.—We shall request this patient to stop smoking entirely, as should be done in all cases having the same disease. If the condition is of the superficial variety, as it appears to be in this patient, the disease may disappear spontaneously upon the removal of the irritation produced by the smoke. In some cases, especially when the deeper structures are involved, treatment is of no avail. However, in the early stages, cauterization with the actual cautery may entirely destroy the plaques and bring about a cure. Caustics, I believe, do more harm than good, and should never be employed.

We will first treat this patient constitutionally and give him a simple mouth wash to soothe the affected mucous membrane. Internally we will give him the following combination in the form of a capsule:

℞ Creosoti (beechwood)	℥i
Strychninæ sulphatis	gr. 1-60.
Podophyllitoxini	gr. 1-10.
Salicini	gr. ii
Pepsini	gr. ii.

Misce, fiat capsula no. i. Mitte no. xx.

Signa. One capsule four times daily.

For a mouth wash we must select such drugs as are soothing, antiseptic and have slight astringent properties. The following combination possesses such qualities and unquestionably will afford the patient great comfort:

℞ Acidi borici	ʒi
Creosoti (beechwood)	℥x
Aquæ rosæ,	
Aquæ hamamelidis	aa fl ʒ iii

Misce. Signa. Use as a mouth wash three or four times daily.

Selected Articles.

THE SURGICAL TREATMENT OF EMPYEMA.*

BY SAMUEL LLOYD, M.D., NEW YORK.

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THORACENTESIS and thoracotomy for the removal of pus from the pleural cavity have been practiced since the time of Hippocrates. It is now generally conceded that there is but one treatment for the cure of a purulent pleurisy, that is, the immediate evacuation of the pus by some surgical procedure. The diagnosis, symptoms, and etiology are considerations with which we have nothing to do at this time. The diagnosis must depend upon the internist, and to my mind it is a just criticism from the viewpoint of the surgeon, that these cases are not recognized earlier and that they are not submitted to a more systematic and radical treatment as soon as the diagnosis is made. I am perfectly well aware of the difficulties sometimes encountered in making a diagnosis of empyema. At the same time I cannot help emphasizing the fact that this is frequently due to neglect of some of the diagnostic aids now available.

As Musser says, "it is no credit to the profession at the present time to send to the surgeon a patient with the chest half filled with pus, or even with half a pint or a pint of such accumulation." In my opinion the statement made by Ziemssen and Ewald that old cases of pyothorax should not exist, is absolutely true and cannot be too strongly emphasized. The presence of pus in the pleural cavity should be recognized, and as soon as recognized should be evacuated. It is sometimes difficult to determine at just what period a pleuritic effusion becomes purulent, and still more difficult, perhaps, to determine the presence and the exact location of localized abscesses within the pleural cavity or between the lobes of the lung. Even more difficult is the determination of those cases where the pus is localized between the diaphragm and the lung.

Unresolved pneumonias are frequently met with and treated by medical men without their being able to give any very satisfactory explanation of the reason why this condition persists,

* Read before the, Pediatric Section of the New York Academy of Medicine, February 14, 1907.

instead of pursuing its usual course. Jackson, in the *Boston Medical and Surgical Journal*, some two or three years ago, in studying this subject, called attention to the fact that an unresolved pneumonia very seldom exists, and Musser says that he has never seen a case to which he could apply this term. Unresolved pneumonias, however, are met with occasionally. I have seen a number of cases where there was undoubtedly a pneumonia present at the time I operated for an empyema, although this is extremely rare. In examining the histories of 400 cases of empyema which have come under my personal observation during the last fifteen or twenty years, I find only five in which the statement is made in the history that a pneumonia was made out, but since these statistics were compiled I have had two cases where it was undoubtedly present, and where I was able to demonstrate the fact to those who were present in the operating room.

Whenever the medical man has a case of pneumonia which does not resolve in the usual way, and particularly if there are evidences of pleuritic involvement, he should suspect a localized empyema, and should take every possible means of determining whether or not pus is present and responsible for the continuance of the symptoms.

A most interesting case of this kind has come under my observation within the past three or four weeks. The child was referred to me with the history of an unresolved pneumonia, and I made out an empyema occupying the upper half of the chest. Operation was undertaken, and the fluid, instead of being of the usual empyemic character, was brown and very offensive. The lung followed down after the removal of the fluid, so that the lower portion, which was already fairly well expanded, fully occupied its position in the chest, and the apical portion also expanded as the limiting adhesions were released. The upper portion of the lower lobe, however—the empyema was on the left side—did not expand, the result being that the lung had the appearance of a dumb-bell. On passing my finger over this contracted area, I found that it was solid, and expressed the opinion that it was an area of unresolved pneumonia. In order to clear up the cavity, it was irrigated with normal saline solution, and suddenly a section of this contracted lung, at least three inches by an inch and a half, dropped out into the free cavity. I immediately seized this piece and examined it, and found that it was a gangrenous portion of the lung, probably the result of the pneumonia. The space left on the lung was interesting because it demonstrated that the same thing goes on in pulmonary tissue that we get in other tissues where we have a localized gangrene. A free oozing of blood could be seen over the whole of the open

surface. No hemorrhage of any moment occurred, and a few washings with hot saline were sufficient to control all the oozing from the raw surface.

I could not see that this affected the child's condition in the slightest. The first two or three days after operation there was a decided amelioration in the symptoms, and at one time I even hoped that in spite of the grave condition of the child at the time of operation she might recover, but she was evidently too septic, and died on the sixth or seventh day.

Another condition in my experience, for which these localized empyemata are mistaken, is tuberculosis. I have had fully fourteen or fifteen cases where the physician had made the diagnosis of tuberculosis, although there was little or no expectoration, and in the little that was obtained tubercle bacilli were not found. In these cases, too, it seems to me that it is important, unless one has all the data necessary to make the diagnosis of tuberculosis definite, that the question of empyema should be considered. As we have already said, the symptoms are sometimes misleading, but the examiner must not allow himself to be prejudiced against the presence of pus, because he does not get any fluid on a puncture of the chest wall with an aspirating needle. One of the difficulties that we have noticed in our work is that many clinicians depend upon needles of too small calibre to determine the presence or absence of pus in the pleural cavity. We must also remember that a short needle may not reach through the thickened pleura to the cavity in which the free fluid is contained. The pus in an empyema is sometimes thick, filled with fibrin flakes, and will clog any needle except one of considerable size. So, too, we frequently find that the pleura is covered with half or three-quarters of an inch of coagulated fibrin, while the pleura itself will be materially thickened. It will be readily seen that in these cases the needle must be longer than the one usually employed for a simple exploration of the chest.

Personally, I do not believe that a small-sized exploring syringe, or a hypodermic syringe, should ever be used. The syringe should be of considerable size; or, better still, an aspirator should be employed. It is always a question how much benefit may be derived from aspiration of the chest in empyema, and there is such an abundance of literature on this subject that it is almost impossible to digest it thoroughly and draw conclusions from the facts we find recorded.

But whether we believe in aspiration or not, we should insist upon the exploratory puncture in all cases where we suspect the presence of pus in the chest cavity. In adults, at times, we can get a better indication for the point of puncture from the patient himself than from the physical signs. While we may have dis-

tant breathing, flatness on percussion, and all of the indications of the presence of fluid, the patient will indicate a spot, perhaps a little above or to one side of the point that we outline by our auscultation, where he complains of the greatest pain on pressure. This is the point for puncture. In children we cannot get this indication, but the fact that we do not get pus with a single puncture should not lead us to discontinue the attempt to make the diagnosis. The purulent focus may be comparatively small, containing perhaps not more than two or three drams of pus. This is frequently true in empyemas following pneumonia. Or it may be due to an interlobar accumulation; an abscess of the lung may also be the cause of the symptom.

The X-ray should be employed in these cases, and the picture should be of both chests, in order that they may be compared. We have recently had two cases of interlobar pneumonia, and one of abscess of the lung, in which the diagnosis was made by means of the X-ray.

In serous pleuritis it is also important that exploratory puncture should be more frequently employed. We must remember that there is a distinct difference between macroscopic and microscopic pus. A fluid which to the naked eye may appear to be simply serous may, when stained and put under the microscope, show the presence of a large number of pyogenic microorganisms. These cases are just as much empyemas as those from which we withdraw the usual creamy pus. They should be operated upon as soon as the diagnosis can be made. I am perfectly well aware of the general dread that the profession has of introducing an exploratory needle into the chest. That death has occasionally resulted is undoubtedly a fact; that pneumothorax has been caused not infrequently is also true; and that pyopneumothorax may occasionally result I do not deny. But that an aspiration of a serous pleurisy, made for diagnostic purposes, under the proper precautions, causes empyema, or is likely to produce dangerous symptoms, is one of the superstitions of surgery handed down from the period before Lister taught the necessity of cleanliness in ordinary surgical procedures.

The question arises, when this exploratory puncture for diagnostic purposes is made, whether something more should not be done. If we believe, as I do, that all cases of empyema should be operated upon as soon as possible after the diagnosis is confirmed, the question resolves itself to the simple determination of the procedure. Should we, at the time of making the exploratory puncture, take out more of the fluid than is necessary for pathological examination, or should we remove as much of the fluid as we can at this time? To a certain extent this will be determined by the condition of the patient. If there is a great

deal of fluid, if the patient is suffering from dyspnea, and if the vital forces are affected by the pressure, the heart impeded, and the general conditions bad, the operator should proceed at once to evacuate as much of the fluid as he can with safety. This almost invariably results in an improvement in the patient's general condition, and enables us at times to put the patient in a much better state for a radical operation, which can be done within a day or two. There is no question that a certain number of cases of empyema can be cured by simple aspiration. Holt reported 121 cases in which he tried this method. Of this number 23 were cured, 6 died, and 92 were operated upon radically. From these results he argued against aspiration. To my mind the very fact that 20 per cent. of his cases were cured by this method illustrates the fact that it is an important procedure in certain types of the disease.

The great difficulty has usually been that medical men in the past have attempted to utilize this method to the exclusion of the other more radical procedures, but it is just as important in determining upon the proper surgical method in empyema as it is in any other surgical operation, and experience and surgical judgment must be the controlling factors in determining whether an aspiration should proceed at once to more radical measures.

In my series of cases we have had but 18 aspirations. Of these, two were cured and sixteen died. Many of these cases were practically moribund at the time of their coming to us for operation, and nothing more than a simple aspiration was possible; but the very fact that two of this small number got well without any further operative treatment, shows the importance of trying it when it is indicated.

It is evident from what I have already said, that I favor the early aspiration of the pleural cavity; and I believe thoroughly that we should adopt a certain mode of procedure. As soon as the physician is convinced, or has a suspicion of fluid in the pleural cavity, if it is showing signs of becoming purulent, or if he has an unresolved pneumonia, or a tuberculosis—and I want to emphasize the latter point, because I know I am in this regard at least taking a position absolutely opposed to the consensus of medical opinion—he should introduce a large-sized exploring needle, and withdraw a sufficient amount of fluid to submit to microscopical examination, and staining for the presence of micrococci. If these are present an aspirating syringe should be attached to the needle and all the fluid withdrawn. During this procedure, the patient should invariably be in the recumbent position, lying on the back with the chest wall beyond the edge of the table so that the needle may be introduced at the most dependent position of the pleura while the patient is in this

position. Many writers claim that the whole quantity of the fluid should not be withdrawn at a single sitting, but in my opinion all should be taken away that will escape through the needle. Sometimes during the withdrawal of the fluid, severe attacks of coughing, and even of syncope, supervene. Whenever these conditions occur, the withdrawal of the fluid should stop, and the opening should be sealed with collodion dressing. It is unnecessary for me to say, at the present stage of surgical work, that the whole chest should be prepared exactly as though you were intending to do a capital operation; that the needle and all other instruments employed should be boiled; that the operator's hands should be just as carefully prepared as though he intended to perform a laparotomy; and that all of the surrounding areas should be covered with sterilized towels. The use of an exploring needle that has not been properly sterilized, pushed through skin that has only been washed off with alcohol by hands that have not even been washed, is an invitation to serious infections, for which the operator should be held criminally liable.

Pneumothorax, or pyopneumothorax, may occasionally be produced by the introduction of a needle, but they will be only occasional accidents; and in case they occur and are recognized at the time of aspiration, the surgeon should proceed at once to an opening of the chest cavity and to thorough drainage of the pleural space. If in the course of the aspiration it is determined by auscultation that the lung is coming down and expanding to fill the chest cavity, the operator may be perfectly satisfied with the simple removal of the fluid. If, on the other hand, it is found that the lung does not expand and that the breath sounds cannot be heard over the whole of the chest wall, a more radical operation is indicated and should be performed as soon as the condition of the patient will permit. In cases of emphysema, which occasionally result from aspiration, thoracotomy should be performed. I have been asked in what cases I expect a cure through simple aspiration. Of course this question applies to cases where empyema is fully established. I have found that the best results have been obtained in those where the pneumococcus is the cause of the disease. Here frequently the fluid is localized, and a single aspiration results in a definite cure.

The fluid will reaccumulate in many of these cases in a very few days. Within the past few weeks I have operated upon a woman at St. Francis' Hospital, from whom three quarts of fluid just beginning to change was withdrawn, and two days later a second aspiration gave two and a half quarts. I operated the second day after the last operation, and two quarts more escaped at the time of the operation.

The statistics of this method of operating have improved with

experience, just as the statistics of almost all surgical procedures do. Thus we find that Dupuytren had only two successful cases in fifty, and he said that he preferred his patients should die by the hand of God rather than by the hand of man. Sir Astley Cooper had only one successful case; Gendrin, not one out of twenty. Bowditch, on the other hand, up to 1882, had operated 386 times in 245 cases without a single fatal result, and with only one in which alarming symptoms supervened. Dieulafoy reported 150 without an accident; and one might continue with statistics up to the present time that would carry the numbers into the thousands.

Thoracotomy should be performed in all cases where it is demonstrated that the fluid is purulent and the lung still capable of expansion.

The question of the removal of a rib is one that should be left to the judgment of the surgeon. The problem in all of these cases is the obliteration of a pus cavity, and this can only be obtained by complete evacuation of the contained fluid and coaptation of the abscess walls. If there is sufficient room between the ribs to provide for complete drainage of the cavity, and the lung expands so as to fill that cavity when the fluid is withdrawn, no further operative procedure should be employed; but the surgeon should take into account that in all these cases there is at least a temporary, and sometimes permanent, retraction of the chest wall, and that this may be enough to bring the edges of the ribs so close together that the drainage tube will be occluded. In these cases a section of rib should be removed.

Expansion of the lung can only take place where the adhesions are not too firm, and where there is not an unresolved pneumonia or an extensive tubercular focus. A too rapid expansion of the lung is also dangerous, and is the cause in my opinion of some of the deaths that have resulted from aspiration. The fluid has been withdrawn too rapidly, allowing the lung to expand suddenly, and this rapid expansion causes an aspiration of the pulmonary veins, with their consequent collapse. The pressure of the blood from the heart is not sufficient to re-expand these vessels and allow of the return of the blood through its natural channels. The same thing may occur by a too rapid evacuation of the fluid in any method of operating, and care should be taken to see that the expansion of the lung does not take place suddenly, but that it is very gradual.

In the tubercular conditions, it is very important that a too rapid expansion should not occur, as a dangerous hemoptysis might result.

I have very little sympathy with the quibbling that has gone on over the question of resection of a rib. To a certain extent,

this must be determined by the condition of the fluid. If the condition is due to some of the micro-organisms that are not particularly virulent, and if the adhesions of the lung are of recent formation and not too dense to prevent its expansion, and if the intercostal space is sufficiently wide to allow the insertion of the drainage tube without compression, the probabilities are that the simple incision between the ribs will suffice.

On the other hand, if the pleura is markedly thickened, and there are large masses of coagulated fibrin, and if the condition is due to the more active pyogenic organisms, the suppurative process will keep up for a longer time and the gradual retraction of the chest wall will so decrease the size of the opening that drainage will not be efficiently performed and consequently, in these cases, the resection of the rib is essential. Personally, I cannot see that the question is one that admits of much argument. The time required to resect a portion of a rib is so little more, and the consequent shock so slight and the drainage so much more efficient, that I favor this procedure in practically all cases. The better inspection of the pleural cavity that can be made through an opening after a rib is resected, and the determination of the exact condition of the lung and of the pleural cavity, demonstrating at once whether simple drainage will be sufficient to cure the case or whether some further manipulation is necessary, is sufficient to compensate for the slight extension of the operation.

I have used incision and drainage only 18 times. Of these cases six were cured, two improved, and eleven died. Simple resection of the rib has been performed 45 times, with 12 cured, 18 improved, and 15 died.

It must be perfectly obvious to any one who has studied this question, that the problem is not simply one of the evacuation of pus, but that we must go further and make sure of the obliteration of the suppurating cavity. If we accept this fact, it must also be obvious that in a certain number of instances a simple thoracotomy, or a thoracotomy with the resection of a rib, will not be sufficient to effect a cure. The rigid chest wall cannot fall in for any distance, and the lung bound down by adhesions will not sufficiently approximate the chest wall to allow of apposition of the pleural surfaces. Thus a permanent suppurating cavity is left with a persistent empyemic fistula. If the operation is done early, when the adhesions are slight, and when the expansion of the lung follows the evacuation of the fluid, one may reasonably expect a cure; but in my opinion this should be determined at the time of the operation. Many experienced operators have adopted the additional method of freeing the lung from its adhesions at the time of doing a thoracotomy, in

order to allow increased expansion. Simple liberation of the adhesions, however, is not of itself sufficient to completely obliterate these large cavities.

Brinkman emphasizes this especially, and advocates that the adhesions should be separated—gently if possible, but by incision or blunt dissection if this is essential to their liberation. Wharton says that it is a mistake to drain without having broken up adhesions. Steele calls attention to the fact that the difficult portion of the cavity to obliterate is the upper portion—up in the apex, and this corresponds with my own experience. In many of the old cases of empyemic fistula that have come to me for secondary operation, I have found that the lower portion of the lung was fully expanded and adherent, excepting for the fistulous tract leading up to a cavity in the apex. It is therefore quite as important that this area should be fully expanded as it is to get expansion in the lower portions.

In these cases of thoracotomy, as we have already said, cure will result when the lung expands; but another cause for the persistency of the sinus is tuberculosis. Cheyne says that in tuberculous empyema operation is not satisfactory and should be avoided if possible, because the cavity is not likely to close, and this position is taken by many observers. Unfortunately, it is frequently impossible to determine beforehand whether or not a case is tubercular. Some observers insist that all the cases where the pus removed from the pleural cavity is sterile are of tubercular origin. If this were accepted as a fact, a very considerable number of our cases would not be operated upon. I am not in sympathy with the avoidance of operation in cases of tubercular empyema, where the tubercular focus is confined to the pleura or to the lung of the affected side. The results will be bad, necessarily, in operating upon this class of cases, but that is no reason why we should not remove the pressure from the lung and give it the benefit that will result from better expansion; and if the pleura is the seat of the tubercular disease, take the opportunity to treat it locally. More experimental work should be done along this line, and I hope that in the future my opportunities for operating upon tubercular cases may be large enough to enable me to draw some more definite conclusions of the results that we may expect from this procedure. If we can get an improvement in tubercular peritonitis by a simple laparotomy, or by washing out the peritoneal cavity with peroxide of hydrogen, or if we can improve tubercular conditions in other serous sacs by excision and drainage, should we not make the attempt in these otherwise hopeless cases to benefit them by some similar procedure?

The other methods of operating for empyema apply only to

neglected cases, and if we could only get these patients to the surgeon early enough our discussion of this question might stop here. Unfortunately, however, we have large numbers of cases where the diagnosis is delayed, and where the surgeon must undertake much more extensive operations in order to obliterate the abscess cavity.

In 1893, Fowler and Delorme suggested decortication of the lung as a method of closing these old cavities. This was undoubtedly a great step forward, as it did not call for the extensive mutilating operations upon the chest wall that had previously been employed. Ransohoff, of Cincinnati, has suggested a method which he calls discission of the pulmonary pleura, a description of which was published in the *Annals of Surgery*, April, 1906. This is simply a modification of the Fowler-Delorme method, by using multiple incisions instead of decortication. Unfortunately, it was found that in a certain number of cases it was impossible to liberate the lung from its overlying pleura, owing to hemorrhage or some other complication, and the results were not so satisfactory as we hoped they might be. Delorme claimed 30 to 40 per cent. of cures. Cestan showed 40 per cent. cures, 11 per cent. improved, and 35 per cent. not improved; 14 per cent. died. Fowler's report covered 30 cases: 17 cures; 9 no cure; 3 deaths; and one doubtful. Kurpjweit, comparing these statistics with those of extensive resections of the chest wall, says: that of the latter 56.3 per cent. were cured; 20 per cent. improved; no improvement, 3; and 20 per cent. deaths, while he says the combined statistics for decortication show only 33.9 per cent. cured. He believes that most of the success in these cases is due to the extensive resection of the ribs that is necessary, and to the consequent falling in of the chest wall.

My own experience has convinced me that this operation has a comparatively small application. Nevertheless, there are a certain number of cases where the decortication is easy and where the results are extremely satisfactory. In these cases it should undoubtedly take precedence over the more mutilating operations of Schede or Estlander. In some of the cases where expansion of the lung is not complete after a decortication, it may be combined with the Schede operation, and in that case the probabilities are that as large a resection of the ribs will not be necessary as if the decortication were not used.

I operated upon 20 cases by the Delorme-Fowler method in which 7 were cured, 5 died, 5 were not improved, and in 3 the operation had to be suspended on account of hemorrhage.

In the Schede-Estlander operation, with its many modifications, the chest wall is made to fall down and come in contact

with the collapsed lung. It is impossible in this paper to go into a general consideration of this operation. It is so extensive, and involves so much surgical experience, that it must always remain the operation of the surgical expert. I have personally operated but five times in this manner: 1 cure, 3 improved, 1 died. The reason that more operations of this kind have not been performed by me, I believe to be due to my present method of operating. I believe that it is invariably better to make an elastic organ fill the cavity which it should occupy, rather than to attempt to make the inelastic wall fall in against the collapsed lung.

My present method of operating is as follows: Incision parallel to the rib, selecting preferably from the 6th to the 8th along the posterior axillary line, according to the size of the chest in children, and the possibility of being able to reach with the finger both the apex and the diaphragm. If the chest is too large to allow digital exploration by the removal of a single rib, then two or even three should be resected before opening the pleura. The piece removed should be from 2 1-2 to 3 inches in length. The anesthetic, in my opinion, should be ether, and the success of the operation depends very largely upon the proper regulation of the anesthesia. The patient should be completely anesthetized until the ribs have been resected and the operator is ready to incise the pleura. It is then my rule to order that all anesthesia shall cease at once, and before the pleura is opened. One reason for this is because occasionally we find that the fluid is evacuated very rapidly in spite of all attempts to control it, the intrapleural pressure being so great that it bursts through the pleura as soon as the soft parts and the ribs have been removed; and in these cases if the adhesions are recent the lung breaks away from them, fills the pleural cavity, and at the same time a large amount of the anesthetic is inhaled. A more important reason for stopping the anesthetic is to allow the patient to recover gradually during the remainder of the manipulation. After the fluid has drained away, the pleura is incised to the full extent of the incision in the soft parts and the cavity is thoroughly inspected. Masses of coagulated fibrin are removed, and if the pleurae are covered completely by this material it is scraped away with a sharp curette. All of this debris should then be washed out with hot saline poured into the wound from a pitcher. The position of the lung is now outlined, and the confining adhesions separated with the finger if possible, if not, by a blunt dissection with a curved periosteotome, keeping as close as possible to the chest wall, and if they are too dense to be separated in this way they should be cut with a curved pair of scissors. The sweeping of the finger over the pleura in the course of this operation causes the now partially anesthetized patient to cough,

and with each forced expiration the collapsed lung is seen to expand. This should be continued until full expansion of the lung is obtained. Frequently, it will push out through the wound, and often it is possible, before the patient begins to cough, to draw the lower end of the lung out and then watch it expand on the outside of the chest wall.

Unless the patient is pretty well over the effects of his anesthesia, this procedure cannot be carried out, because in these inflamed pleural cases there is no response to pleural irritation under complete anesthesia, and consequently no cough. This is the essential part in the success of the operation. The healthy lung must be made to pump up the collapsed lung, and that expansion must be sufficient to bring both pleural surfaces into complete apposition or else we cannot expect a cure. It is true that in breaking these adhesions we sometimes tear the lung and open a bronchus. This is unfortunate in that it interferes to a certain extent with the full expansion of the lung, but if the opening is so large that the air does not expand the lung as it rushes in during coughing, the operator should put his finger or a piece of gauze over the opening, making just enough pressure to prevent the escape of air, but not enough to interfere with the gradual expansion of the lung itself. Otherwise, this accident is of no moment, as the opening will close spontaneously.

Drainage is an important question in these cases where the lung is expanded. The long drainage tube formerly used keeps up the pleuritic cough, and consequently had to be given up. Brinkman has suggested getting rid of all drainage tubes by suturing the pleura to the skin, but this has the disadvantage of necessitating a second operation for the closure of the sinus. The flat spool drainage tube, made at the suggestion of Dr. H. D. Furness, has answered the purpose admirably in my hands.

The total number of cases upon which this paper is based is 400. Of this number, 171 were cured; 114 improved; and 115 died. Of the latter number, 15 were moribund on admission; 3 died of diphtheria; 8 of shock; 2 had been operated upon at other hospitals and were brought in in serious condition; 3 died of nephritis; 3 of general sepsis; 2 of peritonitis; 1 of carbolic acid poisoning; 8 received no treatment on account of their condition; 1 had Potts' disease; 1 volvulus; 1 was tuberculous; and 2 had septic meningitis; 27 cases died of exhaustion in from six days to three months; 4 cases of double empyema; and 20 were cases of simple incision and drainage; 9 of aspiration; and 5 from the Delorme operation.

The cases operated upon by this method of expanding the lung, in which the histories were absolutely complete, number 225: 97 were cured; 58 were improved; and 47 died. Only 15

of these 47 deaths should be included in the statistics of the operation, the others dying of intercurrent conditions not referable to the operation itself. The full table of the causes of death will appear in the March *Annals of Surgery*.

We have had seven cases of double empyema. Of these 2 were cured, 1 improved, and 4 died. These cases were not included in the previous statistics. The general rule is not to operate upon both sides at the same time, and we have ordinarily adopted that method, first aspirating one side, allowing the lung to expand as far as possible, and then after a few hours operating on the other side and taking the aspirated side some days later when the adhesions would hold the expanded lung fairly well in position. In one case, however, we did operate upon both sides at the same sitting, having first expanded as far as possible the lung on one side, fastening a compress over the opening, and proceeding to operate upon the other. This child recovered.

We have not attempted to go into the full consideration of the bacteriological findings in all of these cases, but have taken 50 at random, with the following results:

Pneumococcus	17
Echinococcus	1
Pyocyaneus	1
Pneumococcus and streptococcus	5
Staphylococcus	8
Bacillus tuberculosis	1
Pneumococcus and staphylococcus	5
Pneumococcus and colon bacillus	1
Pneumococcus, streptococcus and staphylococcus	1
Streptococcus	3
Streptococcus and staphylococcus	2
Negative	5

50

In 181 cases, also taken at random from the total number, we find the following etiological factors:

Pneumonia	109
Pleurisy	7
Measles	11
Measles and pneumonia	4
Bronchitis	7
Typhoid fever	1
Scarlatina and pneumonia	2
Diphtheria and pneumonia	4
Subphrenic abscess	2
No cause given	32
Following trauma	1
Tuberculosis	1

—*Medical Review of Reviews.*

ANTISEPSIS VERSUS ANTIPYRESIS.

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It has been admitted by many able men that, so long as a specific is unknown for the curing of the infectious diseases, reasonable experimentation is legitimate and the discussion of the same not improper. Until the absolute specific has been made known it is rational for others to differ in their opinions quite honestly. In differing, they should concede the same as they expect: the benefit of the doubt as to purity and honesty of purpose.

As an illustration, take croupous pneumonia. The text-books of to-day give about the same rate of mortality as was described twenty-five years ago. Yet many of our most eminent teachers honestly prefer to cling exclusively to hydro-therapy, until the specific antitoxin has been discovered.

In order to reduce the high rate of mortality, it seemed plausible to me, that there might be some chemical substance which could be placed within the human economy that would interfere with or check the excessively rapid multiplication of the specific cocci of this as well as the specific bacteria of the other infectious diseases: or else to effect the chemical neutralization of the toxemia following the infection, so as to prevent some of the causes of that profound pneumococcus septicemia and the other effects of toxemia.

In harmony with this thought I first tried aniline, as an internal antiseptic, in minute doses. The action was so depressing that I desisted before there was any moderation in the severity of the symptoms of the disease. When acetanilid was introduced, under the name of antifebrin, I used it because I had read that it was an antiseptic as well as an antipyretic, and my result seemed satisfactory. Suddenly, like a thunder-clap from a clear sky, I had a case of collapse, following the administration of six grains, that seemed to portend immediate death. With a liberal use of nitroglycerine, strychnia and whisky, recovery was accomplished. The fright caused me to ask myself: "Was I carelessly handling a loaded gun?"

After this experience I used phenacetin (acet-phenetidin) and found it much safer. Then the question arose: What is the difference between the two? I could see the effect, but failed to understand the cause. All of the medical literature that I referred to was entirely barren of information of the nature of the composition of either. That master-mind—Horatio C. Wood

—had made too firm an impression upon me of the duty to know the physiological action of my remedies, as well as the entire nature of their composition, to let the incident pass unheeded. Thus my spare time between hours, during a period of five years, was spent in an effort to learn the reasons why. The two compounds were constructed from the very bottom up, in a laboratory arranged for the purpose in my own home, under the guidance of an able chemist. It was some time before the real reason of the therapeutic difference between those two coal-tar derivatives dawned upon me. Acetanilid was used by me afterwards solely as an acetylated aniline, so protected or controlled, because of that acetylation, that it was gradually split up into its elements, and thus liberated more slowly and steadily in the system, to there combat the enemy that was producing the disturbance. Phenacetin (acet-phenetidin) is an *acetylated* nitrophenol which had been *alcoholated* and deprived of much of the poisonous by-products that are found in conjunction with carbolic acid.

As a coincidence to accentuate this line of thought, many months were afterwards spent in fighting death from pyemia; the result of a wound received in the performance of my professional duty. During this time I had plenty of opportunity to feel the effects of streptococcus poisoning and to note the entire absence of the symptoms of intoxication, which might be expected from a daily consumption of over one quart of whisky, covering a period of ninety days, and of twenty-four ounces a day for the next succeeding three months; notwithstanding the fact that I had previously been entirely free from the use of the same. My intellect was never clearer than during the period of this combat. At the same time, over two and one-half gallons of water, in frequently divided doses, was consumed in every twenty-four hours, for the purpose of elimination.

To my mind, the beneficial influence which had been obtained from the large quantity of alcohol consumed, was not altogether to be confined to its property as a stimulating food and its power of exciting the emunctories to rid the system of effete material. I was fully convinced that much of the benefit derived came from making the fluids of the body an undesirable medium for the culture of the specific bacteria—thereby inhibiting their excessively rapid multiplication—and from more or less of a sedative influence on increased cell activity, which had been incited from the invasion of those infernal streptococci.

The resulting incapacities from that awful conflict with death compelled me to regretfully relinquish much of my practice. Since then, in entire harmony with my chosen calling, much of my mental energy has been devoted to so harness and

control antiseptic agents which would have no injurious action upon the organism and yet serve to retard, or in some way inhibit, the excessively rapid multiplication of those fiendish microorganisms, that sufficient time might be gained to enable the emunctories to rid the system of much of the cause of toxemia, and that also there might be more effectually accomplished that to which I have given the credit of doing, in my own case, to the alcohol. (See NOTE.)

The phenol group appealed to me as possessing much of the nervous sedative quality in addition to the antiseptic. This prompted me to associate the eliminative antiseptic virtues of the salicyl group with the sedative antiseptic virtues of para-amido-phenetol, an ethylated nitrophenol to which the hypothetical radical NH_2 has been added for its combining quality. From the standpoint of a physician desiring to so blend his therapeutic agents, to accomplish certain results, I have, by chemical condensation and reduction, so completely harnessed these substances into an almost tasteless bland powder, which is technically acetyl-salicyl-phenetidol, the substance now known under the name of A—s—phen. So slow is the acetyl and salicyl cleavage from the alcoholated phenol derivative, that there has been practically accomplished the entire avoidance of the irritating, stomach distressing and heart depressing qualities of these agents. There is thus placed at the service of the sick what never could be enjoyed if dependent upon a mechanical mixture of the same. It is a very much improved form of salol, for it is well tolerated and there is no uncertain quantity of phenol to be suddenly liberated in the system. Like salol, it is a gastro-intestinal as well as a urinary antiseptic, thus retarding, at least to some extent, the rapid multiplication of the germs of the disease. It has a calmative influence upon the nervous system and thus offsets some of the nervous irritation from the onslaught of the invasion by the pathogenic germs. It stimulates the emunctories of the system, with the consequent elimination of many of the toxins and of the waste products due to faulty metabolism and of the purin bodies or xanthine bases resulting as decomposition products of cell nuclei and of nucleins. It seems to possess the stimulating and antiseptic emunctory value of acetyl-forma-sal (another one of the synthetic compounds of my creation), which has been used with such marked success in inflammatory and articular rheumatism, and which is used in the Hospital of the University of Pennsylvania, and several other most reputable institutions, for rheumatic conditions and for the purpose of sterilizing the urine in cases of gonorrhoea and cystitis.

I should feel damnably culpable to use such a remedy in the treatment of thermic fever, or what is commonly known by the

name of "sunstroke." To remove this excess of temperature the only one remedy is hydro-therapy, ice-cold at that, if the hyperpyrexia is 106 deg. or more. Thermic fever is entirely different from the high temperature of an infectious disease. There is here no question of a circulating toxin to be eliminated. Simply an overwhelming of the heat-regulating mechanism where the system is unable to dissipate the heat rapidly enough.

When the fever is produced from the sepsis, arising from an abscess, it would not seem rational to treat such a condition as a fever, when it is very evident that the indication is a surgical interference. Neither would it seem rational that, because the heart is here beating much faster, it should be knocked down in its action with any heart depressant like aconitine. The surgeon's knife will remove both the fever and the accelerated pulse rate.

But, when the fever occurs in the course of an infectious disease, where no abscess has formed, where there is a decided disturbance of the heat-regulating centres from the invasion of the micro-organisms, where there is much increased metabolism and also poisoning or toxemia, with a consequent degeneration of the vital organs of the body and a decided interference with their proper functioning, then I think it rational to try to do something towards removing the cause of the disturbance. The results of the fever are feared. There is here no indication for surgery. The primary cause is not removable by hydro-therapy. In order to treat the patient and make war on the enemy at the same time, I think that we should try to make the human economy an unpleasant abiding place for the microscopical germs which produce such visible distress.

When it is so easily demonstrated that the urine has been rendered sterile, is it not rational to believe that the other fluids of the body have been made proportionately so, and thus retarding to a certain extent the rapid multiplication of the diabolical germs? When it is so easily demonstrated that both the liquids and solids of the urine have been increased in amount voided, in association with the moist mucous membranes and a slight perspiration, is it not rational to believe that you are removing some of the cause of toxemia? When, because of these facts, associated with the more or less correction of the defects of the faulty metabolism, in conjunction with the antifermentative influence in the gastro-intestinal tract, with the avoidance of tympanites and the reflex irritation of the heart and brain from the same, can you not appreciate why there is a mildness of the fever process, little delirium and less exhaustion and heart failure (the result of toxemia), and understand why convalescence is sooner established and less prolonged? Experience has taught me that

cardiac stimulants are not needed *before* the cumulative effects of the toxemia and pyrexia have brought about that condition described as heart-failure. That by avoiding as much as possible the effects of toxemia and pyrexia and disturbance of the nervous system through antiseptics, elimination and nervous sedative action, it is easier to control the heart action and maintain a more marked equilibrium between the heart and vessels and a consequent uniformity of strength of the heart sound and force of the pulse. That when any irregularity of the heart action did occur, the very identical cardiac stimulation that is used by those depending upon hydro-therapy would stimulate just as quickly, if not more so. In fact, that there is nothing incompatible with the combination of such a treatment with hydro-therapy. That strychnia will tone up the vascular system and stimulate the heart; that digitalis, caffeine, nitro-glycerin, camphor and alcohol will produce just as quick response, if not more so.

In-so-much as a treatment removes the specific cause of a disease, then-as-much does it become a specific. In-so-much as a—s—phen inhibits fever as an antiseptic, nervous sedative and stimulant of the emunctories, then-as-much does it become an antipyretic. For the dissipation of heat already formed, hydro-therapy is most valuable. For the inhibition of the cause of the fever process, then, the use of an internal antiseptic is worthy of a trial. Many much more eminent men than I entertain the very well-known belief that an elevated temperature is a conservative process, and that, in any given disease, its presence is more desired than contra-indicated; in-as-much as it is held that during the fever process the affected organism is enabled to produce its own peculiar antagonist; or, if a poison, its own antitoxin. This may be true in some instances, but I have always felt that they were very few indeed, and that the fever process was doing a greater degree of harm by its action upon the various vital organs than could be estimated by its effects upon the blood, more especially so in pneumonia.

The hydro-therapeutist claims that fever rarely requires active treatment in croupous pneumonia, a constitutional disturbance accompanied with a local manifestation by no means commensurate with the systemic toxemia. He admits that where the nervous or cardiac symptoms are severe, not from the fever generally, but from the toxic condition, ice bags and cold coils and cold wet pack, applied to the head and heart region, or bathing, are useful. This is absolutely true, and no sane man takes exception to these facts. Yet I do not comprehend how the application of cold packs, etc., to the head and heart region can remove any of the cause of that toxic condition, unless it be by reduction

of temperature, and that then the bacteria of the disease multiply less rapidly than at an elevated temperature. General bashing removes much of the toxemia, which is the greatest source of danger to the patient, but it is not in every case that such can be properly used, and it does not satisfy my impatient temperament *to do something to remove the cause* of the toxemia, whereby the bacteria of the disease will multiply less rapidly, and at the same time preventing the formation of fever and retarding that morbid intoxication from the infection, which I have aimed to do, by the intelligent use of a substance which is well tolerated by the system and which is capable of accomplishing much more good than it is at all possible to do harm; more especially so, when it has proven itself to be a most valuable nervous sedative in the treatment of "brain fever."

It has been my custom to take the torch in my own hand and to satisfy myself from hard experience. Perhaps H. C. Wood's vivid description of his personal experience from an overdose of cannabis indica was responsible for much of it; but, when the fate of battle changed my relationship in my profession, and I found myself answering questions from those using the products of my creation, then I invariably made myself the subject for as much of that experience as was at all possible to do. To my mind, it is a crime to recommend or permit others to prescribe any medicine in such grave conditions as are met with in the infectious diseases, without first completely satisfying one's intelligence of its utility; and a man will do that without being biased. Consequently, I have never recommended that others prescribe greater quantities than I have. I have never seen any untoward effects from its proper use. On the contrary, by its employment I have saved several cases of croupous pneumonia where the temperature reached as high as 106.2, 106.4, and 106.8 degrees, which I am fully satisfied would have died had only such treatment been instituted as was taught at the time of my graduation, or that taught by some of my critics—who have called me more than harsh names for advocating the theory here expounded—who, with the same breath used to condemn the use of "all coal-tar remedies," advise the use of salicylic acid (nearly all of which that is used is made synthetically from carbolic acid), and salol, a most typical coal-tar product. Fire and water were both placed at our service by our Creator. Many innocent lives have been sacrificed to them; but when man's intelligence controls them they are invaluable.

It is absolutely unfair to use such coal-tar derivatives as salol—where the cleavage of unprotected carbolic acid is so readily split off—or to use aconitine or veratrum viride and similar heart and circulatory depressing remedies at the

same time, and then blame such remedies as here described for any irregularity of the heart action that might occur.

In using remedies, I have always relied upon their value by securing their indicated physiological action whenever it was possible to do so, and then maintained just sufficient dosage to secure the effect desired. From this experience I have learned the value of an initial dose of twenty grains of a—s—phen, followed up within a half-hour with ten grains more if the effect desired was not obtained; if so, the time is to be extended to an hour, or two, or three hours apart, using as my guide the appearance of a slight perspiration, moist mucous membranes, and the extent of the fever.

Pending the discovery of the specific antitoxin for each of the various infectious diseases, the statements of many impartial and absolutely disinterested physicians of ability, that they have stayed death through the intelligent use of this product of my creation, and the remark of a specialist of national reputation residing in Asheville, N.C., "It was worth the trip to Philadelphia and Atlantic City to find something that did not cause his tuberculous patients to perspire as did phenacetin," are sufficient warrant for its existence and a testimony that my efforts have not been in vain.

NOTE.

As a result, I have created the following organic chemical compounds, all of which are entirely ethical, there being no secrecy whatever in the nature of their composition, and which fully comply with every requirement of ethical physicians and of all legally warranted and duly constituted impartial Food and Drug Laws of every civilized government.

Guaialin, or the benzoic acid ester of methylene diquaiacol. It is a pea-green colored amorphous powder, and is a most efficient anti-tubercular, anti-catarhal and internal antiseptic.

Camphacol, or the camphoric acid ester of methylene diquaiacol. It is a white, crystalline powder, which is quite valuable as a stimulating anti-tubercular and nervous sedative.

Acetylformasal, or acetylmethylene disalicylic acid, which is unsurpassed as an anti rheumatic, and of more than usual value in arthritis and gout and as an urinary antiseptic.

Iodomuth, or bismuth oxyiodide methylene digallate. An iodine-bearing compound so stable as to retain its iodine on standing in the presence of air and light, and to be entirely unirritating, but still in sufficient weak combination as to yield the full therapeutic value of iodine by the enzymes of living organisms. Its desiccating, sedative and antiseptic properties make it of great service as a stimulating, soothing protector and as an ideal remedy in tubercular diarrhoea, gastric ulcer and in typhoid fever.

Sodi-forma-sal, or methylene disalicylate of sodium. Supplants salicylate of sodium for the removal of the pain of neuralgia, as well as that caused by various imperfectly oxidized matters. Very valuable in rheumatism.

Kali-forma-sal, or methylene disalicylate of potassium. Analgesic, anti-rheumatic and antiseptic.

Cal-forma-sal, or methylene disalicylate of calcium. Not soluble in water. Useful in gastro-enteritis and the summer diarrhoeas of children.

Bis-forma-sal, or methylene disalicylate of bismuth. An intestinal antiseptic and sedative of great value. Being insoluble, it reaches every portion

of the intestines, which it coats with a protective covering and shields from further irritation. Valuable in the treatment of fermentative dyspepsia, enteritis, etc.

Cad-forma-sal, or methylene disalicylate of cadmium. Used externally as an ointment in proportion of forty grains to the ounce, in the treatment of serofulous glands.

Cu-forma-sal, or methylene disalicylate of copper. Useful in cholera morbus and asiatic cholera.

Fer-forma-sal, or ferric methylene disalicylate. Indicated in the treatment of the uric acid diathesis and rheumatic affections complicated with anemia.

Am-forma-sal, or methylene disalicylate of ammonium. Indicated in the treatment of pneumonia and as a douche in chronic ozoena.

Lithi-forma-sal, or methylene disalicylate of lithium. Anti-rheumatic, anti-neuralgic and antiseptic.

Bari-forma-sal, or methylene disalicylate of barium. Alternative in rheumatism and in sclerosis when complicated with functional cardiac disorder, as well as valvular disease of the heart.

Stron-forma-sal, or methylene disalicylate of strontium. Much preferable to iodide of potassium in rheumatism complicated with weak heart.

Alumi-forma-sal, or methylene disalicylate of aluminum. As a dusting powder in rhino-laryngological practice for catarrhal practice.

Zinc-forma-sal, or methylene disalicylate of zinc. Of service in chronic skin disease, night sweats and fermentative dyspepsia.

Diurazin, or theobromine-acetyl-methylene-disalicylate. A stimulant of the vaso-motor centre and the renal epithelium, with an antiseptic influence over the urinary mucous membranes. It primarily stimulates the heart action and secondarily strengthens it, with an increased regularity of the pulse, by removing the cause of its depression, in reducing the dropsy through the increased diuresis. Owing to the elimination of the urinary solids, the specific gravity of the urine is little reduced.

Caf-forma-sal, or caffein-methylene disalicylate of sodium. Quickly and completely soluble in cold water. A cerebral, cardiac and nephritic stimulant. At the same time a true antipyretic, diuretic and genito-urinary antiseptic. Whilst it is stimulating the epithelium of the uriniferous tubules it is also invigorating the muscular tissues and imparting tone and force to the heart action, thus increasing the excretion from the kidneys in the amount of both the solids and liquids of the urine.

A-s-phen, or acetyl-salicyl-phenetidin, is, in other words an ethylated phenol derivative which has been chemically combined with acetic and salicylic acids. It is a white, crystalline and almost tasteless powder, which has definitely chemically compounded in it 46.15 per cent. of salicylic acid, yet the same cannot be tasted; nor does it disturb the stomach or depress the heart, and is in every way well tolerated. It is far safer than salol. It has marked antiseptic, anti-neuralgic and anti-rheumatic properties, and is generally used where a therapeutic agent is indicated for the relief of fever and pain in doses of five to twenty grains.

PRACTICAL ELECTRO-THERAPY.

THE busy physician who contemplates the purchase of an X-ray apparatus, unless he has had experience in the handling of such, is at once confronted by the all-important question, what to buy. He takes up one of the medical journals and sees the many advertisements, where each manufacturer claims to have the only good one. He sends for catalogues, and is still more mystified by the divers declamations and open assertions in the letters following, that this or that machine is the only perfect one ever made, and to beware of all others. He may even receive a fac-simile of a "Gold Bond" to be given with the machine. When he has read all these statements he is in a worse quandary than when he first started out. If he intends to do radiography, and treatment, he should consider the following essential points: The apparatus must deliver a uni-directional current. The maximum current intensity should not be less than ten milliamperes. The wear and tear should be slight. The parts which are subject to wear should be readily accessible to inspection and duplicatable at reasonable cost. The entire apparatus should be compact and have a reasonable guarantee.

The doctor is generally undecided whether to buy a static machine or a coil, and often buys in haste to repent at leisure. If he has bought a static machine, no matter what type, he soon finds out its shortcomings, when attempting radiography, and wants to swap it for a coil, but finds that he has an elephant on his hands, both as to size and cost *versus* actual value.

A static machine—often dubbed a "High tension generator"—is, at its best, inefficient. Careful and extended experiments, with all modern types have shown that they develop, at best, less than one-half milliamperes of current, which is insufficient for speedy X-ray work. The static machine is excusable only when no electric service is available for operating, and has to be operated by water power or by a hand crank, though the latter mode of operation is not very dignified. Often, also, the static machine is purchased for its splendor of monster brass balls, rods and plate glass, the desire being to produce psychic effects by means of these gewgaws. Such ideas smack of charlatanism and are not worthy of the medical profession.

The suggestion is here made that a modern fire-engine would likely serve the same purpose.

Often the assertion is made by a manufacturer, that by choosing material other than glass, for the revolving plates, and increasing the speed, the current quantity will increase directly with the speed. This delusion has caught many, because they are

not acquainted with the fundamental facts underlying current generation, and naturally assume that figures don't lie, but if anything is more delusive than facts it is figures. If you get a certain amount of current from a glass-plate static machine, at a speed of, say, 500 revolutions per minute, a mica-plate machine running at a speed of 1,500 revolutions will not give three times that quantity of current, and a sensitive milliammeter will prove this.

The largest static machine ever constructed, with sixteen plates, six feet diameter, did not develop the current a twelve-inch coil does.

Much has been said about the fine fluoroscopic views obtainable from an X-ray tube excited by a static machine, but, no matter how good, fluoroscope views are not often satisfactory; no visible record is retained as by a radiograph, and the doctor who exposes himself often will find himself subject to nervous irritability and complete sterility. It is also a fact that many deep-seated X-ray burns, below the superficial tissues, have been produced by the static machine, these being largely due to the fact that the rays emanating from a tube operated by a static machine, because of the abnormally high voltage, while few, are penetrating, and will affect the deeper tissues before showing any indications on the surface.

YEAST THE BASIS OF NEW SERUM DISCOVERED BY PROF. DEUTSCHMANN.

A REMARKABLE serum, which seems likely to be of great value in the treatment of infectious diseases of all kinds, has been discovered by Prof. R. H. Deutschmann, of Hamburg, an eminent ophthalmist. Prof. Deutschmann's experiments, originally undertaken with a view to discovering a serum for the cure of infectious eye diseases, led him unexpectedly on to a road hitherto untrodden by scientists—that of seeking a serum capable of universal application. The most varied kinds of parasitic infections, either of a purely local nature or those affecting the entire organism, may, his supporters assert, be treated successfully with the serum he has discovered.

Prof. Deutschmann has been enthusiastically supported in his experiments by the directors of the Hamburg hospitals, and particularly by the staff of the Allgemeine Krankenhaus. The Hamburg Hygienic State Institute has also interested itself in the discovery.

The unique feature of the new serum is that, unlike other sera, it does not aim at immunizing the serum nor at generating antitoxins. Its object is merely to serve as a kind of auxiliary supply of energy, reinforcing and strengthening the exhausted tissues in their anti-bacterial campaign. The serum indeed appears to bear a striking resemblance to the "elixir of life" said to have been recently discovered by an English chemist as a cure for cancer.

Prof. Deutschmann's serum rests upon a homely material basis. Yeast is its chief component, this being imparted as food in gradually increasing doses. Prof. Deutschmann's attention was attracted to the use of yeast as a serum through the fact that it had recently been used with great success in cases of tumors, infectious catarrhs, etc. Since it is known not to kill bacteria, Prof. Deutschmann argued that its success as a cure must be due to its effect in increasing the resisting powers of the system. This theory, he said, proved to be correct. The scientist accordingly proceeded systematically to treat animals with yeast on scientific principles, subsequently applying the energizing material thus generated in the animal system for the cure of his human patients. Yeast cannot, it is stated, be imparted direct to the diseased human system, upon which, especially in the case of fever, it reacts disastrously.

Prof. Deutschmann's serum, with which he has been quietly experimenting for the past two years, was first applied in the case of infectious eye diseases, when all hope of remedy by other means had been abandoned. Eyes which would otherwise have necessarily been removed were not only cured, as it seemed miraculously, by the new serum, but regained their normal keenness of sight.

Prof. Deneke, director of the Allgemeine Krankenhaus, subsequently tested the serum in cases of pneumonia with successful results. Dr. Friedlieb, of Homburg v. d. Höhe, applied the serum in cases of croup, etc., rapid recovery following. In individual cases of tuberculosis and even of lupus it has been used with success.

Prof. Deutschmann, however, who is anxious to make no premature boasts concerning the serum, states emphatically that there are many diseases in which his serum will be useless. He adds, nevertheless, that even where it effects no cure the serum is absolutely harmless in its effects, a fact which enormously increases its medical value.

The first announcements regarding the new serum were made in May in the *Munich Medical Review*, up to which time the medical world knew practically nothing of Deutschmann's find.—*N. Y. Times*, Oct. 2, 1907.

Laryngology, Rhinology

IN CHARGE OF
PERRY G. GOLDSMITH, M.D.
TORONTO.

and Otology

THE PROBLEM OF ASEPSIS IN THE ROUTINE OFFICE WORK OF THE LARYNGOLOGIST.

THOMAS HUBBARD (*Laryngoscope*, July, 1907) writes on this rather unusual but important feature of the nose and throat specialist's routine work. The general principles underlying general aseptic work apply with equal force to the surgery of the nose and throat, even if it is not possible to secure an aseptic field in laryngological and rhinological patients. Hubbard thinks the future will see most of the minor operative work performed in special hospitals rather than in the office, when aseptic facilities are not what they should be. He insists on a clean workshop. A floor covering that will stand daily scrubbing, sanitary plumbing and a fountain cuspidor are points he insists upon. Good ventilation is desirable from the patient's as well as the physician's standpoint. Boiling water alone is sufficient for cleaning instruments. Cutting instruments are boiled after using and then wrapped in gauze and paraffin paper. The cut-off and tubing should be protected by gauze covering. Operator and assistants should use rubber gloves and a gown if occasion demands it. A special paper napkin is used in place of gauze or cotton handkerchief. A steam sterilizer is an absolute necessity in every office. Prior to operation spraying the nasal mucous membrane excites a copious flow of sero-mucus, which in turn flushes the glands and recesses of the mucous membrane effectually. Too firm packing retards this action and is therefore very detrimental to rapid and healthy union. Attention to the condition of the teeth and mouth are important in throat operations. The quality of the air used is considered of very great importance. Dry, cotton-filtered air in a tank, kept as clean as possible by occasional use of vapor antiseptics, should be a feature of every well-ordered office-operating equipment.

The paper is a very timely one and while it may seem somewhat overdrawn in some features, there can be no doubt but that it will stimulate all who read it to pay more attention to their powers in preventive medicine.

NASAL DISEASE : ITS RELATION TO THE TRIFACIAL NERVE.

DR. C. N. COX (*Long Island Medical Journal*, July, 1907), after discussing the terminal endings of the three divisions of the fifth nerve, says that irritation of one branch of the nerve can create disease at the seat of distribution of another branch of the same nerve. Neuralgia is instanced as resulting from a septal erosion or sinus involvement, and especially pressure on the septum of an enlarged middle turbinal. Facial neuralgia is said to be a not infrequent result of a suppurating sinus. Ethmoidal disease produces frontal, temporal pain and pain over the bridge of the nose; spheroidal disease, occipital, vertical, frontal and temporal pain. No case of obscure pain about the head or face can be said to have been thoroughly studied unless a careful and special study has been made of the accessory nasal sinuses.

SOME THERAPEUTIC NOTES.

R	Cocaine.....	gr. xiiij
	Chloral Hydralis.....	gr. viiij
	Acid Carbolic.....	gr. vi
	Aq. Distil.....	ʒi
M.		—Gleason

THIS formula, used as a local anesthetic in nasal work, has the advantage over a plain cocaine mixture, in that it does not rapidly deteriorate, because both carbolic acid and chloral are antiseptics as well as anesthetics. The anesthetic effects in the nose are about equivalent to a 3 per cent. solution of cocaine and appear very rapidly.

R	Antipyrin.....	gr. x—xxx
	Aquae.....	ʒi
M.		

A SOLUTION of antipyrin of 2 to 4 per cent., when sprayed upon the mucous membrane of the nose, pharynx or larynx, has the power of contracting the capillaries and of producing an artificial anemia, which effect is maintained for from three to five hours. Solutions of antipyrin may be used with the atomizer in all acute inflammations of the mucous membrane of the upper respiratory tract. When used after the application of cocaine to the interior of the nose, a 4 per cent. solution will maintain the contractile effect of cocaine upon the erectile tissue for several hours. When sprayed upon the nasal mucous membrane without the previous application of cocaine, a 4 per cent. solution gives rise to a smarting sensation, which, however, quickly subsides. Antipyrin solutions of the proper concentration applied to mucous membranes produce analgesia, but not local anesthesia.—(Gleason.)

The Canadian Journal of Medicine and Surgery

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Editorials.

THE OPHTHALMO REACTION TO TUBERCULIN.

In our November (1907) issue, we drew attention, in an editorial note, to the ophthalmic-reaction to tuberculin, a method of diagnosing tuberculosis introduced to the profession by Dr. Calmette, of the Pasteur Institute, Lille. The test is based on a reaction of the conjunctiva to a strong solution of tuberculin. The dry tuberculin is supplied in small tubes containing such

quantity that ten drops of distilled water give a solution, which is said to be of proper strength for ordinary use and will serve for ten observations. One drop of this solution placed in the lower conjunctival sac is sufficient for the test. It is, of course, necessary to first examine the conjunctiva and see that it is healthy. One eye only is tested, comparison being made between it and the other eye. In general terms it may be stated that, if the person experimented on is not tubercular, no change whatever is observed in the eye; if the person is tubercular the eye speedily becomes red, particularly at the inner part of the conjunctival sac. The subsequent congestion of the eye, variable in extent and intensity, lasts two or three days and is not accompanied with any important general reaction, and, after disappearing, leaves no trace behind.

In France, several well-known physicians—Drs. Letulle, Comby and Grasset—have reported their observations of the test, and the results, which are confirmatory of what has been claimed by Dr. Calmette. Dr. Comby uses a solution one-half as strong as the Calmette solution.

In the *British Medical Journal*, December 7th, 1907, there are two articles on the same subject, one by Dr. MacLennan and the other by Drs. Webster and Kilpatrick, who confirm the observations of the French physicians.

Dr. MacLennan asks, "What is the meaning of the ophtho-mo-reaction? Clearly to the eye of the tuberculous it is an irritant; to the eye of the healthy it is bland. Are we to assume from the test, when positive, that there is always present an actual tuberculous lesion, or may we get it, in the absence of a lesion, in those susceptible to the disease? This point can only be settled by prolonged observation and by following the future history of those cases in which the ophtho-mo-reaction has been positive. Parallel results are obtained by the cuto-reaction of von Pirquet. The tuberculin proves an irritant to the skin in the same way as to the conjunctiva."

He says, further on: "One would expect that tuberculin instilled into the eye, scratched into the skin, or injected hypodermically, would 'react' only on the healthy; for is not the reaction a sign of tissue resistance, that we would expect to find better developed in the healthy than in the unhealthy? It seems

apparent that tuberculin or some other toxin developed in the tuberculous imparts to the tissues a resistance to tuberculin, as expressed by the inflammation in the eye or skin, that is absent in the healthy. Von Pirquet holds that the reaction is due to the presence of an antibody."

Dr. A. De Martigny gives a report of thirty-one cases in which this test was used in Montreal (*vide Le Journal de Médecine et de Chirurgie*, Montreal, 28 Decembre, 1907). The results were: one doubtful; ten negative; twenty positive. Dr. De Martigny, commenting on the results, says that the ophthalmo-reaction is a valuable method of diagnosing tuberculosis at a stage of that disease when, formerly, a diagnosis used to be difficult to make and was always open to question. As the field of investigation will now be larger, a diagnosis will be possible, even before tubercles are formed, and as soon as bacilli tuberculosis are present in the economy.

It will be interesting to learn whether or no the life insurance companies will direct their medical examiners to try the ophthalmo-reaction test on future applicants for life insurance.

J. J. C.

CROWNED HEADS, BALD HEADS AND DEAD HEADS.

GREATER TORONTO seems to have awakened during the past two years to a realization of its largeness and its need in the department of hospital accommodation. Since the project of a large hospital on College Street has become the subject of plan and arrangement, the air has been filled with rumors of other hospitals to be erected in the not far distant future. One speaks of a Woman's Hospital. Another tells of a site being looked for upon which the Jews are to build a Jewish Hospital. Still another whispers of the beginning of a Baptist one, by the appointing of a medical teaching staff very soon to McMaster University. And so the ball rolls on. Surely it would seem as if some people were praying for a plague to strike the city, to require so much sick-room space. With pure water, and the Christian Scientists breaking ground for another Temple, and all sorts of housecleaning fads and fancies coming into vogue, ere many moons Toronto ought to be Spotless Town.

After all, the plans of mice and men take time to carry out. A notable example has been the Reorganization Staff of Toronto General Hospital. After fourteen months' cogitation the names of those appointed have been given to the press. The Reorganization Committee grappled long and tirelessly with the very difficult problem before them. That their appointments, on the whole, have been just, may be admitted, with the exception of their treatment of the old Trinity men.

The arrangement of Toronto General Hospital staff
Has but resulted in making some men laugh.
Others have been treated in a way that is rough
Don't you think that their lot is decidedly tough?

A few men have been chosen who meet with the approval of all: hats off to the *Crowned Heads* where the headgear fits. A very few have been appointed who so far have never distinguished themselves in the world of medical science, or even as ordinary practitioners. Perhaps they will make the very best kind of assistants and be willing to be clay in the hands of their seniors, ever at their feet learning, and by sheer hard work win laurels and add their names to the roll of fame. Time will tell. They very wisely have appointed a kindergarten class of those of younger years, on approbation, that is a nervous way to be; almost as bad as being engaged when the dear girl is coy and hard to please, but there isn't a doctor in Toronto who begrudges them their share of the birthday gifts.

But the warmest place in our hearts is ever for the names now on the Consultants' Roll. The men of the Old Brigade who made the Hospital, and who were there by right of the work they did in the old days, before Hospital Boards were composed of god-fathers who made money speak—these men have now been given passes to the *Bald-headed* row. Well, the Bald-headed row is the best place for watching the fun.

Next come the *Dead Heads*—the over-the-age ones who have been told to sing their swan-song—"Grow old with me"—the unappreciated ones, and those who are all right but are just too many—like the old darkey woman's baby. She only knew eight Bible names, and said to the preacher: "This blessed baby can't have no name till one of the others dies; then he'll get hee's name."

Now that the game is over, whether it be worth the candle or not remains to be seen. Let us all unite in a sincere wish for the success of the "Toronto General," that it may be as useful to the community and a greater credit to our city than even in the past, in the good old days so many love to remember.

A question, over the hookah, often lately discussed, has been: What relation will the appointments at the hospital hold in the readjusting of the Medical Teaching Staff of the University of Toronto, which is vaguely spoken of as going to take place in the near future? It is said that the Presbyterian clique are boasting that they are going to have things their own way. That would be indeed monotonous and dreary in the extreme, unworthy of the Board of Governors of a nonsectarian Institution, and also not in the interests of the broader education of the youth of Canada. It is unfortunate that this talk is spreading, and gaining, of course, force and perchance untruthfulness in the telling. As for President Falconer, all we can say is that he appears to be a man, a gentleman, a tireless worker, and broad-minded in the extreme. We will be very much mistaken in the measure we have had opportunity to take of the man if he would stoop to any clique or schism. We all hope for new ideas, great progress and university extension under this Board of Governors. Many will be disappointed if Dr. Falconer, during his *régime* as President, does not make some of the tranquil "Elect" sit up and rub their sleepy eyes in wonder.

W. A. Y.

THE NOBEL PRIZES FOR 1907.

THE Nobel prizes, of the value of \$38,500 each, were awarded on December 10th, 1907. The prize for the "greatest benefaction to mankind by a discovery in medicine in recent years," was awarded to Professor Laveran, of Paris, discoverer of the *hematozoon-malariae*.

Charles Louis Alphonse Laveran, who is sixty-two years of age, took his medical degree at Strassburg, in 1867. He was appointed a professor in the army medical school at Val-de-Grâce, Paris, in 1874. In 1875 he published "Hygiene Militaire," a treatise on the diseases and epidemics of armies, which was so

favorably regarded that it was placed by the government in the hands of every medical officer in the French Army. His studies of malaria were principally made at Algiers, where he was stationed. After long and careful researches had been made, he presented to the Académie de Médecine, Paris, November 25th, 1880, a paper, in which he announced the discovery of a new animal micro-parasite in the blood of patients suffering from malarial fever. He also issued several other papers on the same subject, and, in 1884, published a treatise on malarial fevers. The Institute of France conferred on him, in 1889, the Bréant prize for his very important discovery. In 1893 he was elected a member of the Académie de Médecine.

Writing of Laveran's discovery, H. Roger says (*Introduction à l'étude de la médecine*, p. 143): "Among the gymnosporidia, a group close to the coccidea, most naturalists place the malarial parasite, the hematozoon of Laveran, the plasmodium malariae, the Laverania malariae, as it has been very properly called abroad."

Plasmodium means a protoplasmic mass made by the fusion of several ameboid bodies, and is considered by many savants as one of the most inappropriate of all the names suggested for the parasite of malaria. A plasmodium undergoes simple division and has many nuclei, while the hematozoon malariae has but one nucleus and passes through a complicated life-cycle. Why not call it Laverania malariae, in honor of the winner of the Nobel prize for 1907? The discovery of the cause of malaria will always be identified with Laveran's name, and Laverania malariae does not involve any discrepancy between the nomenclature and the micro-organism designated.

J. J. C.

A LIMERICK-ETTE.

They talk of McMaster Medical School,
 Do you think that it would prosper?
 Would its halls with students ever be full,
 In order the idea to foster?
 Wade in, Friend McMaster,
 Get some oil from old Rock,
 And prove that the scheme
 Is not all watered stock.

W. A. Y.

EDITORIAL NOTES

Prevention of Posterior Urethritis.—Dr. Leedham Green (*Indian Lancet*, October 28, 1907) says that the salicylate of sodium, though of comparatively little value in inflammation of the anterior urethra, exerts a beneficial effect in posterior urethritis. Under its influence the urine rapidly clears, and the acute distressing symptoms disappear. This drug has the advantage of rendering the urine markedly acid, a matter of importance; for, by maintaining the acidity of the urine we help in preventing the extension of the inflammation to the bladder and the production of cystitis. The desirability of maintaining the acidity of the urine should also be borne in mind by the attendant, when dictating the patient. A light diet of milk, with the substitution of mineral waters for alcoholic drinks, as is so often recommended, causes a decided and undesirable reduction in the acidity of the urine. Apart from the administration of salicylate of sodium, the treatment must also be directed to combating the prominent symptoms of acute posterior urethritis, vesical tenesmus, terminal hemorrhage, etc. Sedatives, such as belladonna or hyoscyamus, may be given, and the use of the hot sitz bath prescribed. Should the distress be very great, small doses of morphin or heroin may be administered. In a case of vesical tenesmus the common urinary sedative—a mixture of hyoscyamus and liquor-potassii—should not be prescribed; its soothing properties are dearly purchased by the serious reduction in the acidity of the urine. Urotropin and helmitol, though excellent urinary antiseptics for many purposes, have proved to be of little value in the treatment of urethritis. They are almost valueless in the anterior variety, and, though of some service in the posterior form, they seem to be less efficient than salicylate of sodium. If salicylic acid is administered, it is changed into salicylate of sodium by the gastro-intestinal secretions, and, entering the circulation, increases the urinary flow. It appears in the urine as *salicyluric acid*. After large doses of salicylic acid have been taken the color of the urine is changed to a dark olive green. This change in the color of the urine is due to the presence of indican and pyrocatechin, which are produced by the action of the pancreatic juice upon the salicylic acid in the intestine.

A Hypodermic Injection of Atropin Relieves Bronchial Asthma.

—G. Zuelzer (*Die Therapie der Gegenwart*, September, 1906) recommends a hypodermic injection of one milligramme (gr. 1-64) of atropin to cut short the asthmatic paroxysm. By this means the emphysema and the resulting dyspnea are promptly relieved. The reason of this, according to this author, is as follows: The emphysema is due to irritation of the vagus, and atropin, as is well known, paralyzes the terminal filaments of that nerve. In support of his theory, he adduces the fact that emphysema may be produced experimentally by electric stimulation of the vagus; if, however, the animal has previously received atropin, no emphysema takes place. He also reports a case of "vagus neurosis," resembling an attack of asthma, except that there was complete absence of rales. Expiratory dyspnea, emphysema with tenderness of the right vagus, and slowing of the heart's action were present. An injection of atropin brought immediate relief.

Kleptomania.—Kleptomania is a morbid desire to steal, which may appear in a person of good social position, in whom such weakness would not be expected to exist. A well-to-do, middle-aged person may steal jewelry, ornaments, trifles from the counters of shops and afterwards secrete them. If discovered and brought before a magistrate a plea of insanity may be raised in her defence. To make the plea valid the defence should be able to prove that the accused did not know that her action was wrongful. Very often the defence is not accepted, and the kleptomaniac is held responsible. In great warehouses valuable goods are exposed to public handling and observation in a very tempting way, and a weak-minded person may be induced to steal them on account of the apparent lack of guardianship of the goods. The warehouseman should be obliged to do his full duty in guarding his property. On the other hand, however, a true kleptomaniac would be likely to steal objects of no interest or value to herself, or would not endeavor to raise money by selling them. Strict enforcement of the laws against theft acts as a deterrent, and magistrates enforce these laws, although their action may expose the relatives of the accused to hardships. A story is told of a lady who, during the reign of Brian Boru, travelled through Ireland, adorned with jewels and bearing in her hand a white wand with a gold ring at the top. So well observed were the

laws that she performed the whole of her journey without being robbed. A similar tale is told of Alfred the Great, and of Robert I., Duke of Normandy, both of whom are said to have kept their dominions in such excellent order that golden bracelets were hung up by the wayside and remained untouched. One would say that kleptomania must have been rare in those countries. Or it may be that the bracelets, being known to the public, could not have been disposed of without the detection of the thief, or that the punishment inflicted for theft was severe and exemplary.

The Opsonic Index in Diseases.—In *Harper's Magazine*, July, 1907, appears an article by Professor R. K. Duncan, University of Kansas, on the opsonic index and the injection of opsonins. After describing the theory of opsonins, and mentioning the successful application of opsonins in acne and furunculosis, he acknowledges that this method of treatment has not been successful in systemic tuberculosis, though it gives a new certainty to the diagnosis of the early stages of that disease. "On every side," he tells us, "it is seen that the attitude of the educated and intelligent part of the medical profession towards the opsonic philosophy is one of waiting, of suspended judgment and extreme respect. Dr. Wright's laboratories in London are crowded with students from every quarter of the civilized world—from Russia and Sweden to India and Japan. American hospitals have been importing his assistants to demonstrate the new treatment. The Toronto General Hospital has already established a department of opsonic inoculation under the direction of Dr. W. G. Ross, one of Dr. Wright's most brilliant disciples. A great American firm of manufacturing chemists has sent over a member of its staff to study under Dr. Wright, so that, as soon as the opsonic treatment becomes general it may be in a position to supply physicians with the dead microbes as inoculating materials. Hospitals and schools that claim to be up-to-date can hardly afford to ignore this seemingly valuable branch of research work."

Test of the Purity of Chloroform.—Chloroform decomposes under the influence of moisture and light, the chief product formed being hydrochloric acid. A solution of silver nitrate is ordinarily used to detect the acid. Congo red becomes blue in the presence of free HCl, and it is used as a test for this acid in

chemical investigations of the gastric juice. Some months ago a writer in the *Lancet* suggested that Congo red should be used to indicate the presence of HCl in chloroform. If a small cylinder of elder pith, or some similar substance, be dyed with a solution of Congo red in absolute alcohol, and put into the bottle containing the chloroform, it answers the purpose of a test for HCl. If the chloroform is pure, the pith will remain of a bright red color; but if deterioration has taken place, sufficient to render the use of the chloroform dangerous, the pith will be almost instantly changed to a bright blue. The little piece of pith can be used over and over again, as long as it remains bright red. If the chloroform has spoiled or become old it can be freed from its impurities by shaking it with a solution of caustic soda.

Test of the Purity of Hydrogen Peroxide.—Hydrogen peroxide, H_2O_2 , is an unstable liquid, which readily yields up an atom of oxygen, and hence is a powerful oxydizer. It is strongly antiseptic, and is very much used by surgeons and dentists as an antiseptic application to inflamed mucous membranes and as a cleansing agent in the treatment of abscesses. It is also used locally by physicians in diphtheria, scarlatina, gonorrhoea, etc. For external use this drug may be gargled, sprayed, or applied with a syringe or a swab, either in full strength or diluted with water. Having had occasion recently to wash out an abscess with a solution of hydrogen peroxide (1:4), the patient complained that the solution smarted. Subsequent examination of some hydrogen peroxide from the same bottle showed that it contained free HCl. The manufacturer of this preparation explained that a certain amount of free hydrochloric acid was necessary in a solution of hydrogen peroxide, as the solution itself had a strong tendency to deteriorate with age, by exposure to heat, or from protracted agitation. Obviously, then, a preparation of hydrogen peroxide should be fresh, and, before using it, the surgeon should test it for HCl.

The Bar-Room a Great Leveller.—The bar-room levels many class distinctions, and may be pronounced to be a leading democratic institution. Repeatedly have we seen well-dressed gentlemen saunter into a bar-room behind some tradesman or laborer dressed in soiled working clothes. Such propinquity bespeaks a

common taste and a condition of mind sufficiently insistent to silence the scruples of the rich man and open wide the lean purse of the poor one. The well-dressed man wants the stimulus of a glass of whiskey to brighten his mental horizon; the working man wants it to soothe his tired muscles. Varying psychical and physical needs attract them to the bar-room, where through the influence of the great leveller rich and poor meet for a time on a level. Looked at from a medical standpoint, the bar-room is a great leveller of health. Dr. Osler counts whiskey one of the three "bads" that cause tuberculosis: bad air, bad food, and bad whiskey. Dr. J. A. Rivière (*Annales de Thérapie*, Paris) says that alcoholism is one of the great causes of phthisis, especially the pneumonic and fibroid forms of that disease. The permanent disorder, which alcoholic intoxication causes in the nutritive changes of the body, the gradual infection of the blood and the most essential humors, the lesions of the nobler tissues and the fatal loss of organic resistance to disease fully explain how tubercular invasion is produced in many cases. J. J. C.

ANOTHER LIMERICK-ETTE.

On Spruce Street there once was a medical school;
Of worthy professors it was undoubtedly full.
It no longer liveth, as it bartered its soul,
And to 'Varsity now plays a second-class role.

W. A. Y.

News of the Month.

THE ONTARIO MEDICAL ASSOCIATION.

THE 28th annual meeting of the Ontario Medical Association will be held in Hamilton, under the presidency of Dr. Ingersoll Olmsted, on the 26th, 27th, and 28th of May next.

The addresses in Medicine and Surgery will be delivered by Dr. Charles Stockton and Dr. Charles Scudder, respectively. The former, who is well known to us as the American editor of Nothnagel's work on the Diseases of the Stomach, is Professor of the Principles and Practice of Medicine in the University of Buffalo. The latter is Surgeon to the Massachusetts General Hospital, and has distinguished himself as the author of a work upon Fractures which has been received with so much favor that six editions have appeared within eight years.

The Vice-Presidents, with the chairmen of the committees on Papers and Business and on Arrangements, Drs. R. R. Wallace and A. B. Osborne, met at the home of the President, Dr. Olmsted, in Hamilton, December 15th last, to inaugurate the work for the year.

Dr. Olmsted reported a personal canvass of several portions of the province to stimulate an interest in the coming meeting.

The chairmen of the two local committees have active campaigns on the way, looking to a successful year's work. If the Hamilton members are supported by the men in the province with an earnestness in any degree approaching that with which they have thrown themselves into the work, the next meeting is already an assured success.

The Association decided at its last meeting to stimulate a wider and more sympathetic interest among the practitioners of the province in its work, and one of the steps to that end was to carry the meeting of 1908 away from Toronto, where it has been called for so many years. The movement seems a wise one, and its success depends solely upon the efforts of the individual members scattered everywhere in Ontario. One or two men in each county who will interest themselves sufficiently to occasionally call the attention of their fellows to the Hamilton meeting, with its promise of a good time both intellectually and socially, can give us the best year, in point of numbers, yet. Five hundred active

members would be less than twenty per cent. of the physicians of the province, and surely not too large a number to have in annual attendance, for the western half of the province could send as many, and a successful meeting this year will insure a repetition in a different section.

The profession generally is invited to attend. Any regular practitioner of medicine in good standing may become a member. Come and help make the Hamilton meeting a success. The annual fee is but two dollars.

TORONTO'S BIRTH RATE LAST YEAR WAS 6,715.

THE births in Toronto in 1907 totalled 6,715, as against 5,985 in 1906, and 5,816 in 1905. There were 3,635 marriages last year, as against 3,108 the previous year, and 3,060 in 1905. The deaths in 1907 numbered 4,563; in 1906, 3,960; and in 1905, 3,915.

The deaths from contagious diseases in 1907 were as follows: Tuberculosis, 279; diphtheria, 89; typhoid fever, 58; scarlet fever, 45; measles, 36; whooping cough, 35.

In 1906 the deaths were: Tuberculosis, 279; typhoid, 67; diphtheria, 42; scarlet fever, 12; measles, 11; whooping cough, 11.

There were 560 births in the city last December, as against 541 the previous month, and 409 in December, 1906. The marriages last December totalled 231, as against 392 in November, and 281 in December, 1906. There were 371 deaths last December, 359 in the previous month, and 344 in December, 1906.

LAKEHURST SANITARIUM, OAKVILLE.

THAT a modern medical institution, affording unsurpassed facilities for the treatment of alcoholism and drug addictions, such as the Lakehurst Sanitarium, Oakville, is appreciated by the medical profession, is apparent by the fact that a large number of its patients are sent by physicians, who are aware of the splendid results that this institution has obtained during the past fourteen years.

Lakehurst Sanitarium is neither a hospital nor an asylum. It is rather a private hotel or health resort, situated in one of the most beautiful grounds on the north shore of Lake Ontario. The grounds are extensive and laid out with lawns, terraces and shaded walks. In summer a lawn-tennis court and bowling green are

kept in good order for those who care to participate in these pastimes, while boating, bathing and fishing may be indulged in by the patients. In the house the men can have the use of the billiard table, and the smoking-room is provided with all things necessary to make it a pleasant lounging place.

Every patient comes under the direct care of the physician-in-charge, Dr. John Urquhart. The "habit" that has weakened the will power yields to well-directed scientific treatment. In addition, the improvement in the general health of the patient is very noted.

The institution is founded on the recognized fact that alcoholism is a disease, and a curable one. The essentials for cure, such as rest, complete change, and special treatment, are hardly possible, except in an institution devoted to the one purpose. For particulars, address, Manager, Lakehurst Sanitarium, Oakville, Ont.

THE NEW STAFF OF TORONTO GENERAL HOSPITAL.

THE following is the complete report of the special committee of the Board of Trustees of the Toronto General Hospital, as passed by the Board of Trustees on January 15th:

The committee recommended that, in addition to the head of each department there shall be a senior assistant, or assistants, and clinical assistants, and that the following gentlemen be appointed to the positions specified:

Surgery—Service in charge of Dr. George A. Bingham. Senior assistant, Dr. Charles Shuttleworth; clinical assistants, Drs. Wallace Scott and Arthur B. Wright. Service in charge of Dr. Alex. Primrose. Senior assistant, Dr. F. N. G. Starr; clinical assistants, Drs. Stanley Ryerson and Samuel Westman. It is recommended that Dr. Clarence L. Starr be given the standing of senior assistant and attached to Dr. Primrose's service for the purpose of being available as an assistant for Mr. I. H. Cameron, the senior professor in surgery in the University of Toronto. Service in charge of Dr. Herbert A. Bruce. Senior assistant, Dr. W. J. O. Malloch; clinical assistants, Drs. Warner Jones, John McCollum and A. A. Beatty.

Medicine—Service in charge of Dr. Alex. McPhedran. Senior assistant, Dr. A. E. Gordon; clinical assistant, Dr. Wm. Goldie. In charge of tuberculosis clinic, under Dr. McPhedran's service, Dr. Harold C. Parsons. Service in charge of Dr. W. P. Caven. First senior assistant, Dr. John Fotheringham; second senior assistant, Dr. W. B. Thistle; clinical assistants, Drs. E. C. Burson and Joseph S. Graham. In charge of the department for the treatment of functional neuroses under Dr. Caven's service, Dr.

D. Campbell Meyers. Service in charge of Dr. Graham Chambers. Senior assistant, Dr. R. D. Rudolf; clinical assistants, Drs. Goldwin Howland and Geo. W. Ross; clinical assistant in dermatology, Dr. D. King Smith.

Gynecology—Service in charge of Dr. James F. W. Ross. Senior assistant, Dr. Frederick Marlow; clinical assistants, Drs. R. W. B. Hendry, A. C. Hendrick, Ida E. Lynd and Helen MacMurchy.

Obstetrics—Service in charge of Dr. Kennedy McIlwraith. Senior assistant, Dr. Frederick Fenton; clinical assistant, Dr. J. A. Kinnear.

Eye department—Service in charge of Dr. R. A. Reeve. Senior assistants (of equal rank), Dr. Charles Trow, J. M. MacCallum and D. N. Maclellan; clinical assistants, Drs. Colin Campbell and W. H. Lowry.

Ear, Nose and Throat department—Service in charge of Dr. Geo. McDonagh. Senior assistants (of equal rank), Drs. D. J. G. Wishart, Geoffrey Boyd and Perry Goldsmith; clinical assistants, Drs. C. M. Stewart and Gilbert Royce.

Department of Anesthetics—Dr. Samuel Johnston in charge. Assistant, Dr. Duncan Anderson.

Electrical department—Dr. Charles R. Dickson in charge. Assistant, Dr. George Balmer.

The committee recommended that all appointments lower than that of senior assistant should be probationary, and subject to special review before the annual appointments are made; also, that in observance of the provisions of the Burnside Trust agreement, Drs. J. A. Temple and F. LeM. Grasset be appointed life members of the active staff without service.

The committee recommended that the following be added to the consulting staff:

Medicine—Drs. John L. Davison, T. F. McMahon, W. H. B. Aikins, Allen Baines and John Caven.

Surgery—Drs. Luke Teskey, R. B. Nevitt and N. A. Powell.

Obstetrics—Dr. Adam H. Wright.

Eye and Ear department—Drs. G. Sterling Ryerson and G. H. Burnham.

In presenting its final report the committee recorded its appreciation of the excellent character of the service rendered by the staff, past and present, and expressed its grateful acknowledgment of the self-sacrificing efforts in the interests of the sick, and of medical education, on the part of members retiring, several of whom had been connected with the hospital for long periods, and had requested to be relieved from further duty. It was recommended that the committee be continued in existence for the purpose of assisting in bringing into effect the regulations adopted by the board in connection with the establishment of the new services.

MEDICAL LABORATORIES OPENED AT QUEEN'S.

THE new Medical Laboratory building of Queen's University was dedicated on January 14th. The ceremonies were held in the old Convocation Hall, and there were present for the event Hon. Dr. Pyne, Minister of Education for Ontario; Dr. Barker, of Johns Hopkins University, Baltimore; Dean Reeve and Professor A. B. Macallum, of Toronto University, and Drs. Wesley Mills and Adami, of McGill. There was a large audience in attendance. After an invocation prayer by Rev. Dr. MacGillivray, Principal Gordon stated that Queen's throughout all her borders rejoiced to-day with the medical faculty over the completion of the Medical Laboratory building, one of the most beautiful as well as commodious on the campus. The Ontario Government, he said, had indeed proved itself to be a "liberal" Conservative Government by making a grant of \$50,000 to enable Queen's to do further work in the way of medical research and for the public health. The presence of representatives from Toronto and McGill Medical Colleges, he said, implied that the three universities were on terms of cordiality, which should ever be.

Dean Connell made a statement regarding the history of Queen's Medical College, which was established in 1854, and amid an imposing stillness he called the roll of the departed members of the medical profession of Kingston by whose self-sacrifice and devotion Queen's Medical School was able to exist. These were John R. Dickson, John Stewart, Horatio Yates, Octavius Yates, M. Lavella, Thomas R. Dupuis, C. A. Irwin, A. S. Oliver, W. H. Henderson, H. J. Saunders, K. N. Fenwick, Fife Fowler and John Herald. The dean commended the Ontario Government for its wisdom in adopting the principle of state aid for medical education. In the new building would be accommodated biology, physiology, histology, pathology and bacteriology. There will also be rooms for public health work, which has grown in a few years to be a considerable tax upon Queen's resources. During the past year 1,505 examinations have been made free of expense to the public, and the specimens have come all the way from Fort William to Ottawa.

Dr. Barker, who succeeded Professor William Osler in Johns Hopkins, delivered an admirable address upon medical laboratories and their relation to medical research and discovery, and emphasized the fact that Canada owed a duty to science by seeing that its brightest medical students were given encouragement to take up research work for the benefit of generations to come.

The Minister of Education congratulated the medical faculty

on its fine new building. He scarcely knew how they had managed to erect such a magnificent stone edifice for under \$50,000. He would inform Premier Whitney that he had never seen \$50,000 so well expended. He assured Queen's medical faculty that it would in future have the sympathy of the Government.

Short addresses were made by Dean Reeve and Professor Macallum, of Toronto University, and by Drs. Adami and Mills, of McGill, congratulating Queen's on its advance and the work it was doing for medical science.

CANADIAN HOSPITAL ASSOCIATION.

At a meeting of the Executive of the Canadian Hospital Association at the Hospital for Sick Children, it was decided to hold the next meeting of the Association in Toronto, in the Parliament Buildings (if the rooms can be obtained), on Easter Monday and the following Tuesday, 1908. The meeting will open at 2 o'clock on Monday; the Tuesday sessions will be held at 9.30 a.m. and 2 p.m.

A reception will be given by the President, Miss Louisa Brent, in the new Nurses' Home of the Children's Hospital, on Easter Monday evening at 8 p.m.

Dr. S. S. Goldwater, Superintendent of the Mount Sinai Hospital, New York, and President of the American Hospital Association; Dr. C. K. Clarke, Superintendent of the Toronto Hospital for Insane; Del. T. Sutton, Esq., editor of the *National Hospital Record*, Detroit; Dr. W. J. Dobbie, Superintendent of the Toronto Free Hospital for Consumptives, and Henry M. Hurd, Esq., Superintendent of the Johns Hopkins Hospital, Baltimore, have promised to give papers. A number of the Canadian superintendents have also been invited to contribute to the programme.

THE SECTION OF STATE MEDICINE.

THE Academy of Medicine is now well organized, and a good deal has been done to justify its existence and prove its success. Three sections are now hard at work and a fourth has just been added, namely, the section of State Medicine. The constitution and by-laws providing for the formation of a new section having been complied with, a meeting for organization was called for Monday, January 20th, in the Academy building, at which the following officers were elected: Chairman—Dr. Amyot; Secretary—Dr.

W. L. T. Addison, 431 Broadview Avenue; Editor—Dr. J. F. Goodchild, 33 Bloor St E. These gentlemen were also empowered to arrange a programme, fix stated times for meeting, and frame by-laws for the section, to be reported at the first meeting to be held as soon as possible.

The sections certainly have plenty of work cut out for them. The water situation in Toronto, the milk supply, the smoke problem, the vaccination question, the cleaning and ventilation of railway carriages, and the medical inspection of schools are amongst the subjects already suggested. Besides the above-named officers, the following Fellows of the Academy have signified their intention of joining the section: Dr. McPhedran, Dr. F. N. G. Starr, Dr. Chas. Hodgetts, Dr. R. A. Reeve, Professor Oldright, Dr. C. J. C. O. Hastings, Dr. Herbert Hamilton, Dr. A. A. Macdonald, Dr. W. F. Bryans, Dr. J. J. McKenzie, and others.

II. M'M.

Summer in Winter.—Persons wishing to escape the rigors of our Canadian winter will get copious information concerning the attractions of that "summer isle of Eden," Bermuda, the scene of Shakespeare's "Tempest," by writing to F. Withrow, B.A., Toronto, whose ad. appears elsewhere.

The Canadian Medical Exchange in charge of Dr. Hamill wishes us to announce that interim offers of medical practices for sale are to be found under "Business Chances," of either the *Toronto Globe* or *Mail and Empire*, each Saturday. As this journal is only issued once a month, many practices pass through his hands which are never advertised in our columns, although a full list of his offers, as they appear on his register as we go to press, will be found as heretofore among our advertising pages. His Medical Exchange offers a short-cut for buyers and sellers to secure the end desired.

Training in Medical Organization.—The students of the University of Pennsylvania Medical School have formed an organization the purpose of which is to acquaint the undergraduates with the workings of the American Medical Association, after which it is very closely modelled. The various student societies take the place of the State organizations and elect members to a House of Delegates, which transacts all the business of the Association. An annual meeting is held at which papers are read by chosen members, thus encouraging original research and a scientific spirit. The organization is named The Undergraduate Medical Association of the University of Pennsylvania, and already has over two hundred and fifty members.

The Physician's Library.

BOOK REVIEWS.

Trypanosomes and Trypanosomiases. By A. LAVERAN, Membre de l'Institut et de l'Académie de Médecine, Paris, and F. MESNIL, Chef de Laboratoire à l'Institut Pasteur. Translated and much enlarged by DAVID NEBARRS, M.D., B.Sc., D.P.H., (Lond.), Member of the Royal College of Physicians, London; Scientific Assistant in Pathology at the University of London; Royal Society Commissioner for the Study of Sleeping Sickness in Uganda, 1903. With colored plate and eighty-one figures in the text. London: Baillière, Tindall and Cox, 8 Henrietta Street, Covent Garden. 1907. (All rights reserved.) Canadian agents: J. A. Carveth & Co., Ltd., 434 Yonge St., Toronto.

This rather extensive work on a comparatively new subject requires no apology when we consider that only as far back as 1892 we were able to give a résumé of our knowledge of trypanosomes within the compass of a short article in a medical journal. Only one pathogenic species had been described, namely, that which produces the disease known as Surra in India, while to-day it requires a large volume of over 500 pages to relate all that is known of these hematozoa and the diseases to which they give rise.

Now, all practitioners may be called upon to diagnose trial cases of trypanosomiases even away from their endemic areas, as the means of rapid transport, and the growing facilities for ocean travel undoubtedly spread the human trypanosomiases, of which a number have been observed among Europeans. Three years have now elapsed since the publication of Professors Laveran and Mesnil's "Trypanosomes et Trypanosomiases." When the work appeared it contained all that was known about the subject at the time, but subsequent investigators have done a great deal of work in this particular branch of pathology, consequently the author has not only translated their original book, but has made considerable additions to practically every chapter, bringing it thoroughly up-to-date. All such additions are enclosed in square brackets. Among the most important of these we find recent observations on the spirochetes; the Leishman-Donovan body; the occurrence of flagellates in tsetse-flies, mosquitoes, leeches, etc.; the microscopic changes found in the central nervous system in sleeping sickness and in dourine. Also a new chapter has been

written on the "Treatment of the Trypanosomiasis." This book is the only complete work on this very fascinating and important subject, incorporating, as it does, all the latest information relating thereto. By the use of a larger page, and a closer type for a portion of the added matter, the book is not cumbersome, and it is a masterpiece of the publishers' art.

W. H. P.

The American Pocket Medical Dictionary. Edited by W. A. NEWMAN DORLAND, M.D., editor "The American Illustrated Medical Dictionary." Fifth revised edition. 32mo of 574 pages. Philadelphia and London: W. B. Saunders Company. 1906.

This is an excessively useful book and contains a great deal that is of value. It has been worked up with a great deal of care, and should be on the table of every medical man. In the present day, when so many new names are appearing, no one can read an article in a medical journal without feeling that at any moment he may come across a word that does not convey perhaps its full meaning to his mind. With this book in reach, many men would find much more comfort both in reading and writing medical articles than they would if they had to depend upon their classical knowledge to suggest to their mind the meaning of some of the words in comparatively common use.

A. J. J.

The Operating Room and the Patient. By RUSSELL S. FOWLER, M.D., Professor of Surgery, Brooklyn Postgraduate Medical School, Brooklyn, New York. Second Edition, Enlarged. Octavo volume of 284 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, \$2.00 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

This book during the past six months has been in daily use in the operating suite of the Toronto General Hospital for reference by the nurses and internes, and has been found to contain many useful and practical hints. We find its arrangement quite complete in detail, touching in the main on all issues which may come up in the operating room. We would call attention particularly to the illustrations, both of operating rooms and of patients in positions, which give very concise ideas on those points, and to the chapters on instrument and supply room, which contain many points that are too frequently overlooked.

Third Annual Report of the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis. February 1, 1905, to February 1, 1906. An account of the work of the third year, a continuation of the report on the Maragliano Serum Treatment, a statistical study of the influence of the Henry Phipps

Institute on the death-rate from tuberculosis in Philadelphia, and a report of some of the scientific work done by members of the staff of the institute during the year. Edited by JOSEPH WALSH, A.M., M.D. Published by the Henry Phipps Institute, 238 Pine Street, Philadelphia. 1907.

On Treatment. By HARRY CAMPBELL, M.D., B.S., F.R.C.P., Physician to the Northwest London Hospital and to the Hospital for Diseases of the Nervous System, Welbeck Street. Pages 416. Cloth. Price, \$1.50. London: Baillière, Tindall & Cox, 8 Henrietta St., Covent Garden. Canadian agents: J. A. Carveth & Co., Toronto.

In this work the author gives us an essentially logical method of treatment. It deals with the subject in a general way, embracing many useful hints and suggestions which are unfortunately not mentioned in the standard medical works or in our medical schools. It is a book full of common-sense suggestions which are of inestimable value to the student and practitioner.

E. C. B.

Röntgen Rays and Electro-Therapeutics, with Chapters on Radium and Phototherapy. By MILIRAN KRİKOR KASSABIAN, M.D., Director of the Röntgen Ray Laboratory, and Instructor in Electro-Therapeutics in Medico-Chirurgical Hospital and College; Member of the Philadelphia County Medical Society, Pennsylvania State Medical Society, American Medical Association, American Röntgen Ray Society; Vice-President of the American Physico-Electro-Therapeutic Society, New York Medico-Legal Society, etc., etc. Philadelphia and London: J. B. Lippincott Company. Pp. xxxii.-545. Illustrations 245.

This work, which is one of Lippincott's New Medical Series, possesses many features which should recommend it to the busy practitioner who desires to familiarize himself with recent advances in Electro-Therapy and the uses of the Röntgen Ray. For instance, an enormous amount of most valuable material is condensed between its covers, and this matter so arranged as to be very readily available. Then again, authorities are freely quoted, a point of much importance to those unfamiliar with the subject. Also, the illustrations are exceptionally instructive and clear, as well as unstinted in number, and the diagrammatic ones most helpful in the elucidation of the text. For its comprehensive and comprehensible description of apparatus, and its attention to the important subject of technique, this work is especially to be commended; but the book possesses so many features of value that it is difficult to say which is its strongest point, except, perhaps, that, as might have been expected, owing to the pre-eminence of the

author in this particular field, the department devoted to Röntgenography may be regarded as leaving little to be desired. This is made possible by allotting almost one-half of the volume to its consideration. Phototherapy, a most important subject, unfortunately receives little attention, possibly because it is a comparatively recent claimant for therapeutic favor. For those unfamiliar with the progress of the branches of physiotherapy to which this volume is devoted, a perusal of its contents must prove somewhat of a surprise and revelation, and, to such, if any there be in this enlightened age, it should be most helpful and suggestive.

C. R. D.

Text-Book of Diseases of the Skin. By ARTHUR VAN HARLINGEN, Ph.B. (Yale), M.D., Emeritus Professor of Dermatology in the Philadelphia Polyclinic, Dermatologist to the Children's Hospital, etc. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.

This book is now in its fourth edition, which shows how highly it has been appreciated by the profession.

The work should prove very useful to the student, as the various diseases are dealt with in a concise manner, and many of the rare diseases are left out, and stress is laid upon the commoner affections. The book is exceedingly well illustrated, many of the plates being exceptionally good.

D. K. S.

Merck's 1907 Index. (Third edition.) An Encyclopedia for the Chemist, Pharmacist, and Physician, stating the names and synonyms, source or origin, chemical nature and formulas, physical form, appearance and properties, melting and boiling points, solubilities, specific gravities and methods of testing, physiological effects, therapeutic uses, modes of administration and application, ordinary and maximum doses, incompatibles, antidotes, special cautions, hints on keeping and handling, etc., of the chemicals and drugs used in chemistry, medicine and the arts. 472 pages. Bound in cloth.

Primarily Merck's 1907 Index is published for distribution in the United States, but, owing to numerous requests, a number of copies have been set aside for sale in other English-speaking countries. So long as these reserved copies last, the publishers, Merck & Co., University Place, New York, U.S.A., will send the book to any chemist, physician or wholesale druggist upon receipt of three shillings and six-pence, or eighty-five cents.

The general scope and character of this book are made sufficiently plain in the sub-title. It is a Chemical Encyclopedia. But, whereas Beilstein takes in all possible chemical combinations, Merck's 1907 Index limits itself to the chemicals and drugs actu-

ally on the market, giving in regard to them information comparable to Beilstein's.

To those who have had previous editions, Merck's Index has become almost indispensable. This latest edition is bound to make many new friends, improved as it is by the addition of the newest products of the chemical industry, by the adoption of the latest nomenclature, and by the adherence to the most modern authorities.

Bulletin of the Ontario Hospitals for the Insane. Vol. I., October, 1907. Rockwood Hospital number. A Journal Devoted to the Interests of Psychiatry in Ontario. Printed by order of the Legislative Assembly. Editors of the present number: Edmund Ryan, M.D., W. C. Barber, M.D., W. C. Herriman, M.B., W. F. Connell, M.D., W. Gibson, M.D., Rockwood Hospital, Kingston.

The editors deserve credit for their successful effort in bringing to the notice of the profession many important matters concerning the treatment of insanity. Among others, we notice views expressed on the prophylaxis of insanity, and on home treatment in incipient mental disease. A description of the continuous bath with an illustration, is also given, and we learn that this method of treatment is successfully employed in toxic forms of insanity.

A list of seventy-eight autopsies of persons who had been insane is given. Rarely have we read a summary of anatomical findings more instructive.

To those who love to delve into the remote causes of disease, the chapter on the Diphtheroid bacillus, *Bacillus paralyticans*, considered as a causative factor of general paresis, will give food for thought. It is valuable as research work, and the author deserves to be complimented on an effort all too rare in Canada. It would be worth while to test the nasal mucosæ of ordinary healthy people in Canada, in search of the Diphtheroid bacilli. J. J. O.

Proceedings of the Royal Society of Medicine. Vol. I., No. 1, November, 1907. Longmans, Green & Co., 39 Paternoster Row, London; New York, Calcutta, Bombay. 1907. Price, 7s. 6d.

We received with a great deal of pleasure recently Vol. I., No. 1, of "The Proceedings of the Royal Society of Medicine." This seems to us to be pretty nearly the *crème de la crème* of English medical literature. It is divided into the following sections, viz., Clinical, Dermatological, Electro-therapeutical, Epidemiological, Medical, Neurological, Obstetrical and Gynecological, Odontological, Pathological, Surgical and Therapeutical-Pharmacological. The sections are arranged alphabetically and are in-

dependently paged. Each monthly number will be published on the last day of the month from November to July, inclusive. Needless to say, the first volume consists of the cream of medical knowledge, and includes the presidential addresses of each section, by such well-known authors as Sir Thos. Barlow, Drs. H. Radcliffe Crocker, W. Deane Butcher, A. Newsholme, Sam. J. Gee, J. Howard Mummery, S. G. Shattuck, and T. E. Buxton Brown.

The Proceedings of the Royal Society of Medicine will be well worthy of preservation, and the expenditure of 7s. 6d. per volume is more than justified.

We must criticise, however, the publishers for offering the Proceedings for sale "to the Public." We think this is decidedly unwise.

Report Relating to the Registration of Births, Marriages and Deaths in the Province of Ontario, for the year ending 31st December, 1905 (Being the 36th Annual Report). Printed by order of the Legislative Assembly of Ontario. Toronto: Printed and Published by L. K. Cameron, Printer to the King's Most Excellent Majesty.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology Otolology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by A. O. J. KELLY, A.M., M.D., Philadelphia, U.S.A., with the collaboration of Wm. Osler, M.D., Oxford; John H. Musser, M.D., Philadelphia; Jas. Stewart, M.D., Montreal; J. B. Murphy; Chicago; A. McPhedran, M.D., Toronto; Thos. M. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; Jas. G. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Edmund Landolt, M.D., Paris; Richard Kretz, M.D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume IV., Seventeenth Series, 1907. Philadelphia and London: J. B. Lippincott Co. 1907.

We find among the contributors to the last volume of "International Clinics" for 1907 such men as Professor Alexander McPhedran, of the University of Toronto; Dr. E. M. Corner, F.R.C.S. of Great Ormond Street Hospital, London, Eng.; Prof. G. Olmette, of Lille, France; Dr. Alfred Gordon, of Jefferson Medical College; Dr. Guthrie McConnell, of St. Louis, Mo.;

Dr. John Norman Henry, Clinical Professor of Medicine, Woman's Medical College, of Pennsylvania; Mr. A. H. Tubby, F.R.C.S., London, Eng.; Dr. J. W. Wainwright, of New-York; Dr. Purves Stewart, of Westminster Hospital, London, Eng., and a number of other well-known men. Volume IV. consists of about thirty lectures on Treatment, Medicine, Surgery, Gynecology, Genito-urinary Diseases, Orthopedics, Neurology and Otology.

One of the best lectures in the volume is that by our collaborateur, Dr. Alex. McPhedran, of Toronto. It consists of an article about fifteen pages in length and is entitled "The Urgency of Early Diagnosis of Cancer of the Stomach," having been read at the meeting of the Medical Association of Central New York, at Rochester, last October. The author impresses his readers with the vast importance of an early recognition of cancerous disease of the stomach "as the first step essential to its cure." Dr. McPhedran says: "If we recognize the existence of cancer in the stomach, bowel, gall bladder, omentum, etc., while still local, and before infection extends beyond the original seat of disease, the first and by far the most difficult step is taken towards the cure, to complete which it is only necessary to do the mechanical part—a mechanical part we should see is undertaken only by the capable expert." The lecture is most instructive and well worthy of careful perusal.

A short chapter that interested us, too, was that by Dr. Purves Stewart on "The Disorders of Sleep," as also a contribution by Dr. M. Lermoyez, entitled "Thiosinamine in the Treatment of Deafness."

W. A. Y.

Atlas and Text-Book of Human Anatomy. Volume III., completing the work. By Prof. J. SOBOTTA, of Wurzburg. Edited, with additions, by J. PLAYFAIR McMURRICH, A.M., Ph.D., Professor of Anatomy at the University of Toronto, Canada. Quarto of 342 pages, containing 297 illustrations, mostly all in colors. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, \$6.00 net; half morocco, \$7.50 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

Volume Three of this excellent atlas completes the work. We have already had the opportunity of saying that the author has every reason to feel satisfied with the result of his labors. Sobotta's Atlas and Text-Book of Human Anatomy will for years be looked upon as one of the best works on the subject in print. Volume Three includes the remainder of the vascular system and the entire nervous system, together with the organs of special sense. The author has very wisely placed himself in the position

of the student, and has arranged his work in a similar manner to that found in the dissection of the cadaver. "This arrangement of the material has the advantage that the student using the atlas in the dissecting room can find upon a single page the great majority of the structures found in a layer of his dissection, and is not forced to hunt through the volume and waste much time in unnecessary search." The colored illustrations found all through the volume could not be improved upon, and so true are they to life that a careful study of the atlas would give the student almost as correct a knowledge of the anatomy of the human body as if he had spent months in the dissecting room. W. A. Y.

The Principles and Practice of Dermatology. Designed for Students and Practitioners. By WILLIAM ALLEN PUSEY, A.M., M.D., Professor of Dermatology in the University of Illinois; Dermatologist to St. Luke's and Cook County Hospitals, Chicago; Member of the American Dermatological Association. New York and London: D. Appleton & Co.

In the title of this work the author states it is designed for students and practitioners, and he has fully carried out this idea; nevertheless the book is also of great service to those who devote much of their time to Dermatology. William Allen Pusey is a recognized authority, on this continent, in the use of the X-rays, and if for no other reason than the opinion of the author in the use of the rays in skin diseases, the work would prove necessary to all who use the X-ray as a therapeutic agent.

Throughout the author deals with the various diseases in a most clear manner, going into the pathology thoroughly. The treatment is taken up fully, and in such a practical manner that it is well adapted for the needs of students.

The book is pleasantly written, and forms, as a whole, a textbook which can be highly recommended. D. K. S.

A Handbook of Suggestive Therapeutics, Applied Hypnotism, Psychic Science. By HENRY S. MUNRO, M.D., Americus Georgia. Illustrated. St. Louis, Mo.: C. V. Mosby Medical Book & Publishing Co. 1907.

This is certainly an interesting book and worthy of careful reading. That there is value in Suggestive Therapeutics there is little question. Many a case has been assisted towards recovery by this means, without leaving the medical practitioner open to be charged as tending towards Christian Science—far from it. The author, in his book, gives facts in his "personal experience and clinical evidence as well to prove the value of Suggestive Therapeutics in the practice of medicine, with a detailed explanation how to apply suggestion efficaciously, both with and without

hypnotism as a therapeutic adjunct." The book is written, not for neurologists, but for the general practitioner who may not have given as much thought and consideration to the subject as it deserved.

W. A. Y.

Medical Diagnosis. A Manual for Students and Practitioners.

By CHARLES LYMAN GREENE, M.D., Professor of the Theory and Practice of Medicine in the University of Minnesota; Attending Physician St. Luke's Hospital, the City Hospital and the St. Paul Free Dispensary, etc., etc. Second edition, revised. With 7-colored plates and 241 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1907.

It is just about a year since we received the first edition of Dr. Greene's book, so that it must be flattering to him that he had so soon to publish a second.

The book is of the type that a busy man will frequently take up and read, being a handy size, concise and withal practical. There is many a time that a physician does not care to refer to a system, but prefers to consult—in more or less of a hurry, perhaps—a book that will give him in a short space the most succinct points regarding his case, especially as to diagnosis. This is just the kind of a book that Dr. Greene has given the profession.

W. A. Y.

A Text-Book of Physiology. For Medical Students and Physicians. By WILLIAM H. HOWELL, Ph.D., M.D., LL.D., Professor of Physiology in the Johns Hopkins University, Baltimore. Philadelphia and London: W. B. Saunders & Co.

The second edition of this work, following so closely on the first, is sufficient guarantee as to its efficiency and popularity. Dr. Howell's name in the medical world as a physiologist, thinker and writer needs no word from us. The beauty of this work is its lucidity, the ease with which knotty points are explained, and the care with which useless bibliography is expunged, giving us only his own carefully digested opinions, based on many experiments and laboratory work. He says in the introduction, in speaking of the marvellous advance in physical chemistry:

"Amid the conflicting results of this literature, it is difficult or impossible to follow the true trend of development. The best that the text-book can hope to accomplish in such cases is to give as clear a picture as possible of the tendencies of the times."

This assertion we find carefully carried out. We can heartily recommend the work to the student, whether under- or post-graduate. The publisher's work is that of a quality usually found in all Saunders' publications—excellent.

A. B.

Compend of Surgery for Students and Physicians, including Minor Surgery, and a Complete Section on Bandaging. By ORVILLE HORWITZ, B.S., M.D., Professor of Genito-Urinary Surgery, Jefferson Medical College; Surgeon to St. Agnes Hospital; Fellow of the College of Physicians, Philadelphia, etc., etc. Sixth edition, revised and enlarged. One hundred and ninety-five illustrations, and one hundred and four formulæ. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1907.

In this little work of three hundred and fifty pages the practical points of modern surgery have been condensed and presented in excellent shape. As a book of reference it is indeed valuable. The illustrations, numbering about two hundred, are very well chosen; they do not, however, take up much space. The sections on suturing and dislocations are especially noteworthy. The latter part of the book is devoted to formulæ, many of which are old favorites.

To student and general practitioner this little work will prove a first-class reference. W. J. W.

The American Journal of Orthopedic Surgery. Philadelphia: P. Blakiston's Son & Co. Issued quarterly. \$3.00 per annum, in advance.

Though in the French, German and Italian there are journals devoted to the special work of orthopedic surgery, yet the *American Journal* is the only one supplied in English to the English-speaking world. It is now in its fifth volume and has won for itself a place second to none. For fully half a century orthopedic surgery has had in the United States representatives whose names were well known to the profession the world over.

This journal is an official publication of the American Orthopedic Association and has taken the place of the "Transactions" published for so many years. The Association has a strong membership of men who are devoting their lives exclusively to this one départment of surgery—admittedly one of the most difficult. Very largely through the influence and work of this Association orthopedic surgery has made rapid advances in the last twenty years.

A list of the subjects discussed in the second number of Volume V. sets forth most interesting and important topics—topics which the general surgeon and every general practitioner may well study with great attention:

1. Neoplasms and their relations to orthopedic surgery.
2. The mechanics of lateral curvature.
3. Typhoid spine.
4. Typhoid spine.

5. The operative treatment of Spina Bifida.
6. Congenital dislocation of the hip.
7. Acquired Coxa Valga.
8. Oil in the mobilization of joints.
9. Chondrodystrophia Fetalis.

The above is not a journal-worn list, and the subjects are handled in such a manner as only those can do who have special facilities for becoming familiar with the conditions and diseases under consideration.

Every English-speaking surgeon and many who are in general practice should keep this journal on file.

R. E. M.

Squint and Ocular Paralysis, with a short account of the Disturbances of Muscle Balance. By E. LUCAS HUGHES, M.R.C.S. (Eng.), Clinical Ophthalmic Assistant, Royal Infirmary, Liverpool. London: H. K. Lewis, 136 Gower St., W.C. 1907.

The newer ideas as to the fusion faculty in vision have led to a revival of the non-operative treatment of squint. Javal was, perhaps, the originator of this treatment, about 1860. Anyone who has read his "Manuel du Strabisme" will recall wondering not only how Javal had the patience to persevere, but how he ever managed to persuade his patients to do it. That some patients yield to the non-operative treatment is well known, but its chief merit is as an adjunct to operation, giving a perfect result in that by it binocular vision is established. The general practitioner should be versed in the non-operative treatment, and in this manual will find it adequately treated. The author takes the position, entirely tenable, that "although operative measures are sometimes absolutely necessary in ordinary squint, the later stages of ocular paralysis and heterophoria, . . . yet much can be done, speaking generally, for all kinds of squint and tendency to squint by patience and perseverance in non-operative measures."

M.

A Text-Book of the Practice of Medicine. For Students and Practitioners. By JAMES MAGOFFIN FRENCH, A.M., M.D., formerly Lecturer on the Theory and Practice of Medicine, Medical College of Ohio. Third, revised edition. Illustrated by one hundred and ten engravings in the text and twenty-five full-page plates in tints and colors. New York: William Wood & Co. 1907.

The acceptance by the medical profession of three editions of a practice of medicine in as many years is not a common occurrence. There must be decided merit in the work, and it must have been written in an easy, entertaining style. This last edition, which is very much larger than the former, has been brought thoroughly up-to-date, and, like the former, has not been over-

loaded with theories. The departments of infectious diseases, animal parasites and nervous system have been entirely re-written. Tropical diseases have been given full description—almost too prolix, while diseases of the skin are omitted entirely.

A considerable amount of space has been given to clinical methods. This is an exceedingly valuable part of the work, and one that will be of the utmost value to both students and practitioners. This Practice of Medicine excels in one thing that many others are sadly lacking, namely, treatment. The book is one of the best, if not the best, published in the United States. The house of Wm. Wood & Co. alone is sufficient to ensure a sound work well put together, and in this instance they have excelled themselves.

W. A. Y.

Diseases of the Nervous System. Edited by ARCHIBALD CHURCH, M.D., Professor of Nervous and Mental Diseases and Medical Jurisprudence, Northwestern University Medical Department, Chicago, Ill. An authorized translation from "Die Deutsche Klinik," under the general editorial supervision of JULIUS L. SALINGER, M.D. With 195 illustrations in the text and five colored plates. 1160 pages. Cloth. Price, \$7.50. London and New York: D. Appleton & Co.

In this excellent volume Dr. Church presents to the profession one of the most valuable works on Diseases of the Nervous System ever published. The list of contributors is composed of some twenty-one of the most prominent neurologists in Germany and Vienna.

The translators of the volume have conferred a favor upon the English-reading members of the profession by their excellent rendering of the text.

The first two sections, on the Macroscopic Anatomy and the Normal and Pathological Histology of the Central Nervous System, form an excellent introduction to the work and are especially valuable for clear, accurate, and well-ordered description. The section on General Neurological Diagnosis is most instructive and is of special value to the student. Quinche's method of lumbar puncture is a very important and practical contribution, also the sections on Myelitis and Tabes Dorsalis are especially exhaustive and helpful.

Contrary to what we would expect from a work by German authors, the therapeutic side of the subject has been taken up in a most practical manner.

The typography and plates of the work are all that can be desired and are of great value to the reader.

The book will prove of great service to the physician and student, and to the specialist in this branch of disease it is invaluable.

E. C. B.