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THE PROFESSION, THE PUBLIC AND THE CODE.

AN ADDRESS DELIVERED BY INVITATION BEFORE THE THIRD
GENERAL MEETING OF THE PAN-AMERICAN MEDICAL
CONGRESS, WASHINGTON, SEPT. 7, 1893.

BY ERNEST HART, D.C.L.,

Hon. Causã, Editor of the British Medical Journal, London; formerly
Dean and Ophthalmic Surgeon, St. Mary's Hospital, London.

(*Stenographic Abstract.*)

Sir Astley Cooper, one of the greatest surgeons and most accomplished gentlemen of the last generation, was in the habit of addressing every candidate for membership of the Royal College of Surgeons of England, of which he was president, somewhat in the following words: "Gentlemen, you are about to enter on a noble and difficult profession; your success in it depends on three things: first, on a good and thorough knowledge of your profession; second, on an industrious discharge of its duties, and third on the preservation of your moral character. Without the first—knowledge—no one can wish you to succeed; without the second—industry—you cannot succeed; and without the third, even if you do succeed, success can bring you no happiness." Those words might form a very adequate summary text for guidance of the conduct of all medical men. And it might conceivably be asked whether there is any necessity for a more detailed and elaborate code. Indeed, it practically has been asked, and there are

large questions involved in the decision. On the other hand, it has, from time to time, lately, in our country, been found necessary to reinforce and strengthen our code by additional declarations, and I think to some extent in yours; the need for a stringent upholding and development of the code has also become a question of the day. I think it is clear that if ever there were such necessity, at no time could it be stronger than at the present moment. For under the stress of the modern social development, under pressure of the modern temptation for advertising and the severity of competition, in view of the arts of those who make advertisement a business and a profit; in presence of the temptations held out to draw medical men from the ancient paths of modesty and self-effacement, there are now stronger reasons than ever to fortify ourselves against growing and innumerable seductions by a code so exact, so far reaching, that the physician need never be in doubt as to what is his duty in any complication, or in the face of any doubtful case in which he may be inclined to give himself the benefit of the doubt.

But, first of all, I want to elaborate the view that our rules of medical etiquette stand upon a logical and strong basis, and that their strict enforcement is for the benefit of the public, at least as much, if not even more, than for the benefit of the profession. Medical etiquette has been sneered at by shallow cynicism as mere trades unionism. It is, on the contrary, a self-denying code which is made in the interests of pure morality, and for the benefit of the public far more than for the interests of the profession. This allegation of trades unionism is the converse of that of inutility, which those who are prone to call themselves of the younger school allege; but not even the youngest of us, as you know, are infallible, and in this matter it is the youngest who are most likely to go wrong. They proclaim themselves liberals. Is it, however, in some cases, the liberalism of Gallio? Let us look at this matter from the largest and most liberal standpoint. Let us begin by comparing our code with the standards of the legal profession.

My distinguished friend, Sir Edward Clarke, lately the

Solicitor-General of England, in writing to me on the subject recently, said the essence of the matter might be summed up in a very few words: "Every lawyer ought to be a gentleman, and ought to do only what is right and honest; if he does not, other men should have nothing to do with him." That position of the bar is strengthened by this, that the etiquette of the bar is absolutely in the hands of the bar circuits and attorney-general, and that of the solicitors in the hands of the Incorporated Law Society; so that any solicitor who is guilty of an offence, whether as a lawyer or as a gentleman, can be, and from time to time is, not only temporarily suspended, but deprived of the right to practise at all. In a case tried last July in England, a solicitor in a certain town had been the proprietor of a house used for an immoral purpose, of which he received the rent. That was considered a stain upon his character as a gentleman, and for that he was suspended from the roll and excluded from practice. So that we have at least the example of the legal profession, who have a code even stricter than ours, in insisting upon a high standard of honorable conduct in the profession.

Legal etiquette prescribes certain technical acts which a lawyer must not do. An eminent American lawyer, whom I had the pleasure of meeting, mentioned to me, for example, that he may not conduct a "speculative suit;" that is, he may not conduct a suit in which his pay is to depend on the success of the suit—a palpable restriction of his liberty. Liberty is a blessed word, but compulsion is, under certain circumstances, often a more blessed word. The reason for this rule is, that if a lawyer undertakes such a suit he becomes personally and financially interested in the result, and may be tempted not to give the court all the aid which is his duty, or may in the end lose the relations of harmony and respect which are indispensable between the court and the lawyers, who are officers of the court and are bound to help Justice to duly balance its scales.

In the same way "champerty" is a legal offence. So, too, no respectable lawyer will give separate advice upon a case

which is already in the hands of a colleague. As between advocate and advocate, harmony, courtesy and the forms of friendship must prevail; and at any time they must, in the interest of the client, be able to come together and to seize the earliest opportunity of avoiding litigation by compromise or mutual settlement, where it is possible and right. The etiquette of the bar is very strict, and is closely observed.

Legal etiquette is, like medical etiquette, a code of honour and of duty by which the public benefit; and those who depart from it or deride it—"legal shysters" I think they are called in the United States—are not, any more than medical quacks, those of whom their country or their profession have reason to be proud.

I will pass at once to the consideration of our code of medical etiquette. I will ask you to consider whether you are of the opinion that it is safe or wise to cast aside the precedents of past experience and to substitute individual judgment for settled rules. If man were a purely abstract and perfectly moral intelligence, no doubt few words would suffice to legislate for his daily needs. Enough to say, "Do unto others as ye would they should do unto you."

But medical men are not pure creatures of perfect and abstract morality any more than other men. They have, indeed, certain advantages from the outset. From the very beginning of their professional life it is impressed upon them, by their teachers, that their profession is *a mission and not a trade*; a mission involving frequent self-sacrifice and a steadfast regard for interests other than their own. In this they are greatly helped by the force of precedent, by the example of those around them, and of the leaders whom they most respect. But even these are inadequate. Without the aid of the written as of the unwritten law, even the best of men are apt to decide *wrongly in their own favour*, on a doubtful question of ethics, and often in matters and cases where there are settled instructions in the code which would guide them rightly.

Let me read to you a few of the rules of our College of Physicians, which command with us a universal adhesion and

respect. I do so only as an example of the conclusions to which many years of observation of the impingement of the forces of modern life on professional duty have led some of our wisest heads. I will refer only to a few as follows :

“ No candidate shall be admitted to examination who refuses to make known, when so required by the President and censors, the nature and composition of any remedy he uses.”

“ That the practice of medical authors frequently advertising their own works in the non-medical journals, and especially with the addition of laudatory extracts from reviews, is not only derogatory to the authors themselves, but is also injurious to the higher interests of the profession.”

Again, “ No fellow, member, or licentiate of the college shall officiously, or under colour of a benevolent purpose, offer medical aid to, or prescribe for, any patient whom he knows to be under the care of another doctor.”

A further rule prescribes that no physician shall himself assume any special designation of therapeutic method, such as homœopath, electropath, hydropath, or countenance those who do so.

Again, “ A physician shall have no interest in a secret medicine, and that he shall always when called upon by the college disclose every part of the composition of his medicines.”

“ If it shall at any time hereafter appear, or be made known to the president or censors that any fellow or member of the college has obtained admission into the college or that any licentiate of the college has obtained the license of the college by fraud, false statement, or imposition, or that any fellow, member or licentiate has been guilty of any great crime or public immorality, or *has acted in any respect in a dishonourable or unprofessional manner*, or has violated any statute, by-law, or regulation of the college, relating to fellows, members, or licentiates, as the case may be, the president and censors may call the fellow, member, or licentiate so offending before them, and having investigated the case, may admonish or reprimand, or inflict a fine ; or if they deem the case of sufficient importance, may report the case to the college, and thereupon a

majority of two-thirds may declare such fellow or member or licentiate to be no longer a fellow, member, or licentiate, as the case may be, and his name shall be expunged."

Let us consider now those restrictions which operate to forbid a medical practitioner to consult with "homœopaths," and of which the wisdom has been by some disputed. We do not believe, and we cannot appreciate the medical capacity or fitness to undertake the treatment of disease of those who hold that drugs which given internally will produce certain symptoms of disease are the appropriate remedies for those maladies. For instance, medicines which produce skin reddening for erysipelas; leucorrhine for leucorrhœa; syphiline for syphilis. We do not agree that all chronic maladies arise from syphilis, sycosis, or itch, and that medicines act with an intensity proportionate to the infinite diminution of the dose; or that there is any utility in prescribing, in accordance with these principles, say a decillionth part of a grain, when we all know that a dose so small, if taken by every being on the globe once a minute would not finish the grain in thousands of years. Nor, again, do we believe that the activity of medicine increases in the ratio of the number of shakes given to the vessel containing it. We hold that we have nothing in common with those who assume to base their practice and theory on this kind of therapeutics. Being well assured that these methods and this theory are absolutely delusive, the negation of reason and the acme of folly, it would be useless, deceptive, and contrary to good faith and the public interest that we should pretend to consult with those who profess them and who take a designation derived from them, and to cover with the respectability of logical science what they are pleased to term their system of treatment. Faith curing, it may be, but in that too we can take no part under false pretences.

But then it is said, What if the physician or surgeon of good standing is only called in by the homœopath to assist in diagnosing the nature, the stage, the complications, or name of the disease? Ought he not to give this help for the patient's sake? The answer is, the physician is a healer; not a reader of riddles

nor a conner of conundrums. He is there not to give a name to symptoms or pathological conditions, but to heal the patient ; and if he knows that his solution of the riddle is not to be followed by a method of treatment which he considers capable of attaining that result, he would be infamously wrong, and he is always wrong when he gives the cover of his accepted position, of his recognized ability, and of his professional sanction, to what becomes under such circumstances a dangerous farce or a deliberate fraud. The riddle is read, but the patient is none the better.

But it is said, May a regular medical practitioner not be called in to perform a difficult surgical operation ? If a surgical operation meant only cutting, sawing and sewing, it would be a plausible excuse for the surgeon accepting the responsibility of acting as sawbones to a quack. But there is no surgical operation which does not in its preliminary stages, and may not in its various phases and sequels, require concomitant medical consideration and treatment, or in which septic, constitutional, or accidental complications may not arise. The surgeon cannot honourably, in the interest of his client, divest himself of the responsibility for the wise and faithful treatment of these as an essential part of his operative interference.

I have used the word quack. It is a word often used now in too restricted a sense. This is Dr. Johnson's definition of a quack: "A boasted pretender to arts which he does not understand ; a vain, boasting pretender to physic, one who proclaims his own medical abilities in public places ; an artful, tricking practitioner in physics." This strikes at the root of the matter, now as then. Observe, here is no distinction between those who have degrees and those who have not. The great lexicographer makes no distinction ; neither do I.

The essential note of the quack is love of advertisement. The public "places" of Dr. Johnson's time were the coffee-houses ; they are now the newspapers. Now what are the ways in which the diplomaed quacks adopt the methods and becomes the imitator, the rival, the accomplice of the undiplomaed ? You may know them by their works. They are the gentlemen

who put themselves forward to be interviewed, and are the sham Jupiters and willing Mercuries of the newspaper world. They confide to the ubiquitous reporter what is their opinion of the last new bacillus, the last new anti-toxine, or invite reporters to their amphitheatre and hospital ward. All this is only an outcome of the venal desire for advertisement. They are the gentlemen who, if they have the good fortune to attend a prize fighter, or a ballet girl, or the ruler of a State, are not slow to disclose the secrets of the sick-room, and all for the public good.

Now, in the venerated Oath of Hippocrates, which is the foundation of our code of to-day, the disciple swears to impart the knowledge of his art to others according to the law of medicine, and to share with his colleagues by precept and every other mode of instruction all that he knows. He further binds himself that he will have *no medical secret*, that he will practise his art and pass his life with purity and holiness, that he will abstain from every voluntary act of mischief and corruption, and that *whatever in connection with his professional practice* he sees or hears in the life of men which ought not to be spoken of abroad he will not divulge. "While I continue to keep this vow unviolated may it be granted to me to enjoy life and the practice of the art respected by all men and in all times. But should I violate this oath may the reverse be my lot."

This is the spirit of the modern British code, and I know well it is yours also.

We have dwelt as long as time will allow on the considerations of public utility and professional duty which oppose consultations with homœopaths and their congeners; nor can I stay long to discuss the prohibition of open advertisement. The advertisement in the lay press of medical books intended for the profession; the submitting of technical books for review; the public criticism of the treatment of any disease or person; the thousand and one acts, in fact, by which the advertising surgeon physician seeks to gain the ear and favour of the public by means of notoriety or self proclamation in place of hard honest work, real professional worth; and the judgment of those

whose knowledge makes them alone competent to judge. Self advertisement is the note of the quack. It is as dangerous to the public as hateful to the profession; for it misleads the masses by substituting easily purchased notoriety for merit, and covering by loud talk and bombast and plausible pretences the emptiness of the shallow pretender. It covers also with a pseudo respectability the venal corruption by which whole columns and pages of reading matter of the newspaper are very frequently devoted to quack nostrums and "treatments"—save the mark—often of the most fantastic, false and dangerous character. It destroys the landmarks of honour and reticence, when in successive numbers of the daily and weekly papers are found the lucubrations of these pests of society, and, along side of them, the interviews, the explanations, and the descriptive narratives put forth for the public good by reputable physicians, *apropos des bottles*, but hardly-veiled self-advertisement.

It is, however, only fair that the physician should have notice of the offence or its penalties, and that this salve which he puts to his conscience should be rubbed off. Hence the value of "A Code." We have seen that the medical man is prohibited from deriving any profit directly or indirectly from any medicine which he uses or recommends, and from tampering, however remotely, with secret medicines. If this were merely an arbitrary rule, if it were not at least as much for the benefit of the public as well as for the practitioner, there might be ground for calling it in question. But it is a rule of the highest public import.

That a healer, whose judgment in prescribing should be clear and unbiased, should possess and profit by a secret remedy is as obvious a source of public peril as it is a heinous offence against professional morality. Every physician has a traditional and immemorial right to expect from, and he is bound to give to, his fellow practitioners every possible aid and assistance in the treatment of disease and in the healing of the sick. He has received such knowledge from his predecessors; he daily and continually receives it from his colleagues and contemporaries, to whose knowledge and experience, and from the results

of whose investigations (openly stated and submitted to critical discussion) he owes the great bulk of his knowledge and of his ability to practice at all.

A new method of treatment, a new drug, or a new dogma in medicine is like a new doctrine or a dogma in theology. The one is as much the means of physical salvation, as the other is of spiritual salvation. The man who keeps either of them to himself, as a profitable secret for his own mean gain, is a traitor to his profession; he is also a traitor to humanity, and he is false to his mission. It is fitting that the code should provide for such cases and that the penal clause should not remain a dead letter.

But it is sometimes suggested that the usefulness of the "secret" drug may be so great as to overpower and outweigh morality, and call for its prescription. I put it to you all, is there any foundation for such an assumption in the whole history of medicine? In the whole history of the past, can we recall any example of a secret medicine which had aught but the most insignificant value, or could not easily be replaced? We may take even the most famous, such as the famous remedy of Mr. Stephen for dissolving stone in the bladder, for the divulging of which eminent men petitioned Parliament for a grant of £5,000. It was granted, and what do we read of the remedy when divulged? That it consisted of calcined eggshells or of lime obtained by a filthy and obscene process. Naturally, and like *all* secret remedies when divulged, it ceased to cure. Hartley—the famous Dr. Hartley—one of the most strenuous supporters of the grant, died of stone in the bladder, after taking two hundred pounds of the remedy. In our day there is no such thing as a secret remedy in the true, or in any other than the trade meaning of the word. We doctors know the composition of all of them. They are secret only to the gullible public to whom they are to be sold. Pain annihilators, blood purifiers, vegetable and animal extracts, botanical nostrums, invigorators, electric belts, amulets and chains, Asiatic, African pills and phials, "green, blue and yellow electricity"—there is nothing secret about them.

When examined in our private or public laboratories, they are all found to be commonplace in composition, or if they have anything not well worn in use, it is merely the name of some indifferent or trivial matter—Indian grass or African leaf added, most often, and chiefly for the sake of novelty. These secrets are trade devices, with which we are not concerned. Let us visit those physicians who dabble in them with the severity of the code. I don't think that is asking more than is due to the honour of the professional body and the welfare of the people.

In respect, then, of secret medicines, at least, the world has up to this date lost nothing by the stern and scornful disapproval with which the medical profession regards these tricky nostrums, and by the punishment with which they visit, and always ought to visit, those who sell the honour of their calling and the free communication of medical knowledge which is the birthright of mankind for some mess of commercial pottage.

Finally, I will say a word or two of what is known as the etiquette of consultation. The patient, it is said, and is said cogently, has the right to determine whom he shall consult and to change his medical advisor if he desires so to do. No one will dispute that. But, like other rights, it is limited by the legitimate claims of others; and a medical practitioner may justly object if he shall be, without explanation or courtesy, superseded in attending on a case. In such event, moreover, the superseding practitioner is morally and ethically bound to take due care that the same courtesy and respect which he individually would expect to receive be paid to his discarded colleague, not only by himself, but by those who have professionally consulted him.

Every day cases of this kind occur; few days pass without bringing to me some complicated question arising out of them. The pages of our *British Medical Journal* are full of such questions. Very often, all I have to do is to say, "See Code, page so and so, section so and so," and that decides both the practice and the principle. Probably if that is the case with us, it might occur here also, and not less frequently. Of one

case I became cognizant here only the other day. An eminent doctor in a capital city of the United States of America was called in, came and saw a patient severely ill, said he would return; when the family physician returned in the evening, he was told, "But you are not any longer in charge; Dr. so and so has charge of the case." He said, "But I don't understand; I was here this morning." "Well, it was the particular wish of ——— that the consulting physician whom you called in shall take charge, and you are not wanted." Exit family doctor.

Once more, our College of Physicians explicitly directs that the physician called in to consultation by a brother practitioner shall not express directly to the patient his individual views and the conclusions at which he arrives, but that whatever he has to say shall be said after consultation with the practitioner, and through his mouth; that he shall behave with the utmost courtesy and forbearance to such practitioner, to whom shall be left all explanations and statements of the conclusion resulting from the consultation. Were it otherwise, were consultants authorized to supersede or to snub the family doctor, the public client would be the first to suffer. For anything which creates ill-will or unnecessary friction between consultant and family practitioner tends to limit the range and frequency of consultations. Therefore, it is forbidden to the consultant called in subsequently to assume the sole charge of that patient, however he may be entreated to do so, or under whatever inducement. Were it otherwise, the attending or family physician could not call in a consultant without the fear being before his eyes of losing the charge of his patient. There would arise at once the temptation to limit and restrict consultations, and this would be an impediment in the way of ascertaining the best means of cure by consultation. The strict observance of such rules and of the whole code as to consultations may sometimes be something of a personal trial to the patient, something of a personal loss to the consultant; but it is a rule which is of infinite importance to the public welfare.

The maintenance of a high standard of professional honour,

the acceptance, adoption and enforcement of a detailed code of professional etiquette, the agreement by all and the observance by every individual of the whole range of limitations and restrictions which are set up by that code, and by the logical deductions from it—these things are, I contend, demonstrably as valuable to public welfare as for any professional interests concerned or supposed to be concerned.

I infer from the repeated and enthusiastic plaudits with which you have honoured me that the opinions and conclusions which I have ventured to bring before you have agreed with your sentiments, and are accepted by you sympathetically, and that you consider them opportune and proudly useful.

I have been encouraged by your continuous signs of general and warm approval to speak at greater length than I had intended. But there is yet much more to say. In thanking you now for this most gratifying ratification by the unbroken plaudits of this representative general meeting of the argument which I have ventured to state, it seems to me of great importance to such progress or fair ethical development, I will only add that I shall be most happy to hear privately from any one who has doubts to solve or arguments to suggest, either for or against or in supplement of those which I have developed before you.

ONE HUNDRED CASES IN THE CORONER'S COURT OF MONTREAL, 1893.

By WYATT JOHNSTON, M.D., MONTREAL.

(Continued.)

II.—DEATH BY POISON (7 CASES.*)

Of the series of 100 cases death was assumed to be due to poison in 7, or 7 per cent. Of these deaths 4 were suicidal and 3 accidental. The nature of the poison was Paris green in two cases, Rough on Rats, chloral, chloroform, copper sulphate and lighting gas each in one case.

In the matter of demanding an official analysis the medical expert is placed in rather an awkward position, as special per-

* Reference has also been made to a few other cases which came under my notice during the same period.

mission has to be obtained from the department before this can be done. This necessitates an adjournment of the inquest and a considerable increase in the expense, although the modest fee of twenty dollars which is allowed as a minimum for the chemical examination in ordinary cases is too low to permit of any good chemist and analyst profitably undertaking the work.

It is not well understood that, on general principles, the motive for desiring an analysis is simply that the cause of death is not satisfactorily explained either by the autopsy or the other evidence at the inquest. In other words, when an autopsy is performed without decisive results the expert cannot feel certain that poison has not been the cause. In such cases I have made it a practice to state that it "could not be determined by the autopsy whether poison had been taken or not, and if the other evidence suggested poisoning an analysis had better be made," thus leaving the matter in the hands of the jury, who should be, of all persons in the world, best qualified to decide the question. It would be better if preliminary qualitative analysis (for a small fee) could be made in all doubtful cases, but under the present jury system this course is impracticable owing to the delay involved.*

A further disadvantage lies in the fact that at present we have no means in Montreal of freezing the suspected organs so as to check the progress of decomposition. Organs left at the ordinary room temperature soon develop putrefactive alkaloids, which closely resemble those of the vegetable poisons, while at the temperature obtained in an ordinary refrigerator, though the development of these ptomaines is less abundant, their composition and reactions resemble still more closely the toxic alkaloids. On the other hand, the more unstable vegetable alkaloids, and especially morphine, rapidly become decomposed and elude chemical analysis. In frozen tissues they remain unchanged for an indefinite period, so that nothing is risked by delaying an analysis except the results as regards volatile substances (prussic acid, chloroform, chloral, etc.)

* I have to thank Dr. R. F. Rutten for having kindly made qualitative analyses for me in several obscure cases.

My notes upon the cases of poisoning are as follows :

ARSENIC.

No. 30.—C. S., male, aged 40. Heavy drinker. Stated to have taken a large quantity of Paris green, with suicidal intent. Removed to hospital two hours later, when emetics and demulcents were given, with the result of inducing vomiting of a large quantity of greenish fluid. Moderate diarrhoea. The patient rallied at first, but afterwards died, six days later, in hospital.

It was suspected that the patient had obtained a fresh supply of the poison, and an autopsy was ordered, which revealed a moderately severe reddening and swelling of the mucosa of the stomach and intestines. No ulceration. No traces of the poison were visible to the naked eye. Other organs normal. No analysis ordered.

Verdict.—*Death from suicide by taking Paris green.*

No. 29.—C. G. S., male, aged 55. Had been acting strangely for about a year, but was able to attend to his business. Found about four hours after taking a large quantity of Paris green. A series of doses of sulphate of zinc were given, amounting in all to 160 grains, with mustard and mucilage. This was followed by violent and long-continued vomiting. The patient died from exhaustion.

Autopsy.—Walls of stomach intensely reddened and swollen, being nearly $\frac{3}{4}$ -inch thick through, and cedema and hæmorrhage into the submucosa. Surface of mucosa dark brownish-red, and covered with a brownish, shreddy, sloughy coat. Particles of bright green pigment seen lying on surface. The seproved, on chemical examination by Mr. Wolff, to contain both arsenic and copper. Mucosa and submucosa of small bowel intensely reddened and swollen, especially in the duodenum, which shows numerous bright green grains. Scattered particles of this substance are also seen throughout the whole intestinal tract as far as the rectum,

In the brain, symmetrical cystic spots of softening, involving both internal capsules and reaching from opposite the head of optic thalami back as far as pineal glands.

Conclusions.—1. Death has been due to an irritant poison. Particles of Paris green are found in stomach and intestines. 2. The condition of the brain is such as would probably be attended by mental weakness.

Verdict.—*Suicide while insane.*

(In my limited experience of arsenical poisoning, comprising about a dozen autopsies, I have never met with such intense inflammation and hæmorrhage of the stomach, and am inclined to attribute it partly to the repeated doses of emetic given.)

Case 32.—M. G., female, aged 50. Died two hours after taking a dose of Rough on Rats. Known to have had the poison in her possession for several weeks, and supposed to have taken some during that period. Symptoms.—Vomiting, diarrhoea and collapse. Treated by emetics and stomach-pump, with dialysed iron.

Autopsy.—Stomach: Mucosa reddened, punctiform ecchymosis at pylorus, contains 6 oz. of rusty-looking fluid (iron.) This substance

seen in small intestine as far down as the valve. Large bowel contains soft, whitish-gray mucus. Intestinal contents free from fœtor. Kidneys show nothing special. Throughout the liver, numerous grayish-yellow, blotchy patches, seen on microscopic examination to be dust. Diffuse and irregularly distributed fatty degeneration of the cells, not limited in any way to the periphery of the lobules.

(In this case the condition of the liver was apparently due to a former unsuccessful attempt at suicide. The absence of fatty change in the kidneys may mean that this was not done in the form of small, frequently repeated doses. No analysis was authorized, but a private chemical examination showed the presence of arsenious acid both in the stomach and intestines.)

As Rough on Rats is made by rubbing together white arsenic and charcoal, I thought it possible that some of the wood fibre of the charcoal might be recognized under the microscope in the contents of the intestine, and identified with that of the original powder, some of which was obtained. This did not prove to be the case, as the charcoal was found to be entirely in the form of small amorphous black nodules.)

SULPHATE OF COPPER.

A. G., aged 28, while despondent, made an attempt to cut his throat. which being unsuccessful, he drank nearly a quart of saturated copper sulphate solution out of a battery jar in the electric works where he was employed as night watchman. Death 1½ hours later. Consciousness retained till the last. Intense abdominal cramps, with greenish vomiting and diarrhoea.

Autopsy, 3½ hours p.m.—Intense rigor mortis. Six shallow transverse incisions in anterior region of neck, not penetrating further than the skin, edges lined with scanty dried blood-clot.

Stomach and intestines externally of a leaden-blue colour, contain a large amount of pale, grayish-green, flocculent fluid. The mucosa is dried and shrivelled throughout, and has the appearance of having been tanned. The mucosa of stomach is stained of a deep green, from imbibition of the fluid. Chemically, the contents of the stomach were found to consist of basic sub-sulphate of copper. Heart muscle and liver parenchyma look opaque and grayish. Unfortunately these organs were not examined for copper.

CHLORAL (?)—DILATATION OF STOMACH.—SARCINÆ.

Case 82.—One case of death after a dose of 25 grains of chloral occurred in a hard drinker, A. H., aged 30, male, who was suffering from a mild attack of delirium tremens, and was still under the influence of liquor when the dose was given. He became comatose almost immediately, and died in six hours.

Autopsy.—Lungs voluminous. Numerous small sub-pleural ecchymoses. On section, large amount of rusty froth on cut surface, with numerous small areas of hæmorrhage. No œdema. Bronchi filled with reddish froth. Pectoral muscles have a marked odour like alcohol. No special odour noticed in liver or brain. Heart not fatty. Stomach very large, reaching down to pubis; on opening, it contained

nearly two quarts of a frothy, brownish paste, having a sweet, alcoholic, yeast-like odour, and containing partly digested food. Under microscope, large numbers of sarcine found. Mucosa not thickened. No stenosis of pylorus. Other organs normal.

(In this case I did not feel able to decide whether the alcohol or the chloral, or a combination of the two, had brought about the death. The jury in this case probably came very near the mark in stating that the deceased "died from the effects of alcohol, having succumbed to an ordinary dose of chloral.")

It can hardly be looked upon as a safe procedure to give a full dose of chloral to an alcoholic without first giving him time to eliminate the alcohol from his system.

The coincidence of sarcina ventriculi and dilatation of the stomach was very interesting, this condition never having been, to my knowledge, noted in connection with sudden death. Possibly the dilatation of the stomach may have acted injuriously by impeding respiration, but there was no proof that such had actually been the case, and reflex interference could hardly be seriously considered in the case of a man whose system was narcotized by alcohol and chloral.

I also considered the possibility of the engorgement of the lungs being due to a commencing pneumonia, but this was definitely excluded by the absence of the pneumo-coccus in cover-slip preparations.)

DEATH FROM ALCOHOLISM (?)

I may mention here another case, No. 81, that of D. M., aged 36, male, a man who was not an habitual tippler, but who had been drinking freely for some days, and was found dead sitting upright in a chair.

Autopsy.—Body that of a hunchback. There was intense congestion of the head and upper part of the body, with numerous small ecchymoses in the skin over the chest and shoulders. The vessels of the brain were found gorged with dark fluid blood, and the lungs were dark, intensely congested, with extensive patches of extravasation of blood in their substance. The bronchi were filled with froth. The other organs were normal. No signs of injury.

(Evidently the immediate cause of death was asphyxia, but what was the primary cause of this asphyxia? A chemical analysis was made for opium and morphia, but with negative results. I am inclined to put down alcohol as the cause, as there appeared to be no mechanical explanation.)

In this case I found marked evidences of bronchitis, the bronchial mucosa being coarse and swollen and the tubes filled with mucus. The evidence taken by the coroner showed, however, that, though the deceased had suffered for several years back from bronchitis and asthma, his cough had been much better for some months back, and none of those who had seen him in the last days of his life had noticed him to cough much.)

CHLOROFORM INHALATION.

Case No. 83.—D. L., male, aged 24, laborer. Died suddenly while under chloroform, at the Notre Dame Hospital, for the reduction of a dislocation of the right shoulder. Had inhaled less than Zii . Took the anæsthetic badly.

Autopsy.—Moderate dilatation of the heart, with slight hypertrophy. Microscopically, no fatty degeneration. Slight diffuse fibrosis of kidneys. Lungs show abundant reddish froth on cut surface. Bronchi contain reddish froth. Other organs normal.

(The opinion given was that, while the heart and kidneys were not perfectly normal, there was not sufficient change in them to indicate that chloroform inhalation would be dangerous.)

I may append another case of death under chloroform, not in the present series.

S. L., aged 25, male. Died after inhaling 3iv. of chloroform from a Junker inhaler, preparatory to operation for removal of a bronchocele, in the Montreal General Hospital. The operation had not been commenced.

At the autopsy, the only abnormality noted was a decided enlargement of the spleen, which weighed 300 grammes, and a slight enlargement of the kidneys, which weighed 210 grammes each. The heart was found to be absolutely normal.

In both these cases the chloroform used was Duncan and Flockhart's. No analysis of the anæsthetic was ordered.

In answer to a question from the coroner as to whether chloroform was liable to cause death in healthy people, I stated that it was regarded by many as a dangerous anæsthetic, whose use was only advisable where for some reason ether could not be employed. The occurrence of two deaths from chloroform in a city where no death from ether has been recorded for several years, though ether is given probably five times as often as chloroform, seems to me to bear out this statement.

In neither of these cases was the death shown to be in any way due to carelessness or want of skill on the part of those administering it. The usual restoratives—including hypodermics of strychnine—were employed, but, as usual, without result.

ILLUMINATING GAS.

One case of death from this cause, included in my hundred cases, is sufficiently typical.

W., aged 74, who had never been in a city before, was told by the bell-boy in a Montreal hotel that he "could not" blow out the gas. He was found dead in bed next morning, having apparently perished through the attempt to demonstrate the falsity of the bell-boy's statement. The room was small and smelt strongly of gas.

The body, when viewed by me 48 hours after death, showed nothing unusual beyond an extensive rose-red colouration of the skin in the dependant parts. I was unable here to state that this was due to the characteristic change in the blood from the presence of carbon-monoxide, as the body had remained for so long a time in a very cold place, and in bodies kept in the cold a rosy-red change of the superficial parts affected by post-mortem lividity is very common. No autopsy was asked for, and the verdict was death from inhaling illuminating gas.

Some blood obtained after the inquest from the femoral vein was bright cherry-red in colour. On diluting and examining with a hand-spectroscope, *two distinct absorption bands are seen, which appear*

practically identical with those of oxyhæmoglobin. After adding excess of strong solution of ammonium sulphide, these bands become somewhat fainter, but still remain visible, and the band of reduced hæmoglobin does not appear. On testing in the same manner blood obtained from a healthy person, the band of reduced hæmoglobin appears promptly on adding a very small quantity of ammonium sulphide.

I have underlined part of the above paragraph because I find that [this simple and easily recognized means of establishing beyond doubt the presence of carbon-monoxide poison is not as generally known as it should be. It should be borne in mind that: (1) The spectrum of carbon-monoxide is practically indistinguishable from that oxyhæmoglobin, but (2) on adding a reducing agent the bands of oxyhæmoglobin become altered, while those of carbon-monoxide persist.*

Other tests for the detection of carbon-monoxide are the addition of caustic alkali, tannin solution, and other substances which give a different colour reaction when CO is present, owing to the fact that the monoxide-hæmoglobin resists the action of the reagent more than normal blood. I did not myself find that these reactions were at all as satisfactory as the spectrum test.

It must be remembered that if a victim lives a few hours after removal from the air containing the gas it will have disappeared from the blood. Hence the collection of a sample of blood should not be delayed. Placed in a well corked bottle, however, the blood will remain for a long time (over two years) without becoming altered, especially if diluted with an equal volume of saturated solution of borax.

Properly speaking, spectrum analysis of the blood ought not to be looked upon as part of an external examination of the body, though, as a rule, in other countries it is expected to be done by the physician making the autopsy and not left to the chemist. For practical reasons, however, I now make a spectroscopic examination form part of the view whenever death is supposed to be due to inhalation of gas, as it seems, in the interests of the public, preferable to do so than to have death attributed to this cause without any direct proof being brought forward.

* A freshly prepared solution of ferro-ammonium-tartrate works more rapidly than ammonium-sulphide as a reducing agent.

I may cite two other recent cases of gas inhalation where the cause appeared to lay in the defective nature of the stop-cock, in which the catch was so worn away that it could not be known with certainty whether the tap was turned off or not.

Cases 116-117.—Mrs. B., aged 60. Came in to Montreal on a visit from the country and went to bed with her little grandchild in good health and spirits. Both found dead in bed next day. Strong smell of gas in the room six hours later, although windows were open.

External Examination.—Rigor mortis present. Both bodies show rosy-red patches in skin of dependent parts. The little girl's body shows white, thick froth about the nose and mouth. No marks of violence. Bodies both lying faces upwards.

Blood obtained in both cases is of a bright cherry-red colour. Examined with spectroscope shows two absorptive bands in the green and yellow spectrum resembling those of oxyhaemoglobin. On adding excess of ammonium sulphide the lines persist and are still distinctly visible several hours later, though somewhat fainter.

(To be Continued.)

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

CASE IN DR. BLACKADER'S WARDS.—PRIMARY CANCER OF BRONCHIAL GLAND WITH TUBERCULOSIS.

(REPORTED BY DR. J. LEEING WALKER, HOUSE SURGEON.)

Joseph Taylor, aged 49, married; employed in woollen mills; entered hospital July 29, 1893, complaining chiefly of weakness and pains through chest and back.

Present Illness—Began about three weeks ago. He was seen by Dr. G. A. Brown on the 19th July, who reports the case as follows: His condition when first seen was one of marked prostration, accompanied with dry, brown tongue, thirst and frequent foetid stools. There was slight cough, with expectoration of small amount of muco-purulent sputum. Pulse 96, small and weak; respiration, 30; temperature, 98° F. His illness had commenced two weeks previously with a feeling of chilliness, pains in back, epigastrium and limbs, accompanied with diarrhoea and vomiting. In a week he felt well enough to resume work, but after a few days had again to take to his bed owing to weakness. From the 19th to the 28th

there was little change in the symptoms. The temperature reached 99° every evening; the pulse became distinctly weaker and increased in frequency to 120. There were occasional attacks of severe pain referred to epigastrium. The character of the diarrhoea had improved under treatment.

Personal History.—Born in England; came to Canada one year ago; has always been healthy; two years ago had the sharp pains over the left side, confining him to bed for seven days, but shortly afterwards he returned to work. Has never been very strong since, and during last winter had morning cough with expectoration. Used alcohol freely while in England, more moderately since coming to this country (glass of brandy at night); uses tobacco. No venereal history; no indications of scrofula or rickets.

Family History—Patient can give no information about his family history.

Present Condition—Patient is a somewhat emaciated man; face slightly flushed, presenting numerous stellate veins over nose, and malar prominences. Lies quietly on his back. Intelligence is good; mental state quiet; sleeps fairly well; no complaint of pain anywhere. Temperature, 98°; pulse, 108; respiration, 24.

Respiratory System.—Breathing easy; no dyspnoea; complains of slight cough, generally in morning, with scanty expectoration, muco-purulent in character. There is no history of hæmoptysis. Examination of sputum for tubercle bacilli gives negative results.

Physical Examination.—Chest expands equally on both sides; on palpation there is diminished vocal fremitus over left apex. Percussion in front reveals dullness over the upper part of left lung as low as fourth interspace, where it is blended with the cardiac dullness. Below this and in the axillary space the lung is resonant. Over the right lung, especially near edge of sternum, the note is somewhat hyper-resonant. At the back deep percussion reveals slightly impaired resonance over left apex. On auscultation the breath sounds and vocal resonance are found much diminished over the dull area in front. In first inter-

space near the sternum the breath sounds are tubular and the vocal resonance is increased. In upper part of left axilla breath sounds are bronchial. Over the right side the breath sounds are slightly puerile, with prolongation of expiration and a few mucous rales. Over back the breath sounds are normal. A few mucous rales are heard on the right side. The voice is somewhat husky.

Circulatory System.—Pulse small, but regular in volume and rhythm; arterial coats thickened; slight cyanosis of lips. The apex beat is diffuse and felt in fifth interspace $\frac{1}{2}$ in. to left of midsternum and $\frac{3}{4}$ in. outside nipple line. The superficial cardiac dulness blends above with the pulmonary dulness. Transversely it extends from $\frac{1}{2}$ in. to left of margin of sternum outwards $3\frac{1}{4}$ in. Auscultation reveals an accentuation of pulmonary second sound, but no endocardial murmur.

Digestive System.—Tongue coated, edges and tips red; appetite poor, thirst considerable; no vomiting. Bowels regular, moving once daily. Abdomen somewhat retracted; no pain or tenderness. Liver enlarged, edge palpable below costal margin has distinctly nodular feel; no tenderness. No enlargement of spleen.

Urinary System.—No change in quantity excreted: color light orange; reaction acid; specific gravity 1020. No albumen, no sugar, no bile. Microscopically no casts are to be seen. The patient was placed on a milk diet, and there was prescribed for him the following: Ac. hydrochlor. dil. \mathfrak{m} x., tr. nuc. vomic. \mathfrak{m} x., sp. chlorof. \mathfrak{m} x., aquam ad $\bar{\text{ss}}$. ter die sumendum.

Aug. 6th.—Night of 6th patient complained of great pain between shoulders, also in chest and upper part of abdomen. hot fomentations applied to abdomen, gave relief.

Aug. 16th.—Has had pains above mentioned on several occasions since last note; always relieved by application of hot fomentations. Patient has developed a diarrhoea with stools of a bright yellow color and very watery. He was ordered bismuth. carb. grs. xv, beta-naphthol grs. x, every four hours.

Physical Examination.—Over back there is dulness immediately below spine of scapula on left side, with a circumscribed

spot of about 3 in. diameter, over which sharp crepitant sounds are heard, persisting after coughing.

Aug. 25th.—Patient left the hospital to-day at his own request. Physical signs still the same, but he feels considerably better; has been free from pain for several days. The temperature during his stay in the hospital (28 days) occasionally reached $100\cdot5^{\circ}$, but for the greater part of the time was below $99\cdot5^{\circ}$.

Sept. 6th.—Patient re-admitted to hospital to-day. Pulse 104. Temperature 98° . Respiration 28. The emaciation is much more marked; weakness extreme; cough frequent with copious expectoration of thick, tenacious, muco-purulent sputum, examination of which shows presence of tubercle bacilli in fair numbers; respiration at times more rapid and laboured and accompanied by mucous rattle, distinctly heard on breathing. Physical signs much the same; rales more abundant over back. Complains of severe pain over region of stomach.

Sept. 7th.—Temperature, $100\cdot8^{\circ}$. Patient wandering in mind, but can be readily recalled.

Night of 9th.—Patient has been in a sleepy condition all day; during night breathing became difficult; good deal of cough. Temperature, $100\cdot2^{\circ}$; respiration, 32; pulse, 118.

Sept. 10th.—Patient is worse. Respiration accelerated and short; comatose, almost impossible to arouse him. Temperature, $102\cdot2^{\circ}$; pulse, 126; respiration, 52. Died at noon.

Post-Mortem Report by Dr. Wyatt Johnston.—Body of emaciated man. Subcutaneous fat of slight orange colour and dry. Rigor mortis present. Head not examined, owing to conditions under which post-mortem was obtained. Thorax—Diaphragm, right side, 4th interspace; left side, 6th interspace. Both pleuræ show slight adhesions, readily broken down, with a little soft, white lymph, most abundant on left side. Left pleural cavity contains a cupful of yellowish, turbid, serous fluid. The anterior mediastinum, near root of lung, presents infiltration of greyish-white, nodular masses. The pericardium contains about 5i. of slightly turbid serum. Heart—Large. All cavities distended with firm, dark clots. Over right auricle,

close to root of lung, there is a firm, greyish-white, nodular infiltration, which on section yields a large amount of milky juice. Valves of heart normal; left ventricle $\frac{3}{4}$ in. thick, aortic orifice 3 in., mitral 4 in., pulmonary 3 in., tricuspid 5 in. in circumference. Lungs—Left, weight 1050 grms.; base œdematous; upper lobe completely airless, greyish colour; bronchi filled with thick, white muco-pus; the lower lobe is very œdematous, and at its apex shows numerous greyish-white granules of infiltration, and a couple of small calcified nodules, the size of a pea. At root of lung is a large, firm, greyish-white mass of new growth, the size of a small apple. This has encroached upon the left bronchus, just below the bifurcation, and grown through it, so that the lumen is nearly occluded by a clump of five masses of new growth, each the size of a hazel nut, one of which has undergone extensive necrosis. This infiltration, evidently of a malignant tumour, extends upward on left side to just below bifurcation of trachea. Right Lung—Crepitant throughout; a little emphysematous in middle and upper lobes; lower lobe œdematous, and contains a good deal of blood, with a few greyish-white, granular areas of apparently broncho-pneumonia. Abdomen—The liver projects a hand's-breadth below costal border. Nothing unusual about peritoneum. The surface of liver studded with white, firm, raised nodules. Spleen—Small, normal. Kidneys—Weight each, 170 gms; parenchyma greyish and opaque-looking; columns of Bertini greyish colour. Bladder—Filled with ordinary urine, and normal. Testes—On left side slight hydrocele. Stomach—Looks quite healthy; bile ducts pervious. Pancreas appears normal; does not contain anything like a tumour. Portal vein and hepatic artery free. Supra-renals normal. Aorta and vena-cava normal. Retro-peritoneal glands not enlarged. Rectum normal. Intestines show no ulceration or tumour. Liver—Large (weight, 2730 gms.); infiltrated throughout with greyish-white, medullary looking tumour masses, ranging from size of pea to walnut; none of the superficial ones show anything like central depression, and nothing that can be regarded as primary growth.

Anatomical Diagnosis.—Primary cancer (lympho-sarcoma) of bronchial gland and left bronchus; secondary growth in bronchial glands, lung and liver; sub-acute broncho-pneumonia; cancerous pleurisy and pericarditis; slight parenchymatous nephritis. Microscopical examination of fresh section of nodule in liver (unstained) shows: Alveoli very large, with distinct stroma, filled with rounded epithelial cells, very small, not much larger than lymphocytes.

In this case the question of a new growth was thought of and discussed, but afterwards laid aside for that of tuberculous disease of anterior portion of left apex, with excavation and subsequent shrinkage of cavity, resulting in compensatory hypertrophy of right lung and displacement of heart.

Correspondence.

EXPERIENCE OF A SHORT VISIT TO SOME OF THE UNIVERSITY CLINICS OF EUROPE.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

DEAR SIRS,—According to promise I send you a short account of what I saw during a hasty run round the German continent this summer. I had only an opportunity of remaining over in each place from three to seven days. From June 18th to July 21st I visited Paris, Vienna, Prague, Dresden, Leipzig, Berlin, Hanover, Cologne, Bonn, Brussels and back to Paris; then on to London and Liverpool to return home via New York in the steamship *Majestic*.

June 18.—On my arrival in Paris I proceeded the following morning to visit the St. Louis Hospital. Here in this quaint old building (over 200 years of age) I found Dr. Lucas Champoniere at work. The operating room was large. it was not in good repair, though at one time it must have been a very pleasant and efficient room to work in. The heat of the room, from a large dry-heat sterilizer at one end of it, was intense. Phenic acid and sublimate solution seemed to be the antiseptics used. There was also a peculiarity noticed, not seen often now-a days—an antiseptic spray of the old Lister type was going at full pressure during the entire period of operating. Chloroform was the anæsthetic used, and the patient

was every now and then revived by the inhalation of oxygen. This was supplied from large rubber bags which looked like green cloth-covered bolsters. It was certainly very interesting to witness the effect a few inhalations from this oxygen bag had upon the patient when dangerous symptoms set in. From an ash-coloured lividity of countenance and a failing heart, a bright pink complexion and return of pulse ensued, and all was well. I understand Mr. Chapman, of Montreal, has imported a few of these bags, which may become useful in over-etherization as well as from over-doses of chloroform.

In connection with the St. Louis Hospital there is an excellent museum, where two skilled men are employed putting up specimens.

I next visited the Maison Municipal de Sante. This is a large hospital somewhat more modern than the St. Louis or La Charité. It is arranged on the continuous terrace plan, surrounding beautifully laid-out gardens with well-kept gravel walks, the whole pleasantly enlivened by beds of variegated flowers artistically arranged. Here I saw Dr. Paul Segond at work in a small, well appointed operating room.

June 28.—Arrived at Vienna, having passed through Zurich and Innesbruck. Visited Schauta's clinic the following morning. This clinic takes place five mornings in the week at 11 to 1 o'clock, in the large lecture theatre, or what was originally an operating theatre. In Austria and Germany gynæcological operations are not performed in large theatres before students. They are done very early in the morning in small private operating rooms before only a limited audience of visiting surgeons or physicians. I did not see more than two or three at any one operation, besides assistants. The large theatres are used for the purpose of demonstrations on patients before and after operation, and for lectures upon pathological specimens; also obstetric examinations and demonstrations are carried out here.

Upon this occasion there were a few interesting cases. One was that of a patient with a rachitic pelvis. She was pregnant at about full term. Labor was in progress. Schauta spoke for a short time upon the case, and said he would send her back to the ward to be delivered naturally. Next was a case of a large hæmatoma of the head of a newly-born infant.

He punctured the cyst with a trocar and attached an exhaust jar. In this way he drained the blood cyst and applied pressure by means of strapping of the entire head. He spoke of the great difficulty of diagnosing compressibility of bones of the head by external palpation, which was acquired only by long experience. He demonstrated this fact on a patient at full term, and by finding the bones compressible he sent the patient back to the ward to be confined without the aid of forceps. He also handed round his class a newly-born infant, so that a very compressible head could be examined and its peculiarity carefully noted.

Schauta next handed round a number of beautifully prepared pathological specimens in spirit, of ovarian and tubal disease. The majority of them were pus tubes. He gave the history of the individual cases and a clinic upon the methods of diagnosis and the treatment applied in each case, with the post operative course. He said the diagnosis of and operation for pyosalpinx were amongst the most difficult procedures in the whole range of surgery. He spoke of Thur Brandt's method of massage in such cases, and condemned it very strongly as a practice in treatment. He spoke of two cardinal symptoms met with in cases of pyosalpinx, viz, pain and hæmorrhage, dysmenorrhœa and painful defecation were very constant symptoms. The hæmorrhage was due to endometritis, and that it was almost always present in these cases. He also spoke of the various reflex phenomena associated with pyosalpinx cases, such as gastric disturbance, reflex cough and headache; skin conditions, such as urticaria and eczema. Altogether the patient frequently assumed a condition of extreme misery, all of which was very characteristic of these patients. Massage and electricity were looked upon by him as exceedingly dangerous proceedings. He referred to a fatal case of pyosalpinx which recently came within his observation which had been treated by electricity, and he knew of a number of fatal cases resulting from massage.

Some of the specimens exhibited by him and upon which he spoke were characterized by extensive adhesion to adjacent parts, especially the ascending and descending colons, and when the tube became adherent to the ovary by its fimbriated extremity it invariably caused abscess formation in

the ovary (tubo-ovarian abscess). It was these adhesions in various degrees of density which made the operation for pyosalpinx so extremely difficult. He advised operation in all such cases as the only means of relief.

Prof. Schauta is a skilful operator; he is, however, not a strong or impressive expounder. He possesses, notwithstanding, some of the most valued attributes in a teacher. He is extremely patient and minute in detail with his student, never allowing him to depart without thoroughly understanding that which he has been most patiently trying to teach him at the bedside. All of the teaching is carried on in the large theatre, capable of holding from 170 to 200 students. The woodwork and walls are painted white, in fact, every article of woodwork is white. The floor is mosaic asphalt, irrigators of glass with solutions of various colours. Abdominal sections are performed in small private rooms before a limited audience.

I also visited Prof. Chrobak's clinic. He was then engaged in demonstrating to his large class the foetal circulation with coloured chalks on a transparent box fixed on the window. Chrobak uses his theatre only for lectures and demonstrations. His methods of teaching are the same practically as Schauta's. The student examines the patient with help of advice from his teacher, and as he progresses makes a probable diagnosis and gives his ideas of treatment, etc. The clinic conducted in this practical way the student is impressed with the necessity for observation of detail and thoroughness. Obstetric cases at, and approaching full term, are used for instruction in this manner. Gynæcological cases are seen and examined in this way before operation, and after operation before the patient leaves the hospital. Amongst other cases upon this occasion was one of turning at term in a narrow pelvis. The first assistant pulled down one foot in the usual manner and sent the patient away to the ward to be confined. I understand that turning is performed very much more often now in Germany than formerly and the forceps consequently less often applied.

Prof. Chrobak also delivered clinics on several very interesting cases before, and some after, operation for large uterine myomata and ovarian tumors. I admired very much his

beautiful oil paintings of pathological conditions of the sexual organs. They were done by eminent artists on a sort of cardboard about two feet square. The coloring of these paintings was exceptionally good and true to nature; I saw them only in Chrobak's clinic. Each plate illustrated the condition of the patient under consideration at the time. Antiseptic methods are carried out in these clinics in a most thorough manner. There is no difference of opinion on this great subject; it is a matter of who shall show the greatest power of originality of thought towards the accomplishment of the most perfect technique. In this respect Germany is to be congratulated for her solid wisdom. This profound respect for antiseptic surgery in detail must command the admiration of all other nations, and has made her to-day the great post-graduate finishing school of the world.

July 5.—I left Vienna for Prague. On arriving at this quaint old city I visited Prof. Von Rosthorn's university *Frauen-Klinik*. The building is new and situated in the grounds of the general hospital. It is a fine stucco building, every part inside is of stone, iron or cement. The operating room is a model of perfection. The clinic has accommodation for 34 patients, all purely gynæcological cases. The wards were all full of most interesting cases, nearly all of abdominal sections. Von Rosthorn uses one of the original Trendelenberg tables. He uses silk and catgut for ligatures and the cautery instead of the knife or scissors. He is a rapid and careful operator, the outcome of constant experience at one kind of surgery. He resorts very seldom to drainage, and when he does, prefers gauze to tubal. I saw in his clinic one case on the seventh day after operation for tubal pregnancy. The gauze abdominal packing removed in my presence came away quite easily without any pain to the patient and was still aseptic.

Von Rosthorn used small-sized material for ligature, whether silk or catgut. I observed no sponges or towels in this or any other operating room in Germany. The patient after being anæsthetized is stripped nude, prepared for operation by the assistants, and covered with sterilized gauze. She is then wheeled to the operation room and gently lifted on to the operating table. Besides the assistants there are gener-

ally two or three guests present. In closing the abdominal wound Von Rosthorn used three rows of suture, the first of fine catgut for the peritoneum, the second also of catgut for the fascia and muscles, and the third for the skin. This last suture was, in his practice, of silk; it was a peculiar running blanket stitch and looked very nice when finished. I was somewhat impressed with this many-suture style of closing the abdomen. It certainly has many advantages, but is suitable only to very rapid and expert operators. It closes at once the cavity and no blood can continually flow into it from muscle or skin punctures during the passing of needles. It also produces much less tension on the wound and therefore less pain, as the tissues from peritoneum to skin are not drawn up all together and constricted by one very tight silk-worm gut suture. I had the pleasure of witnessing many abdominal sections at Prague, especially through the kindness of Prof. Von Rosthorn. These included several abdominal hysterectomies by the new method known as Zweifel's or Chrobak's. It is a very interesting operation and gives most excellent results. Von Rosthorn has charge also of the maternity clinic, which is in a separate new building. He informed me that he superintends the confinement of about one thousand cases annually. It is a magnificent clinic and well equipped. He showed me the original old building where Scanzoni conducted his obstetric clinic years ago, with its fearfully high mortality. The building was so old and dilapidated that it had become deserted for some time past. After spending a week in Prague I went on to Dresden.

On my arrival at Dresden I went to see Prof. Leopold's famous *Frauen-Klinik*, situated in the grounds of the general hospital. It is a large stucco building of modern architecture, containing both the gynæcological and obstetrical wards. I had the pleasure of meeting Dr. Williams of Baltimore here, with whom I spent a pleasant day. I witnessed some of Dr. Leopold's operations; he operated in a small, well-lighted operating room with marble walls and mosaic floor before a few visitors and private pupils. I am told this is one of the finest obstetrical clinics in Europe. Leopold uses heavy silk in abdominal work; he passes this through all structures forming the abdominal wound, and applies finer silk for inter-

mediate stitches; no drainage. He treats endometritis with painful menstruation by means of a series of tangle tents, continuing the dilatation morning after morning until the uterine canal is dilated to an enormous size. By the combined use of these and hard rubber dilators he effects the dilatation. He uses ether in abdominal work. He showed me two cases convalescent from symphysiotomy, one on the eighth day, the other on the seventeenth day after operation. The dressing consisted of a strong web strap with buckle across the hips, which controlled the bony pelvis. He also used a permanent catheter in these cases.

From Dresden I went to Leipzig. It is a beautiful old city, very clean and possesses many attractive features. I called at once upon the genial and highly respected Prof. Sanger, from whom I received much kindness and courtesy during my visits to his private hospital. His hospital accommodates about 25 patients. These are received and allotted to separate rooms, which are appointed with every appliance necessary. The passages and areas are large and there is a large garden in rear of the building. In the basement are two large steam sterilizers which furnish the operating room with sterilized water from condensed steam. There is also a large bath-room in the basement, fitted out with all the modern methods for treating diseases of women by water. The kitchen is beautifurnished, tile flooring, and is a model of cleanliness. The operating room is on the second floor; it is not large, has painted walls, and the floor is covered with a sort of thick rubber linoleum material, so commonly seen on floors in Germany. The room is ventilated by a large opening in the centre and cold air is admitted at the sides. Dr. Sanger's operating table and instrument cabinets are of his own design. Sand is used as a mechanical cleanser of the hands. Permanganate of potash and oxalic acid is also used by Dr. Sanger, and he claims to have been the first surgeon to have used them by many years. He uses fine silk in all his operations, the silk suture being divided by the assistant in charge of the ligatures with the spirit lamp. This makes the silk easily threaded and is more advantageous for other reasons. Dr. Sanger has on his staff ten pupil assistants, one of whom is a resident; he needs only two, however, at each operation,

besides the anæsthetizer. He uses no sponges or towels in his operating room, and only sterilized water. In vaginal hysterectomies he uses silk ligatures, removes the adnexa and turns the stump into the vagina and closes the cavity without drainage. He does his own operation for prolapse, sterilizes all ulcerating points with the cantery and uses silver wire in the perineum. It is a long operation, taking sometimes as long as two hours and a half. Part of this time patient lies not under the anæsthetic. He said he often did the operation without an anæsthetic. He uses ether.

At the General Hospital in Leipsig I visited Prof. Zweifel at his clinic. He was also very kind in showing me through the clinic. It is a very large building, quite new, being finished last year. It is magnificently appointed, the passages are very large and the system of ventilation ensures the most perfect purity of the air. The large theatre in this clinic is certainly the finest I have seen in Europe in splendour and size. No major operations are performed in it; it is purely for lectures and demonstrations on patients before and after operation. All major operations are private and performed in small, well appointed operating rooms, before a limited audience of visitors. Prof. Zweifel is the chief or director in absolute control of this clinic. He has a magnificent suite of private apartments as offices, microscope rooms and chemical laboratories, in fact, everything that can be required for the advancement of the science of his specialty. His principal operating room, where he does only abdominal surgery, is a model of perfection and ingenuity. The room is about 18 feet square, the ceiling very high, and has attached a net-work of metal water pipes which are perforated by numerous small apertures. At will Prof. Zweifel can fill the room with superheated steam and clear it with a perfect shower of rain. This rain comes from the perforated tubes on the ceiling, the water to which has been turned on at a given moment. In this way the walls and floor are thoroughly flushed and the air purified of all particles of foreign matter carrying infection. It is most ingenious and is a topic of favourable comment all over Germany.

Cold air from without is admitted through ventilators situated near the ceiling covered with wet gauze; the ven-

tilators for the return air are situated on the wall near the floor. The whole of one side of this chamber is glass, and the ceiling is also of glass. The glass sashes are double, as is the case throughout the whole continent. The wards in this clinic are simply large rooms, containing not more than five or six beds. The capacity of the clinic is 150 beds, including obstetric cases.

In speaking of symphysiotomy, Prof. Zweifel informed me that he had performed the operation on 16 patients recently, and that they had all done well. He said he did not suture the wound until 24 hours after the operation, so as to favour blood clotting. He did not use forceps in such cases, but simply "opened the door and allowed the little stranger to come out at his leisure." He thought the operation better in the interest of both mother and child, but that there was a possibility of the pelvic bones remaining mobile from faulty union. In North Germany the operation is performed very frequently, but in South Germany it is seldom required.

In performing abdominal hysterectomy Prof. Zweifel claims to have been the first to adopt and practice the retroperitoneal method (performed first by him 12 years ago.) His method differs slightly from Prof. Chrobak's. Zweifel takes his larger flap from the anterior segment of the uterus, and covering the stump with this he throws the cervical stump into the anterior *cul de sac*. He says that the anterior flap is more loosely attached than the posterior, and being thicker will tend to nourish the stump better. He uses catgut and silk as ligature material, uses the cautery instead of knife or scissors; for drainage I saw him only use gauze; his anæsthetic is ether.

Chrobak's method consists in taking his flaps from the posterior and anterior uterine segment and turning the stump into the posterior *cul de sac*.

From my experience in witnessing the various operators performing hysterectomy throughout Germany I have concluded that practically there is very little difference in method. The main point remains the same, namely, that the cervical stump is left in the pelvic floor and is covered by peritoneum after the vessels have been secured by firm ligatures on each side. The flaps were taken from the anterior

and posterior segments according to the size, shape and other points in the nature of the individual growth then being dealt with.

Prof. Zweifel, when operating, sits between the patient's legs, as Martin, of Berlin, does. He says he has tried all other positions and likes this the best. He uses catgut and interlaces his stitches. He divides tissues with the cautery instead of knife or scissors; uses no sponges. If necessary he turns the intestines out on antiseptic gauze and gets properly at the diseased parts in the bottom of the pelvis. He does not keep his instrument in water while operating, and sterilizes his hands by solution of sublimate. I saw him re-open one case on the third day following operation. At the original operation he had introduced through gauze drainage from the opening in the anterior abdominal wall to the vagina. The patient had high temperature on third day, he found no pus, some serum. He attached fresh gauze to the original and pulled it through by traction on the vaginal end. I think glass abdominal drainage would have been better in this case.

July 15th.—Arrived at Berlin and next morning visited Prof. Olshausen at the University *Frauen-Klinik*. The magnificence of this clinic is well known. It is not, however, as new and palatial as Prof. Zweifel's clinic at Leipzig. I saw Olshausen do several abdominal sections. He is a very rapid operator; uses medium-sized catgut for his pedicles. He uses three rows of sutures, all of catgut, in closing the abdominal wound. He told me he had not seen the slightest defect in the last 100 cases on which he had used this method. He operates in a small room, the inside of which is largely of glass. He has many assistants; so rapidly does he operate that one patient is being anaesthetized while he is beginning to operate on another—one patient is wheeled out while another is wheeled in. He uses the cautery instead of knife or scissors; no sponges. He covers his patients with pure gum rubber sheeting; stands on the right side of patient, who is resting on an ordinary horizontal table. He uses chloroform or ether, according to the case under operation. In order to see Prof. Olshausen operate it is necessary to call on him beforehand, enter your name and address in a register; telephone word will be sent you that evening to inform you of your presence

being required at the Royal University Clinic at a certain hour next morning. If you are a moment late the porter will not admit you; if on time you are clothed in fresh linen and ushered into the surgeon's operating room, where you will find him at work.

From Berlin I went to Hanover and on to Cologne and Bonn. At Bonn I had a pleasant interview with Prof. Trendelenberg, the inventor of the now famous position and table for placing the patient in that position. I also visited the famous old university at Bonn; it has 1,500 students enrolled on its register, 350 of whom are in medicine.

From Bonn I returned to Cologne, then on to Brussels and back to Paris.

I feel I have already made this letter much longer than I had originally intended, and therefore have encroached overmuch upon your valuable space. I hope, however, those who intend taking a similar holiday may find a point or two of a passing value in it.

I am very sincerely,

T. JOHNSON-ALLOWAY.

23 Mackay street, Montreal, Oct. 4, 1893.

Reviews and Notices of Books.

The Anatomy of the Peritonæum. By FRANKLIN DEXTER, M.D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons (Columbia University), New York. With thirty-eight illustrations. New York: D. Appleton & Co. Montreal: Wm. Foster Brown & Co., 233 St. James street.

In the handling of this difficult subject a great deal of skill is shown. Starting from the time when in the embryo the alimentary canal resembles a tube, the changes are graphically portrayed by means of illustrations of a diagrammatical nature. The development is traced step by step, so that no one can avoid understanding the subject, for, unless the manner in which the changes are produced is studied, it is impossible to explain the anatomical conditions present. The pamphlet is of great use to students of anatomy, as well as to practitioners who wish to arrive at a clear understanding of the anatomy of this important part of the human organism.

A Chapter on Cholera for Lay Readers: HISTORY, SYMPTOMS, PREVENTION AND TREATMENT OF THE DISEASE. By WALTER VOUGHT, Ph.D., M.D., Medical Director and Physician-in-Charge of the Fire Island Quarantine Station, Port of New York; Fellow of the New York Academy of Medicine, etc. Illustrated with colored plates and wood engravings. In one small 12mo. volume, 110 pages. Price, 75 cents net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry street.

The author has written this book to give a clear and comprehensive idea to the reader of what cholera really is. He first defines it, and then gives a short account of its history, and gives the route of the pandemics which from time to time have devastated Europe and America.

The causation of the disease is fully gone into, and the conditions necessary for its development in human beings are given as the presence of cholera bacillus, the entrance into the body of these germs, and a condition of the body suitable for their growth and multiplication. The symptoms, diagnosis, prognosis, treatment and prevention are described, as well as the disposal of the dead, quarantine and disinfection.

The author says:—"The knowledge that it is only the discharges and vomited matter that are the source of contagion, and that in no other way than by the entrance into the mouth can the disease be conveyed from one person to another, and that proper and thorough disinfection of these discharges is the only way that the further spread of the disease can be stopped, should be so effectually disseminated that a condition of panic among the inhabitants of a place could not develop." This is most excellent advice, and can be carried out in no better way than by reading this volume and recommending it to others.

The book is well printed, and illustrated by several plates, coloured and otherwise.

Diseases of Women. By Dr. LEWERS. Fourth edition. Published by H. K. Lewis, London, England.

This work has now reached its fourth edition, which shows that it has more merit than many of the so-called practical

works on Gynæcology published. There have been but few changes introduced into this latest edition, but Dr. Lewers has found it advisable to recommend the use of laminaria tents for dilatation of the cervix sufficiently to admit the index-finger, except where the dilatation is performed soon after labour. Dr. Lewers strongly advocates supra-vaginal amputation of the cervix in all cases of cancer beginning in the vaginal portion of the cervix. He records twenty-two such operations without a death, and gives a table showing favourable results as to recurrence. The differential diagnosis given throughout the text is very good, and would prove useful to either a student or general practitioner. The chapter devoted to fibroids of the uterus, and the author's description of Apostoli's electrical treatment, is short, clear and concise, and his criticisms of the same very just. As a rule, the treatment and operations described are good and well up to date; but, in describing laparotomy, Dr. Lewers advises the use of the spray during operation. This has very properly been discarded now by most laparotomists, as it is irritating to both patient and physician, and is not at all necessary if one is careful about asepsis and antisepsis in his hands, instruments, etc. Taking it altogether, the work is just what Dr. Lewers intends it to be, viz., a practical work on "Diseases of Women," and will be found useful by students and general practitioners.

A Hand-Book of Diseases of the Eye and their Treatment. By HENRY R. SWANZY, A.M., B.A., F.R.C.S.; Surgeon to the National Eye Infirmary, and Ophthalmic Surgeon to the Adelaide Hospital, Dublin, etc. Fourth edition, with illustrations; 506 pages and index. Philadelphia: P. Blakeston, Son & Co. 1892.

The brief interval of two years between the third and the present edition of this excellent work is sufficient evidence of its continued and well merited popularity. It is a medium-sized book, not so large as to discourage the beginners, or so small as to sacrifice essential details.

The author presents the whole subject in a most readable form, and is well up to date from the standpoint of European ophthalmology. The chapter on diseases of the crystalline

lens is an admirable illustration of the remarkable advance made within the past few years in operative ophthalmology, and may be taken as an excellent guide for anyone whose experience in operations on the eye is of a limited character. As in former editions, the discussion of pupillary reactions in health and disease is a pleasing feature of the work, not met with in most of the other well known ophthalmic text-books; and the discussion of amblyopia and allied conditions in connection with lesions of the central nervous system will be found instructive even to the advanced specialist in this department of medicine. The subject of color-blindness has been largely re-written and is presented in a concise and thoroughly practical form in an appendix of eight pages.

On the whole, the work is one which merits the full confidence of the profession, and will doubtless continue to hold its place in the front rank of works on diseases of the eye.

Operation Blank. Prepared by W. W. KEEN, M.D., Professor of the Principles of Surgery in the Jefferson Medical College, Philadelphia. Second edition. W. B. Saunders, Philadelphia.

This is divided into two parts, one to be given to the nurse and the other to be sent to the drug store, after checking off the items. In this way much time may be saved in giving instructions to the nurse, and there is no fear of forgetting any important particulars. On the back of the pad is printed a list of instruments required in various operations.

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- Cocaine Poisoning.** By J. B. MATTISON, M.D., Medical Director, Brooklyn Home for Habitués. Reprint from *The Medical and Surgical Reporter*, Nov. 5, 1892.
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- Cocaine Inebriety.** By J. B. MATTISON, M.D., Medical Director, Brooklyn Home for Habitués. Reprint from the *Medical Record*, 22nd Oct., 1892, and 14th Jan., 1893.
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- Proceedings of the State Sanitary Convention,** held under the auspices of the State Board of Health of California, at San Francisco, April 17th, 1893. By J. R. LAINE, M.D., Secretary, State Board of Health.
- Report Relating to the Registration of Births, Marriages and Deaths in the Province of Ontario for the year ending 31st December. 1891.**

Society Proceedings.

THE MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, April 14th, 1893.

JAMES STEWART, M.D., PRESIDENT, IN THE CHAIR.

Paralysis of the Arm following the Application of an Esmarch's Bandage.—Dr. JAMES BELL related the history of the case, the circumstances being, in his experience, unique. A young woman, 20 years old, admitted to the hospital Jan. 16th, with ankylosed elbow joint. The position was not a very bad one, being a little greater than a right angle. The history of the injury was as follows: On the 6th of last July she fell in a car, and, knocking against the wall, hurt her elbow. At the time she did not pay much attention to it; but after awhile, the joint having become stiff, it was thought necessary to call on a doctor. The latter attempted passive motion, which was partially successful, but the ultimate result was ankylosis in the above position. Excision of the joint was advised, to which she after awhile consented, and the operation was carried out in the ordinary way. It was noticed, after removal from the operating room, that she had no power in any of the fingers, and that even sensation was not normal. Owing to the hand being encased in dressing, no very accurate observations could be made for some days, but it was remarked that the fingers perspired profusely. At the end of the third day after operation, being anxious and unable to explain the paralysis (the operation was done sub-periosteal, and he was sure no injury had been done the ulnar nerve, besides injury to the latter would not account for paralysis of all the fingers and muscles of the forearm), the dressing was removed, and the explanation was at once patent. The Esmarch had been applied in the upper portion of the arm, just above the belly of the biceps, and below the prominence of the deltoid, and it had been tied so tightly that the skin was blistered. There was consequently no longer any doubt as to the Esmarch being the cause. The whole operation only occupied 40 minutes, so that the band altogether could not have been applied more than half an hour. Upon the discovery of the neuritis she was at once put under the care of Dr. Stewart.

Motor paralysis remained absolute for three weeks. On the 21st day the first sign of movement returned, being a slight motion of the thumb; and after about six weeks' treatment she returned to her home with almost complete power of the arm. Once movement began to appear, it progressed very rapidly. She was able to flex and extend the arm and fingers completely, though not with the full amount of power. There, however, was no motion deficient.

This case is very instructive and very important, in view of the frequency of the application of the Esmarch. It is interesting on account of its rarity. It was the first time he had met with the accident, and considering the number of operations he had seen in the last twenty years, and the recklessness with which the Esmarch had been applied in all sorts and conditions of patients, it seemed to him that this must indeed be a rare complication. It could hardly have occurred had the Esmarch been applied in any other part of the body; but it is a lesson well worth bearing in mind.

The PRESIDENT drew attention to the value of electricity in prognosis. This case, even up to the second week, presented no signs of the action of degeneration, so that, although the paralysis at the time was absolute, he could give a favourable prognosis, and the ultimate result justified it.

Myeloid Sarcoma of the Second Metatarsal Bone.—Dr. ADAMI exhibited the tumour because its position, namely, the second metatarsal bone, is distinctly uncommon, and therefore worthy of record. It was removed in the hospital recently by Dr. Shepherd, during which some difficulty was experienced, owing to the deep arch passing close beneath the second metatarsal bone. The arch was cut across and considerable hæmorrhage was experienced. At first it looked as if the tumour had grown from the tendons, owing to the latter being closely applied to its upper surface. Further examination, however, showed this was not the case; the tendons were with moderate ease dissected off, and the tumour seen to be attached to the bone. On examining the tumour microscopically, thin fibrous bands are seen stretching across the tumour, originating from the periosteal surface of the bone. We are then really dealing with a periosteal tumour. Further examination shows it to be a very pretty and very good example of a myeloid

sarcoma. The main features are large spindle cells of various sizes; and amongst these some very large giant cells multinucleated. In addition to these, and accounting for this being rather a slow growth, there is a considerable amount of fibrous tissue in the tumour, and which in places has undergone hyaline degeneration. The correct name, therefore, for the growth would be hyaline myeloid sarcoma. The patient was a young man.

Upon Horse-Pox Affecting the Cow.—Dr. ADAMI brought this subject before the Society, not because his observations could be considered as other than at their commencement, but because at the present moment great interest is being manifested in the subject of vaccinia and the various diseases allied to or liable to be mistaken for it.

In Montreal, horses are very subject to horse-pox, and especially during this winter has the disease assumed the character almost of an epizootic. Dr. Adami himself had seen as many as twenty cases. It would seem to come on just about the time of a thaw, when the horses in their work about the streets are very much exposed to partly frozen water about the lower portions of their legs. Many of these cases this winter have been associated with the production in the groom, or those attending the horses, of definite eruptions, very similar to the true vaccinal pox. Dr. Bell and others present could give records of grooms and others going to the hospital with pocks on the hand, lips and face obtained in this way.

The case in question was one which occurred in the stable of Mr. Strathy, a gentleman who has well-kept stables. Unfortunately less than a month ago both his horses were attacked with horse-pox. Now, it is the custom in Montreal with many people to keep a cow in the stables with the horses, for greater warmth as well as for domestic convenience. Such was the case in Mr. Strathy's stable, and the cow was milked and tended to by the groom who looked after the horses. One horse had the pox about ten days, the other the greater part of two weeks, when it was noticed one Monday that there were upon the two posterior teats of the cow a small papular eruption. On Wednesday Mr. Baker very kindly showed him (Dr. Adami) the cow; the papules had then be-

come distinct vesicles, and on the Friday following they showed well-marked scabs. There was a certain amount of inflammation in the vicinity; but this had been reduced to a minimum by the cessation of all manipulation of the udders and by employing a milk tube to draw off the milk. The scabs were very characteristic and accorded wholly with the classical pictures given of the true cow-pox affecting the udders and teats of the cow. The history seemed to be most clear. The stable was outside Montreal; the horses and cow were kept apart from all other animals, and they were attended to by the same man; the cow showed the characteristic eruption. It would seem most probable that here we were dealing with a case of horse-pox communicated to the cow by the milker, who was at the same time groom. A week previous to the meeting Dr. Adami had inoculated a calf with the scabs rubbed up in glycerine, and again with the knife that he had employed in removing these scabs, with the result that on that day there were to be seen on the latter well marked typical vesicles, some beginning to dry up, some becoming slightly pustular, such as one gets in vaccinating the cow for the purpose of obtaining vaccine lymph. This is a subject of extreme interest. One hundred years ago Jenner declared that cow-pox was produced from horse-pox. On further investigation it was seen that he had made a mistake, that he had inoculated "grease" instead of horse-pox, and ever since the anti-vaccinationists have availed themselves of this circumstance as a fruitful source of derision in their attacks. Since then there have been many workers in this line, but the conclusions drawn have been very vague ones. He thought that the present case afforded an opportunity of doing some good work in clearing up the difficulty and establishing the identity or separate status of horse and cow-pox. Having once obtained a cow-pox from a horse, as we almost surely have done, and then by inoculation from the cow obtained typical vaccinia in the calf, if some human being will allow himself to be vaccinated by this lymph from the calf, and typical vaccine vesicles or pustules are obtained, Dr. Adami held that he would go near to prove that these two conditions are identical. It is an experiment well worth carrying out, especially as there is a commission now working on this subject in London

and so far they have been able to arrive at no very definite results. Dr. Adami expresses his indebtedness to Dr. Baker for much assistance in this case.

Dr. JAMES BELL saw two cases during the winter of horse-pox in grooms. The first man came with a sore on his lip; it was large, hard and indurated, with depressed, umbilicated, vesicular surface; enlargement of the lymphatic glands beneath the jaws. It was at first regarded as a hard chancre, though the man persistently denied any confirmatory history. Finally, on learning his occupation and whom he worked for, his case was better understood. No doubt it was a case of horse-pox. He was a groom to a gentleman whose horses had been afflicted with the disease this winter. Moreover, the subsequent history and development of the case confirmed the diagnosis of horse-pox.

The other case was seen some time after the foregoing, and, with the benefit of this experience as a guide, a diagnosis was more readily made. His was a sore thumb, and although the history is not so reliable as in the first case, still he (Dr. Bell) was practically sure it was a case of horse-pox.

Now, if it can be inoculated on the groom it can be inoculated on the cow, and this is another link in the evidence going to prove the identity of small-pox in the different species of animals, only modified by the special organism in each case. He asked for some information as to a differential diagnosis between "grease" and "horse-pox" in horses. It seems rather suspicious that horse-pox should be so prevalent in horses at a time of the year when they are exposed to wet and damp weather, which is known to be the cause of "grease" in these animals; or, in other words, that a good many cases of "grease" are diagnosed as horse-pox.

Dr. D. J. EVANS said that a case of this kind came under his observation some three weeks ago. A groom who was attending to three horses, all of whom were afflicted with the pox, happened to get a slight scratch on his hand. At the seat of the scratch a little inflammation was noted, with some slight constitutional febrile disturbances; a vesicle formed, which in a few days became pustular, when it broke, and a marked little ulcer remained. The ulcer finally healed up, and left a distinct cicatrix behind.

Dr. KIRKPATRICK asked if horse-pox protects against small-pox in the same way as when the vaccine has passed through the calf.

Dr. GURD referred to a case he had seen about eight years ago. A groom, while attending to some horses suffering from this disease was accidentally inoculated in the cheek. An inflammation followed, and a typical vesicle was developed. The cheek began to swell considerably, and, being so close to the eye, he began to fear an injury to his sight, and went to Dr. Buller, who no doubt can corroborate these statements.

Dr. SMITH, referring to the differential diagnosis between horse-pox and "grease," thought that the course and termination was sufficient to distinguish them. Horse-pox does not last two or three months, as "grease" often does. Like all the acute fevers, it is a self-limited disease. "Grease" is looked upon as a neglect on the part of the groom to properly dry the horse's feet.

Dr. ELDER thought that there were still one or two links wanting to complete a valuable piece of evidence. He understood that the groom did not have the pox at all, and it seemed that the connection between the sickness of the cow and that of the horses is not clearly established. There is nothing more common than for cows to have cow-pox, and that this cow should have it at the time that the horses had horse-pox may at the most be only a coincidence. If the pox had been taken from the horse and put into the calf, then it would have been a direct piece of evidence. As it is, the calf was inoculated from the cow, and the resemblance of the calf's disease to cow-pox may, after all, be due to that, and not horse-pox, being the true malady of the cow.

Dr. ADAMI stated that this was purely a preliminary communication, and the experiments reported are only the beginning of a series of experiments. He had already taken material from the horses, also a scab from one of the grooms that has had horse-pox, and intended inoculating them in cows. With regard to the matter of "grease," one important point is the duration of the disease. "Grease" is a long disease; it does not have the stages of horse-pox. Horse-pox is a papular eruption, followed by the coalescence of the papules, the formation of vesicles and the development of the vesicles

into pustules. Finally you have the rupture of these pustules, the formation of little ulcers and the healing of these ulcers, leaving behind a permanent cicatrix. "Grease," on the other hand, is not characterized by pustules, but rather by pus. It is simply a superficial inflammation of the skin, which goes on to suppuration. This refers to typical cases. Of course there are atypical cases where it is not so easy to separate them. He had seen a case of horse-pox in Montreal where regular suppuration took place, with great swelling and tenderness, but this is exceptional. He was not properly acquainted with all the manifestations which "grease" may undergo, nor could he give what he felt to be an adequate history of its course and termination, although he can detect it readily enough when he sees it. "Grease" is a subcutaneous as well as a cutaneous affection, and he doubted whether it has any counterpart in the human being. With regard to horse-pox granting protection against small-pox, this is as yet an unsettled point. In the last few years a good many experiments have been made in this direction, and many of them seemed to declare that it did protect; others have doubted it. Among grooms, twenty or thirty years ago, when horse-pox was more prevalent in the old country, it was believed that it did protect, but this is also a matter which requires to be thoroughly investigated, and a complete series of experiments is urgently required.

Epithelioma of the Soft Palate, etc.—Dr. H. D. HAMILTON, after stating that he had to thank Dr. George W. Major for the permission to utilize material from his clinic, read the report of the case, as follows:—

R. H., female aged 45; unmarried; a domestic servant; lived in Montreal.

First applied for relief at Nose and Throat Department of the Montreal General Hospital in November, 1891, complaining of soreness of the throat and painful swelling of the glands of the neck, both on the right side.

Present Illness—Began in the summer of 1891 as a small sore on the soft palate to the right of the middle line. This was described as a "pimple, about the size of a split-pea, painful and red like a burn." When this had been noticed one month a doctor was consulted, who used a paint, which the patient says cured the spot.

A few weeks later a similar sore appeared nearer the right, on the soft palate. This was treated as before, with no effect; the spot increased in size and the glands of the right side of the neck became swollen and painful, and when this had been going on for three months the patient applied at the hospital in November, 1891.

Through the winter of '91-'92 patient applied at irregular intervals at the hospital, and her condition seems to have remained about the same, with the exception of marked increase of pain in throat and neck when she was exposed to a cold. (She was able to keep on with her work.) When I first had the opportunity of seeing patient, June, 1892, she complained of difficulty in swallowing solids. The ulceration had then attacked the right posterior pillar of the fauces and the pharyngeal wall immediately behind.

Her case was followed up through the summer and winter of '92, during which time this discomfort varied in degree, but flesh was lost steadily, and the ulceration gradually spread towards the left, both by way of the post-pharyngeal wall and the soft palate, so that at the New Year the left cervical glands had also become involved, and the patient was obliged to give up work and come to live with a married sister in the city.

The tongue was attacked first in January, 1893. The patient was suffering from "la grippe," when an acute glossitis occurred. The swelling subsided in a few days, leaving a deep ulceration in the right side of the tongue, opposite a decayed lower tooth. The tooth was drawn and soon the tongue returned to its normal size, leaving a painful ulcerated spot marking the position of the tooth.

At this time the patient had been six months without solid food; pains shooting from the angles of the jaw towards the ears and vertex were almost constant. (Hearing was not impaired.) Nutrient enemata had to be commenced on the 19th of February last. The throat became so painful during an acute inflammation that the patient could swallow nothing. Feeding by soft rubber catheter was tried, but produced too much pain and retching. After a few days liquid food could again be taken in small quantities, but enemata were constantly used from that time. The ulceration of the tongue

had now been present one month and had become surrounded by a hard mass the size of a marble. The voice was now noticed hoarse for the first time.

One week later, February 26, 1893, the floor of the mouth became rapidly swollen and very painful, the discharge from the mouth became blood-stained and fetid, and the patient coughed frequently. Lungs on examination found clear.

Patient was admitted into the General Hospital on 9th of March, where she remained for one week, having the artificial feeding regularly attended to, both by stomach tube and enemata. On returning home she kept her bed; took nothing by the mouth; her mind wandered frequently; the blood-stained fetid discharge from the mouth was very offensive.

March 27th the patient died suddenly after a large quantity of blood escaped by the mouth and nose. When seen earlier in the day the wasting and weakness were very marked. The mind was weak. Pulse 124, small and thready; respirations 20; temperature (under the tongue) 97.2-5° F. No pain complained of.

Personal History—Negative, patient's habits being regular and her health always good before this disease began.

Family History—Father died of cancer at age of 55 years. (His tongue had been removed for this disease by Dr. Shepherd.)

General condition has been sufficiently described, except that the heart gave a faint systolic "bruit" over the mitral area early in the course of the illness.

Post-mortem examination could only be partial (by the wishes of the family), so I endeavoured to get as much of the diseased pharynx and larynx away as possible. The stomach and liver were roughly examined, but only a small infarction on the surface of the liver was found.

When the floor of the mouth, tongue, larynx and commencement of œsophagus were removed, the naso-pharynx could be felt a crumbling mass of superficial ulceration. The whole of the soft palate was absent; no bare bone could be felt. The parts removed showed bone attacked, viz, the greater ala of the hyoid bone on the right side. To enumerate the parts affected, we have the walls of the pharynx and naso-pharynx, the soft palate, fauces and tonsils, the larynx externally and

internally on the right side. Externally the superior ala of the thyroid cartilage was absent, and internally the disease had reached the true vocal cord. The right half of the epiglottis was removed by ulceration, and the tongue immediately in front was infiltrated throughout its whole width, while the right side towards the tip was deeply ulcerated. The glands affected were beneath the jaws and the anterior cervical chains on both sides.

The course taken by the disease, as far as can be made out by the clinical observations, was as follows: First the right side of the soft palate and the cervical glands on the right; the pillars of the fauces, the tonsil and the side of the pharynx on the right. Then the back of the pharynx, the remainder of the soft palate, the left tonsil, fauces and anterior chain of glands. Towards the end the right side of tongue and glands below the jaw, and the interior of the larynx.

Sections from the tongue and left anterior pillar of the fauces were removed for microscopical examination. Dr. Adami kindly made the examination, and with his consent I will quote what was written at the time concerning the two sections:

"Sections from the tongue and palate are atypical epithelioma, that is, the masses of cells passing down from the epithelium into the deeper tissues are small and devoid of cell nests, so that at a very little distance from the surface the growth might easily be mistaken for a true carcinoma."

If I may impose on the time of the Society for a few minutes more, I should like to draw attention to a few characteristics of this disease accurately borne out in this case.

Epithelioma of the tongue runs a rapid course; the lymphatic glands are soon infected, and death follows in a short time.

Again, in malignant growths of rapid course, there is more than the usual tendency to be atypical.

Epithelioma of the tongue is seen to be influenced by irritation as a cause almost more than any other growth. In this case the tongue was affected within three months of the end. The microscopical examination has proved the growth to be atypical. The onset of the disease with the irritation of a root of a tooth against an acutely swollen tongue is significant.

I have gone thus fully into the case for the following reasons :—

Firstly, this is a case where the cancer clearly began in the soft palate and fauces; not at all a common occurrence.

And, secondly, since the variety of the growth is the same in both, the interesting question arises, viz, May the recent involvement of the tongue not be due to direct infection, the tongue being constantly in contact with the diseased palate and fauces? An avenue for infection was widely opened by the irritation of the tooth described.

Lastly, it is worth noticing the effect of "Influenza" in this case. Several times during the earlier part of the winter the patient came complaining of rapid onset of pain and swelling of the throat and neck, making it next to impossible to swallow or even open the mouth. The skin over the glands would then be red and tender. The attack of glossitis accompanied one of these attacks, and most likely depended chiefly upon the epidemic.

Dr. ADAMI :—Dr. Hamilton's cases interested me a great deal. It is so rare to have two forms of carcinoma occurring in the same patient at the same time, that although this conclusion that the two forms were present was forced upon me as the result of first sections, I was unwilling to believe it, and have spent two days cutting and preparing more than half a dozen portions of the tissues, with the result that I am glad to retract my previous report. First of all, taking the facts as they come, in examining the tongue one is no doubt dealing with an epithelioma, though unfortunately this inflammatory condition, coupled with a foul sanious discharge, and the time that elapsed before the post-mortem was made rendering the whole surface more or less disintegrated, made it difficult to be certain. I find a proliferation of the epithelium; that proliferation is not the same as in the typical epitheliomatous proliferation. In some regions one sees it a proliferation affecting the ducts of the glands passing down the lower portion of the tongue, and again one sees these glands undergoing malignant change. In all sections examined there is this curious absence of well marked "cell nests," there are cell nests, but they are poorly developed. In the lower portion of the tongue the appearance is very similar to what one gets

in scirrhus cancer, long thin lines of cancerous cells separated from each other by marked fibrous stroma. Then one sees the infiltration between the masses of the cells.

Going, then, to the fauces, there is here complete absence of anything like true epithelioma; in its place there is a carcinomatous appearance. However, in sections made to-day, in some regions nearer the tongue than those first made for Dr. Hamilton, one sees similar appearances to that found in the tongue, so now I say that throughout we are dealing with an atypical epithelioma. The epithelioma seems to spring from the lower portion of the epithelium, loses its appearance very rapidly, and soon grows to resemble ordinary gland cancer. When I came to examine the right vocal chord there I found purely inflammation and no carcinomatous appearance whatever.

Neurasthenia of the Stomach.—Dr. GUNN read his paper on this subject page. (Page 109.)

The PRESIDENT took exception to one of Dr. Gunn's statements, viz., that "anorexia nervosa" never occurs in the male sex. Most of the senior medical men in this city remember a case of the medical student named Brown who was suffering from this disease. He was looked upon as the most perfect type of the living skeleton that had ever been known. One of the most important of Dr. Gunn's remarks is that every case requires to be treated on its own merits. A great many of these cases are certainly very difficult to cure, and in the vast majority of them it requires a man like Weir Mitchell to be successful. There is something about the mental type of the man that is essential to success in such states. There is one form of treatment that Dr. Gunn forgot to mention, namely, hydro-therapeutics. Winternitz, in Europe, treats with cold water, but he is no more successful than Weir Mitchell.

Dr. LAFLEUR said that about three years ago he had seen a case of "anorexia nervosa" in the male. The man had at the same time another neurosis that increased very considerably the difficulty of the forced feeding treatment, viz., persistent eructations. However, when last heard of he was very much improved. In Johns Hopkins Hospital, Baltimore, they have had some experience with the Weir Mitchell treatment, hav-

ing as a rule quite a number of patients in the private wards suffering from general neurasthenia, and many of them suffering from gastric disorders. He corroborated the statement that the treatment is very successful when properly carried out; but it requires a special type of man, one with unusual tact and persuasiveness, to carry it out, and unless thoroughly enforced it is worse than useless, it is really harmful.

Dr. WYATT JOHNSTON remembered a case which would probably come under the category of neurasthenia of the stomach, although not anorexia nervosa. The patient, a man slightly over 40 years of age, fairly healthy as a rule, fairly strong, from time to time suffers from the most severe attacks of what it would be impossible to describe as being anything but nervous dyspepsia. The attacks come on gradually; food begins to disagree with him. He has a great inclination to take food, but its inception causes him pain, and again pain is felt more when food is not taken. There were never any definite signs pointing to an organic disease, such as ulcer; there were never any hæmorrhages or any definitely localized pain. These attacks used to reduce him to a perfect skeleton. They lasted several weeks, and during that time it is impossible to do anything for him. At the end of that time he gets perfectly well, and remains so for a year or more. One peculiarity he had about him was that when he began to get well he would diet himself, and, in spite of the extremely small quantity of food ingested, manage to perform a very unusual amount of active exercise. One slice of bread and three glasses of milk was his average daily allowance, while at the same time he walked from 10 to 15 miles daily, besides other active employment. Notwithstanding this discrepancy between the quantity of food taken and the amount of work done, he gained flesh, and picks up rapidly. Between the times he enjoys good health, but is any day liable to one of these severe attacks of gastric pain.

Dr. GUNN, in reply, said he was very glad to hear of cases of anorexia nervosa appearing in the male, as it corrects a wrong impression hitherto existing in his mind. This impression he received from the author quoted in his paper, who states positively it never appears in the male; and the cases mentioned here to-night he had not seen reported anywhere.

THE CANADIAN MEDICAL ASSOCIATION.

(Reported by Dr. J. N. E. Brown, Official Stenographer of the Association.)

The Twenty-sixth Annual Meeting of the Canadian Medical Association met in Victoria Hall, London, Ont., on Wednesday, September 20th, at 11 a m, Dr. Chas. Sheard, of Toronto, as President.

The first session was devoted to business, there being no papers read.

Dr. BRAY, of Chatham, after thanking the members for their kindness and consideration to him as President for the last year, introduced Dr. Sheard as his successor.

A motion was then introduced asking that fees be required only of members in actual attendance at the Association. Another, that, after this, those members who were to read papers, and were unable to come, should telegraph such inability to the Secretary, so that the programme might be more easily carried out.

The SECRETARY then read a communication from the National Bureau of Bibliography, Washington, D.C., informing the members of its value as a storehouse of medical literature, from which they might procure information on any medical subject in which they were interested as students or lecturers.

Drs. McGregor, Campbell, Butler, Hobbs and Weld, of London; Drs. Starr, R. E. McKenzie and J. N. E. Brown, of Toronto, and Dr. Smith, of Quebec, were elected as members of the Association.

The PRESIDENT proposed that some provision be made for reporting the proceedings of the Association, and named a committee to arrange for such reporting.

Dr. Brown, of Toronto, was chosen to do the work.

The Nominating Committee was then balloted for, Drs. McPhederan and Bray being appointed scrutineers. The result of the ballot showed the following gentlemen to have been elected:—Drs. Roddick and Stewart, of Montreal; Fulton, of St. Thomas; Graham, McPhederan and McCallum, of Toronto; Olmstead, of Hamilton; Harrison, of Selkirk; Holmes, of Chatham, and Bucke, of London.

Drs. R. A. Reeve, F. E. W. Ross, H. A. McCallum, T. S. Harrison and Holmes, of Chatham were chosen as the Committee on Ethics.

The subject of a uniform Canadian Pharmacœpia was then discussed, and Dr. Blackader, of Montreal, H. A. McCallum, of London, and Jas. McCallum, of Toronto, teachers of Therapeutics, were appointed a committee to memorialize the Government in this regard.

AFTERNOON SESSION.

After the opening business, the PRESIDENT proceeded with his address, whose eloquent periods held the Association in rapt attention and elicited the most hearty applause. The effort was a most masterly one. The substance of his address was solid, and the effect of its brilliant delivery can be appreciated only by those who have listened to the magnificent oratory of the Doctor when he is speaking on some congenial theme. He expressed gratitude to the Association for his election, saying that he felt honoured to fill such a position, which had formerly been filled by men who had made the profession of medicine in Canada illustrious. He combatted the statement made by some that the influence of the Association was on the wane and its work usurped in part by Provincial institutions. It had for twenty-six years stood out against charlatanism; it had developed a feeling of friendship and unity among the profession, it had stimulated and helped men to professional excellence, and had given medical men an increased love and zeal for their calling. It had not outlived its usefulness. Such men as Howard, Ross, Osler, Hadder, Workmen and Wright, not to speak of men whose advancing years prevented them from attending this Association, were examples of all that was good and noble and inspiring to the younger members of the profession. If a man would do good work, he needed to devote his whole attention to his profession. It was unfortunate that some of the younger men presumed that, because they thought they had the latest and most improved methods, they should parade them in such a way as to reflect on their older colleagues. Thackeray had asked how it

was that the evil which men did spread so widely, whilst each good, kind word seemed never to take root and blossom. The President went on to say: "It appears to me scarcely conducive to professional unity that we should have in the various Provinces of the Dominion separate licensing bodies, which confer the privilege of practising only for the Province, and that those of us who to-day may reside in Ontario, in travelling to Manitoba or British Columbia, require there to pass a period of naturalization before we can even be examined, and then to again pass an examination which proves our qualification to practice,—and this in our own country. Surely we are all Canadians, and, if the spirit of the time means anything, we are united in patriotic feeling and national progress. Why should it be different in medicine? I may express the earnest hope that the time is not far distant when there will be some central examining board, or boards, for the whole Dominion, when a license from such a body will be a qualification to practice from one end of the country to the other." (Applause.)

The Doctor then spoke of the great strides medicine had made as a result of bacteriology investigations. Curative methods followed correct diagnosis. Bacteriology was a practical, scientific means to aid in this direction. He saw within the next decade a solution to the difficulty which beset the cure of phthisis and such diseases whose causation had during the past decade been established. The science of medicine, like others, must depend upon the co-relation of facts,—upon the comparison of cases alike in many respects but differing somewhat in their phenomena. Much difficulty there was in ascertaining what cases were sufficiently similar to become comparable,—due to insufficient and erroneous records of the phenomena observed. Few men could, for and by themselves, see and describe the things before them. It took a long time before men could see the difference between measles and scarlatina, between typhus fever and typhoid. Plato said, "He shall be a god to me who can rightly divide and define." Men, the speaker said, who have this faculty we cannot produce by any system of education; they come we know not when

or why. It was science, he said, that laid the basis upon which were wrought the revelations in practical science. "Science seams and scars the detested face of hypocrisy and lies, adds beauty to beauty, grace to grace, truth to truth. It decks the flower of the field with loveliness, till all the universe beats with one heart, pants with one breath. It goes hand in hand with art. When the tale of great deeds ceases to thrill; when the awe has vanished from the snow-capped peak and deep ravine; when the lily of the field becomes no longer beautiful; when the tale of suffering causes no pity, then indeed, and not till then, may science be said to have devoured art. Science and practice," he said, "should go together. It should be the work of the pathologist to study the etiology, diagnosis and progress of the case. Paget was a pathologist and surgeon, so was Billoth. Koch was a general practitioner, Cheyne a consulting physician. In the lines of scientific attainment Canada was fully abreast of the times. There were too many men in our country, however, who were possessed with the sordid ambition of the utilitarian, who thought they could not leave their practice a day to gather such knowledge and enthusiasm, have their powers of observation quickened, receive such mutual benefit as would come to them from attending medical associations." The President eulogized the good work of our colleges and the Medical Council of Ontario. In concluding, the President said "the Government of the Province was liberal, leaving to the profession the ordinance of its own laws, and did it show worthy intelligence on the part of those claiming to be ornaments of the profession to urge upon the gubernatorial body the wisdom of withdrawing from them what was justly and legitimately their own? The masses sent their representative to represent them in certain issues, and if they did not do so they changed their representatives. This is one law of political economy throughout the world. Have the physicians of our Province not enough intelligence to be entrusted with the same privilege?"

Dr. Hingston was voted to the chair. Dr. Bray moved, Dr. Reeve seconded, a vote of thanks to Dr. Sheard for his address.

This was carried with applause. The President made a suitable reply.

Dr. J. E. WHITE, of Toronto, seconded by Dr. BRAY, of Chatham, made a motion to the effect that a committee be formed to report some scheme whereby the barriers that exist to inter-provincial registration might be overcome, so that practitioners in one Province might be enabled to practice anywhere in the whole Dominion without re-examination, and that such committee be composed of Drs. Praeger, B. C.; Hingston and Mills, of Montreal; Waugh, of London; Sheard, of Toronto; Harrison, of Selkirk; Taylor, of Goderich; Worthington, of Sherbrooke, and Ross, of Toronto. Carried.

The next feature was the report of a case of eclampsia, by Dr. J. CAMPBELL, of Seaforth, Ont. Patient, aged 32, complained of headache extending down neck to shoulder. Without physical examination he administered something for what he supposed was neuralgia. He had not noticed that she was pregnant. In three hours patient had convulsions. Was called again and found patient suffering severe head pain and also in the epigastrium. Temperature normal; pulse full and bounding. Found patient to be about seven months pregnant. Administered an enema of \mathfrak{v} i. of chloral; this induced sleep. Had administered elaterium, which was soon effectual. Was unable to get urine. In a few hours called, and while about to give another injection patient took another convulsion before chloroform could be given. Found urine full of albumen on examination. Very soon patient had another convulsion; repeated enema. Found os dilated to size of quarter. Ruptured membranes. Labour pains came on, and after a sleep till 3 p.m. (case having commenced at 11 p.m. day before) was delivered of living child. Gave \mathfrak{v} i. ergot half an hour before delivery. Placenta delivery normal; no hæmorrhage. Administered a diuretic mixture of pot. acet. and digitalis. Headache disappeared and all symptoms abated.

The doctor concluded his paper by saying that the subject was one that required further investigation, but thought that the following statements were justifiable in the light of modern

pathology : First, cell activity both of mother and foetus produced substances pernicious to mother, if not excreted ; second, the excretory function was inadequate in the pregnant ; third, the unknown accumulated poison caused the eclamptic seizure ; fourth, the convulsions are believed to be the result of anæmia of the brain, caused by the contractions of the arterioles, probably by direct action of some poison on the brain substance itself. On account of the intense muscular action, the blood was driven into the internal organs, brain, kidneys, etc., causing apoplexy and abrogation of the renal functions, etc. Treatment, he said, should be directed to elimination,—diminishing of the nervous sensibility ; if convulsions ensue, to save the child without adding risk to the life of the mother and, lastly, to guard the mother from injury during the attack.

Dr. LAPHORN SMITH expressed entire approval of what Dr. Campbell had said in his paper. He thought the cause was due to pressure on the circulation of the kidneys, causing nephritis. He did not agree that the anæmia of the brain was the beginning of it. The nephritis caused the albuminuria, the albuminuria caused the anæmia. The indication for treatment was to remove the pressure by lessening the size of the uterus. He favoured the use of chloral to assist in the dilatation of the os and to lessen reflex action. He thought hastening labour did not tend to cause convulsions.

Dr. HARRISON outlined the history of a recent case of his where he employed bleeding,—a remedy he had spoken about at some length in the treatment of the affection at the meeting of the Ontario Medical Association. He bled freely, with immediate and permanent effects. He employed, as well, enemata of chloral and brandy.

Dr. BETHUNE, of Seaforth, corroborated what Dr. Campbell had said regarding his case. He was in favour of bleeding in sthenic cases, not in anæmic ; but he regretted that the young practitioners of to day did not know how to perform this simple and often effective remedy.

Dr. IRVING, of St. Mary's, asked if it were proper to give ergot in eclampsia. Did it not cause contraction of the arte-

rioles,—a thing to be avoided? Dr. Smith had said that the pressure of the foetus *in utero* was the cause of the convulsions. How was it that they often did not occur until after delivery?

Dr. HOLMES, of Chatham, said he was reminded of one thing in what Dr. Campbell had said—the danger of making too cursory an examination of the patient. Dr. Holmes pointed out the benefit derived in causing profuse sweating. He leaned to the theory that the convulsions were due to the circulation of some toxic element in the blood, independent of the nephritis.

Dr. CAMPBELL closed the discussion.

Dr. CANNIFF, of Toronto, then gave an address on “Sanitary Science: Some of its Effects.” Sanitary science, he said, was not a distinct and separate science, but rather a development of medical science, and that the medical man should be employed not only to cure but to prevent disease. He advocated that we should have specialists on the subject. He also advocated the same observation by individuals and families in regard to sanitation as is done in the case of the state and municipalities; and, as it was desirable to legislate in regard to preventable diseases, so the principle was equally applicable in relation to individuals and families. It was nobler to prevent than to cure. The principles of hygiene should be taught by the parent and continued in the school. He advocated the principle of families employing a medical man by the year, who should make regular visits and advise as to sanitation. By so doing, sickness would be prevented.

Dr. ARNOTT thought the idea of families employing medical men by the year good in theory, but bad in practice. His experience was such. He also thought it would be a bad education to the family itself. He thought the importance of a knowledge of sanitary science by medical men in the cure of disease should be emphasized, as well as the prevention of it.

Dr. BETHUNE liked the idea of employment by the year, if possible. His experience had been that, having agreed to a certain amount for his services, he was called so frequently as to make it non-paying. If families could be educated up to it, it would be well for the country, and much disease prevented.

Dr. WESLEY MILLS thought that it would be practicable for the physician to look generally to sanitation, and to be paid extra when specially sent for. Family tendencies would then be understood. Until physicians were employed in the way mentioned, the best results would not be obtainable. He thought the appointment of specialists a good thing, and stated in some places this was being agitated.

Dr. CANNIFF thought he had been misunderstood. He only intended saying if regulations as to hygiene worked well in municipalities, so it ought to in families. Statistics show that the practice of hygiene is a saving operation,—saving the man and saving the labour.

Dr. ANGLIN, of Verdun, followed in a paper on "The General Practitioner and the Insane"—a very practical paper. The subject of insanity was one which had been left alone too much by the general practitioner. It was important that he should know more about it, for on him rested the diagnosis of insanity, possibly the administration of treatment, the recommendation to hospital, and the certification of the patient's mental condition. Generally speaking, it was better to advise hospital treatment, but in some cases this would be impossible. It was much less expensive, and the change of environment was generally beneficial. He was glad that the old prejudice against insane hospitals was becoming lessened. It should be taught to the general public that insanity was a disease, not a crime. The Doctor then described the hospital of to-day, showing that it was not a place to be shunned, as was the one of days gone by. If a man were called on to treat a case of insanity, he should recommend a change of scene, the employment of one or two trained nurses. Relatives generally made poor attendants, as did also ordinary sick nurses. Sleeplessness should be immediately combatted by giving moderate exercise, a drive, a meal or a hot bath. Of remedies, alcohol, hyoscine, paraldehyde, suffonal, chloral hydrate (and opium in cases due to pain) were useful. Constitutional treatment should be attended to strictly. The Doctor outlined the points necessary to observe in making out certificates, laying special

emphasis on the recording of phenomena actually seen by the examiner. He criticized the stupid methods of admission in certain States, but commended the progress of Canada in this matter. A certain amount of formality was absolutely necessary, and the doctor should be exceedingly exact in replying to the questions on the blank used. It was wise to find out all one could about the patient before interviewing him. Deception should never be used with the patient, for this often rendered him less amenable to treatment. It was sometimes exceedingly difficult to detect symptoms, so careful to conceal them was the patient often. Three things should be noted—acts, appearance and conversation. The patient should be told frankly that he was *sick* and needed *hospital* treatment.

This paper was discussed by Drs. Matheson, Arnott and Mills. Dr. Anglin closed the discussion.

Dr. HARRISON, of Selkirk, then followed with a paper on—“Is Alcohol, in all Doses and in all Cases, a Sedative and Depressant?” He had formerly thought alcohol the great stimulant, and the physician who failed to administer it was culpable. Temperance physicians had refused to administer it, for fear their patients would acquire the drinking habit. The subject was a scientific one, and should be discussed as such. If alcohol was a powerful sedative and depressant, as some claim, the use of it for so many generations would have caused untold injury, and the number of deaths caused by using a sedative, instead of a stimulant, unaccountable. He spoke of a case in his practice of post partum hæmorrhage, which promised to end fatally, and while preparation was being made to inject blood, brandy had been administered freely, per os and per rectum, and under it the patient rallied and recovered. In a case of typhoid fever lasting seven weeks, where the patient seemed dying of exhaustion and heart failure, after two weeks of a diet of port wine only the patient recovered as if by a miracle. Another case of puerperal fever—an extreme one, with pulse 140 to 150: All medication was abandoned, and brandy and port wine in a little milk and beef essence were given, and effected a permanent cure. When a patient was

nearly moribund—when a feather's weight in the wrong scale must be fatal—and brandy was administered, if the brandy acted as a sedative the result must be fatal, but the fact that the patient rallies shows it cannot be a depressant.

Dr. ARNOTT said he had some diffidence in discussing the subject, as he seemed a "lone bird in the tree." His views were, and had been for years, that alcohol was not a stimulant in its direct action. The question under discussion, in other words, is: "Does alcohol, or could anything, under varying conditions give the same results?" Suppose the principle were applied to water; although under some circumstances it causes death, no one would say it was a poison. The direct and primary action of water is nourishing. The profession are not divided at present as to the sedative action, because all use sedatives to bring about a stimulating result. There was, he said, not so much difference between Dr. Harrison and himself as appeared on the surface. Although opium was a sedative, we get stimulating results from it. He mentioned a case of his in practice—the setting of an old lady's arm, a Collas' fracture. He had given her a great deal of pain, and suddenly she became white and pulse imperceptible. He was afraid the patient was dying. He thought it clearly the result of shock, and called for whiskey, not as a stimulant (being opposed to that), but to relieve the shock. None being in the house, he gave the patient chloroform, after which the pulse became strong, and the operation was completed. He had another case of typhoid fever, in which the depression was very great, and in which he administered whiskey in large doses—an ounce every hour. Being alarmed, he called in another doctor, and they administered $\frac{1}{2}$ grain of morphia hypodermically, and that did much more good.

Dr. BETHUNE said alcohol was in one case a stimulant, in another a narcotic, and in another a sedative, according to the condition of the system. If taken in big doses it was a narcotic; perhaps some of them had felt the effect. (Laughter.) In neuralgia it was a sedative; when people took a tumblerful at night to put them to sleep, it was a narcotic.

Dr. GARDINER, London, said that by the use of alcohol the pulse got stronger, the eye brighter, the skin warmer and the body invigorated. Whether it was called a stimulant or narcotic, it should not be used carelessly, but only when there was reason for it.

Dr. MILLS, of Montreal, thought it was a subject demanding careful scientific study, especially as its elementary principles were taught in the public schools. The doctor said the necessity for experiment was absolute and they were not yet prepared for dogmatism. He condemned the present school books as extreme. The children were taught that alcohol under all conditions was a poison. The medical profession should do something to counteract this.

Dr. ARNOTT said that alcohol was termed a stimulant, an anodyne, and a narcotic. This was perplexing. The fact that the hospital having the lowest death rate in London, England, did not use alcohol he made his excuse for speaking on the subject.

Dr. LAPHORN SMITH spoke of the experiments showing the effect of alcohol on the muscular power, how that soon after administration of the alcohol the individual tested could lift much more, but when the reaction had set in considerably less than at first. It was certainly a temporary stimulant. It affected the great sympathetic which contracted the arterioles, more blood being forced into the coronary arteries, thus strengthening the heart.

Dr. H. A. MACALLUM said there seemed to be physiological evidence to show that all narcotics and poisons were stimulants. The respiratory stimulus was a poison. It could not be that CO_2 , the respiratory stimulant, and ultimate poison to that centre, could be a stimulant as secondary to narcotic action. All stimulants for secretion, respiration and circulation ultimately were narcotic and poisonous. Anæsthetics were stimulants in small doses. It could not be argued that CO_2 is a natural stimulant and acts as a narcotic.

Dr. HARRISON closed the discussion.

Dr. B. E. MCKENZIE presented a bad case of lateral curva-

ture, in which he had used a rawhide spinal support. The patient could be stretched four inches, so much was the curvature. He knew of no other treatment in such a case. It was fitted to a plaster of paris model and had no seams. It fitted smoothly and seemed to afford much relief. This was the first time Dr. McKenzie had tried it.

EVENING SESSION.

Dr. HINGSTON, of Montreal, gave the address on surgery. It consisted of an historical review of the subject. He held that in Egypt, before the time of Moses, many so-called modern operations were practiced. The Greeks considered surgery a divine art. Pythagorus, about 600 B.C., elevated surgery to a science. The Egyptians and Greeks practiced nephrotomy, used tents, issues and moxas, and trephined the skull; they also practiced percussion as an aid to diagnosis and drew fluid from the chest. Hippocrates made use of immediate auscultation as a means of recognizing disease. But the fall of the Macedonian empire seriously interfered with the progress of surgery. The Alexandrian school were skilful in abdominal surgery. They first used the catheter. Two thousand two hundred years ago Ammonius crushed stone in the bladder. There was another retrogression in science at the time of the Cæsars. Celsus found that there might be rupture of brain substance without fracture of skull. He was the first to ascribe this to *contre coup*. Heledonius opened into the bronchial tubes. The Arabians were credited with greater proficiency in surgery than history will justify but to them we owe the preservation of Egyptian surgery. The suturing of wounds was practiced by Albicasis, also the incising of the kidney for abscess. The Council of Tours forbade the clergy to spill blood; by this prohibition surgery was divorced from medicine and got a serious set back. When Columbus discovered America the physicians of Europe were not superior to medicine men of the aborigines of America. Vesalius laid the foundation of modern surgery. Paré advocated cupping for displacements of the uterus. Wiseman, in Britain, was original but crude; his reports of successful treatment of cancer are so remarkable as to arouse

suspicion as to the accuracy of his diagnosis. Wiseman believed in the magic royal touch for the king's evil.

Surgery, the speaker went on to say, preceded medicine in this country. The Governor of Nouvelle France, was always seeking for surgeons to be sent out; the people did not need physicians. Dr. Hingston then described the marvellous advances of surgery during the past forty years in the treatment of many surgical cases, but was sorry that in some cases this divine art had degenerated to a commercial question, owing to the greed for gold spirit which had extended to some of the members of the profession. He especially cauterized the practice of those one-idea gynæcologists who referred all female disorders to the uterus and instituted a daily tinkering process as a means of obtaining money.

(To be continued.)

Selections.

Maternity Hospitals and their Results.—The following paper by Dr. Joseph Price, of Philadelphia, appears in the *Medical and Surgical Reporter* of Sept. 9th :—

Every obstetrician's dependence in emergencies must be upon himself. If the resources of his information and skill are so limited that he must call in extraneous aid, the lying-in woman is exposed to other risks than those of delay—those of dangerous drugging or ignorant surgical interference. The resourceful surgeon is one with many experiences, and the same fact applies to the successful obstetrician. The lessons of three or four hundred maternity cases never yet made an eminently skilful obstetrician—one to be depended upon in all of the many emergencies liable to be met with in lying-in cases.

The problems, those tests of the practical wisdom of hard earned and well learned lessons, of the very genius of obstetrical skill, arising in many emergencies give no time for settlement by consulting the books, by reference to reported cases or by calling in outside aid. In fact, the lessons of the books in many cases would be misleading. Through many and pain-

ful experiences, the lessons of sad results, we have unlearned many of the teachings of the old books.

There is grand promise in the fact that the profession of the period has in it the impulse and the spirit to grow away from and above the old benches. One of the most gratifying and hopeful results of the thorough training which comes of wide obstetrical experience is the doing away with the too free use of instruments in delivery.

Certainly with the lessons of more than two centuries of forceps experience we should be able to form an enlightened opinion as to the value or risks of their use. The consensus of the best authorities, of the opinions of men who speak from the most extended observation and experience, leads to the conclusion that the mortality attending non-interference is less than that attending the use of forceps. In this relation our debt is great to the Dublin school of obstetricians. Dr. Clark, for long master of the Rotunda, stands out as the one heroic figure in the van of those pioneers.

The exigencies requiring the use of instruments are not of such frequent occurrence as formerly believed. Now the citing of a case of instrumental interference is usually accompanied by an elaborate statement and explanation of desperate and otherwise unavoidable conditions. We have learned the evil and bad results of hurry; the welfare of mother and child are no longer to be sacrificed to the exigencies of private practice. With the growth of general intelligence our patients become less tolerant of undue haste, they have an enlightened appreciation of the issues involved, and of well-timed and skilful work, and they make few mistakes in their book-keeping, in charging to the correct cause unhappy or fatal results. It is not a wild prophecy when we say that the time is not distant when in all dense communities obstetrics will be a specialty, and in the ranks of its practitioners there will be the cleanest, most cultured and scientific men of the profession. The issues, the often fearful sequelæ of ignorant or ill-advised treatment in cases of midwifery, furnish a strong warning, a resistless argument against the employment in such practice of the inexperienced and unskilled.

The advantage of patients in maternities over private lying-in patients lies in the fact that they are under the strict

surveillance of experienced medical men, aided by nurses trained in all the principles and methods of their art. All the environs and appointments are under the control of well-defined and intelligent authority,—sanitary and hygienic conditions are of more easy control, the evils of dense crowding can be avoided, and an ideal cleanliness more nearly attained. There are less injuries in maternities from attempts to expedite labour. And from this cause there are more evil consequences than from delay or any other cause; nature is interfered with in doing her part of the work. There is no branch of medical science in which we have so many understood certainties as in obstetrics.

Where our knowledge is defective or incomplete, it is not due to lack of authentic source, of easy and approved means—but to the lack of energy of use. There exist open opportunities of bed-side experience and training, many open doors for clinical study and research, yet there are very many—and the best—kept closed. For this the profession is responsible. It is their mission and duty to heal—it is also their mission, duty and royal right to the use of every avenue through which the best lessons are taught. The tyros going out from our college benches into fields of private practice are ill-equipped for successful obstetrical work; they carry many risks to mothers. We are not claiming that the science or its practice in the hands of any one is perfect,—that cannot be claimed of anything in which our humanity is involved.

There has been gathered a very rich harvest of the results of cleanliness in maternities and private obstetrical work, and we have in these results promise of yet better results in the future. As we grow to know how very simple is our art, how near to nature is its successful practice, we feel less disposed to take off our hats when we speak of our individual work and its success.

It has not been long since obstetrics was the one department and dominated the field of gynecology. Progress has been such that gynecology no longer suffers the reproach of being a pseudo-science, working by guess, by vague suspicion, gaining advances by mere experiments upon human life, groping in the dark in attempts at settlements of problems of health and life, but has grown to work hand in hand with

obstetrics, and is gaining increased recognition wherever suffering exists. The lessons of both have come to live with us. In both experience teaches the value of cleanliness—that we have no right to tolerate filth in any of its forms—nor to blunder in our work.

The signal advances in obstetrics, as in gynecology, are of our own generation. As to many anomalies, obscure troubles, the general practitioner has become enlightened, he has acquired the important knowledge which enables him to determine where purely medical or palliative treatment fails, and the only resource left is surgical interference. The obstetrician is not practising what his forefathers wore out and threw away. Old theories and beliefs have been gradually giving way before the assault of our better facts. Each day finds fewer superstitions in practical medicine and surgery. Dr. Angus Macdonald, in a Report of the Royal Maternity and Simpson Memorial Hospital, Edinburgh, condenses truths worthy of mention here: "The more I see of midwifery and gynecology, the more I am confirmed that the safety of patients urgently requires the diligent use of cleanliness. I feel more and more satisfied that operations on the genitals, of whatever sort, are specially dangerous, not so much because of the inflammatory reaction, which is likely to be severe in itself, as because there is extreme facility for septic absorption. This is particularly the case where, from aggregation of septic influences, there is specially apt to arise putrescent materials of highly toxic qualities."

The reduction of the mortality in lying-in hospitals from 20 per cent. to almost nil cannot be credited so much to the use of antiseptics as to a more enlightened and strict sanitary regime, a more strict cleanliness. The constant improvement in our operative statistics testifies the value of surgical cleanliness, scrupulous antiseptic precautions. The great increase in the average of city life is largely due to greatly increased observance of health conditions. The measure of the physician's responsibility in these lines cannot be over-estimated.

He can kindly, where that will serve, or sternly, where that is needed, urge the lesson that to live amid bad hygienic conditions, in an atmosphere of domestic malaria, means disease and death,—that pure, healthy in-door air, freedom from

poisonous effluvia and musty odours, cannot be had without the most scrupulous cleanliness, the removal of all bodily excretions, of everything offensive, animal, fluid and organic. There are out-door impurities, sources of air pollution, we cannot at all times and under all circumstances guard against. Streets, alleys and courts are often sources of atmospheric infection over which we have little or no control. The most we can do is to educate public sentiment in the line of a wise sanitary policy, and back its administration.

The members of the medical profession have it in their power to make themselves the sovereigns in the enforcement of the wise dicta of sanitary science. They are the real educators in everything that pertains to the public health. The people are willing and anxious to learn the lessons through the practice of which they can avoid disease. The more the obstetrician and medical men generally press home upon the public the vital truth of the preventability of many diseases, the sooner we will have a popular understanding of the simple principles of sanitary science and a rigid practice of cleanliness. Let the physician teach the risks of filth infection to his clientele—send the lesson into private homes that bedding, carpets, floors, walls, every appurtenance and furnishing, may be a source of uncleanness, that all forms of excreta and impure gases emanating from decaying organic substances are so much pollution.

The apology for this paper, if any be needed, lies in the importance of the subject, its importance to the profession, to communities, and its yet more grave importance to mothers. I would echo the voice of Holmes loud enough for warning: "The woman about to become a mother, or with her newborn infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden or stretches her aching limbs. The very outcast of the streets has pity upon her sister in degradation when the seal of promised maternity is impressed upon her. The remorseless vengeance of the law, brought down upon its victim by a machinery as sure as destiny, is arrested in its fall at a word which reveals her transient claim for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril. God

forbid that any member of the profession to which she trusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly or selfishly!"

I presume a long and somewhat varied experience entitles me to speak plainly, and the time for speaking plainly is always present, always *now*. As to the *conscience* with which I speak, that is mine. There are some things about which our national and international congresses should speak in no uncertain tones; there are some things that we here at home and our honoured brothers of republics to the south of us should insist upon; everything associated with our profession, with our schools and all their agencies, with respective fields and departments of practice, is a sacred trust. A trust something more than narrowly individual, it is communism in all that it involves, its bond is to prolong and promote healthful human life. The trustees of our schools and maternities hold the highest trust existing in our communities, a trust that reaches helpless mothers and their more helpless offspring, that reaches the unfortunate in every grade of life, and humanity is their care. Yet they only too frequently do not exercise wisdom and deliberation in the choice of teachers and masters. The time is fortunately not distant when they will be held to more strict account. We have long since proven that maternal deaths are avoidable, deaths not only from sepsis or child-bed fever, but from other causes as well; death in child-bed means an error of omission or commission. The mortality in maternity hospitals is now the lowest. Maternities have settled about all the important disputed points in obstetrical practice. The most perfect work has been done in the maternities of Baltimore, Philadelphia, New York and Boston. Not only has this work been perfect from the standpoint of a low mortality, but the hospitals in which it has been done have done a great work in practical teaching, demonstrating beautifully two points: 1st, That a maternity can be run with a nil mortality; 2nd, That it can unite with its humane purpose practical teaching with a nil mortality. All this has been disputed both at home and abroad. The time is not distant in the future when the directors of maternity hospitals will not dare to appoint a man to direct or have official charge of such vital interests without a rich practical

experience and sound judgment. They will be held responsible for the success of their trust, and it is to be hoped will be held criminally responsible for the choice of a person to such trust with no more pride of personal cleanliness and cleanliness of environment than a stable boy, dirty in all the term implies, morally and personally.

It is the teaching of this subject that is of so much vital importance to the profession. Very much of it is fed out from the old books, and is worth very little more to the student than is an old almanac for dates. The student gets little of clinical or practical value, and goes out from the college to study the science and art of his work upon helpless patients. Every day brings to our notice sad illustrations of the result of such miserably poor and inadequate obstetrical teaching. The directors or managers of our schools are responsible for imperfect, inadequate or false teaching; the profession and the community must and do so hold them responsible. They hold them responsible for the incompetent and unfit men they select to teach; for the injustice done worthy students, and for the irreparable mischief worked in communities by obstetrical ignorance. Teachers should not be appointed on account of their pedigree, their family connections or their wealth, but for their brains, their knowledge of their subjects, their love and faculty for teaching, and for the honour and advancement of the school. About all some of those now holding responsible chairs in some of our oldest schools have to recommend them is a volume of prefixes to their names, suggestive of a medical and biographical index. The shout goes up when dotting relatives, maiden aunts and friends secure their appointment, "Now we have a professor of favored parentage, one dating beyond our accepted scriptural Genesis." At the claims of this class the Darwinian would indulge in a philosophical smile and note fresh evidence in favor of his theory of the descent of the human species. There should be no small men, mentally or morally, in the faculties of our great schools. The work of none of us is so well done but that it cannot be out-done—better done. Let each man go back and study the history of his own neighborhood in connection with obstetrical practice, and he will scarcely escape being startled by the result.

Recently, within the past few weeks, several lovely women, those moving in the most cultured and refined of Philadelphia society, have died in child-bed. Now, these untimely and sad deaths are too frequent. In a majority of instances they are avoidable by the exercise of enlightened precautions, through the practice of that skill which comes of experience, and without which no man should enter a lying-in chamber. The old mock, tearful reverence, the pious humility with which the deaths in these cases are credited to providential dispensation, will not longer answer. With each death the demand will grow stronger, more universal and angry for better and more thorough obstetrical teaching.

I speak for the pride and best hope of our land, the American student; for the best loved, the purest and noblest of our own or any other land, our American mothers.

Treatment of Opium Poisoning.—The following is an extract from a paper read by Dr. J. S. McLain before the Medical Society of the District of Columbia, April 19, 1893, and printed in the *Archives of Pediatrics*, June, 1893: The opinion which has been gaining ground for several years seems now well established, that belladonna and its alkaloids are of little use in the treatment of this form of poisoning, W. H. Thompson going so far as to state that "the cases in which the opium narcosis is really dangerous are those where belladonna is useless, if not injurious." Lenhartz, in his experiments upon dogs for the purpose of satisfying himself as to the antagonism of atropia to morphia, came to the conclusion that while certain symptoms were ameliorated,—for instance, there was immediate dilatation of the pupil, quickening of the pulse and increase of heart pressure temporarily,—in no case did the alkaloid have any effect upon the more dangerous appearances, the coma, cramps and convulsions, and hence he holds that the opposing power is limited, and of no avail in serious cases, the atropine increasing the heart depression already brought about by opium, and that "the physiological antagonism between atropine and morphine is not established by a single authentic observation." Bartholow says, "It is a fatal error to attempt to restore a patient in opium narcosis to complete consciousness by repeated doses of bella-

donna," and further on states that "the utility of belladonna consists in its power to maintain the action of the heart and the respiration until elimination has taken place." Lastly, Dr. T. D. Smith, of Louisville, Ky., writing upon the subject, remarks, "In order to root out more rapidly the prevalent error as to the use of atropine, it would be better that it be not mentioned at all in connection with the treatment of opium poisoning."

Leaving, then, atropia out of the question, except in the most minute doses (according to Bartholow, 1-120 of a grain, repeated, and its effect carefully watched, is ample), and for the purposes above mentioned, upon what is the physician to depend to conduct his patient safely through his lethal sleep? In my opinion, the answer to this question,—after every means has been resorted to to hasten the elimination of the poison from the blood through the usual channels, the kidneys, the skin, the liver, the intestinal and salivary glands,—the main dependence is to be placed upon the galvanic battery, artificial and forced respiration. Hypodermics of tincture of digitalis, 10 to 20 drops, may be given with the object of sending the blood more quickly to the lungs, to obtain a greater degree of oxygenation. Strychnia and caffeine, especially the latter, are also useful for this purpose. Firm and gentle pressure over the veins in the direction of the heart has been recommended. The cold douche is of the greatest service. An excellent manner of applying cold water is by means of a strong atomizer, spraying it freely upon the head and naked chest and back. It is always well to guard the patient against cold draughts during treatment, for the reason that an attack of catarrhal pneumonia seems particularly liable to follow poisoning by opiates.

The practice which has been in use for ages, and is still recommended, of whipping the patient, pinching and pounding him to keep him roused, seems to me not only useless but bordering on the inhuman; if his condition is such that these exercises serve to keep him awake, then they are not needed, and if the coma is profound and prostration great, he is beyond the stage where bodily pain can affect him, the sensory paralysis being complete. T. D. Smith (above quoted), regarding this custom, says, "The spectacle of a crowd gathering around

a thoroughly narcotized person, holding him limp upon his feet, trying to walk him about, is surely one of the most pitiful folly."

Inhalations of ammonia, and, better still, of amyl nitrite, have proved of the greatest service. While the action of the amyl may be antagonized, theoretically, by some of the agents above mentioned, the antagonism is of little moment, due to the difference of time in which these separate drugs are taken up by the organism.

Where death is threatened, through default of the respiratory centres, great benefit may be expected in the use of trinitrin; a single drop of a ten per cent. solution in alcohol being placed inside the mouth, on the tongue or lip, generally produces an advantageous effect in a short time, this dose to be repeated at intervals as indicated. Administered in this way, the effect is as rapid as when injected under the skin, time is saved and the administration is far less troublesome.

If signs of failure of respiration continue, the battery should be brought into play, applying one pole to the nape of the neck, the other to the epigastrium. It is well also to apply a strong, stinging current to the legs, arms and chest, even before this stage. Lastly, artificial and forced respiration should be resorted to long before default thereof makes it absolutely necessary, and this should be continued for hours if needful.

In reference to the last mentioned suggestion, the use of "forced respiration" (the apparatus for the administration of which you see before you, and which will be demonstrated later), the method was originally devised and presented to the profession by Dr. George E. Fell, of Buffalo, N.Y., who read a paper before a section of the International Medical Congress in Washington in 1887, giving the reports of his first case, which occurred July 23, 1887. In this instance the patient had taken a dose of chloral, and, finding that did not produce the desired result, followed it up with a quantity of morphia sulphate, estimated at 20 grains. He was in an extremely perilous condition when forced respiration was instituted by means of the tracheotomy tube, the "dilatation of asphyxia" having taken place, but after use of the instrument for two hours and a half, was considered out of danger, "the ordinary

tracheotomy tube was substituted for the tube of the apparatus, and the patient allowed to breathe for himself." From this time on—with the exception of some rather serious complications, not, however, ascribed to the poisons—the case went on to complete recovery. Since that time, between twenty-five and thirty lives have been saved by the use of forced respiration, most of them cases of opium narcosis, and many of them by the personal service of Dr. Fell; in other cases, the patients have been kept alive for several hours, but either the treatment was begun too late, or the lethal effects of the agents used were too great to be overcome, the fact that life was kept in the body longer than would otherwise have been the case showing the value of the method. With such a record, my impression is that forced respiration, its safety having been demonstrated, is destined to take the place of all other systems in every case where its use may be indicated.

—Dr. McLash, of Houghton, Mich., was summoned to a case injured in a saloon fight. Because he did not respond with desired promptness, he was shot by one of the parties. This is the first instance in which we have heard of a doctor being shot for failing to hurry to an injured person.—*Amer. Lancet.*

—It does not often happen, because patients are not generous nor practitioners so scrupulous, that a physician returns a check for \$500, voluntarily tendered, on the ground that the medical service rendered was not worth so much money. This incident, pleasant to chronicle, occurred lately in Philadelphia.—*Med. News.*

—Medical practice is dangerous in Ireland. Dr. Alfred Brown, of Mount Pottinger, was visiting a patient named Galway, when the patient fired at him with a revolver concealed beneath the bed-clothes. The bullet missed its mark, whereupon Galway shot himself in the mouth, inflicting a serious injury.

—Cyrus Edson recommends for children who do not thrive as they should, the administration of small doses of cod liver oil in the form of some reliable emulsion, because even the best artificial food is necessarily deficient in fat.

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CANADIAN MEDICAL ASSOCIATION.

The twenty-sixth annual meeting of the Canadian Medical Association was held in London on the 20th and 21st Sept., under the presidency of Dr. Charles Sheard, of Toronto. The attendance and general interest in the London meeting was fully equal to any of the past meetings of the Association. In many ways the meeting was a decided success. The members present are greatly indebted to the kindness of the profession in London for the pleasantness of their stay. Dr. Sheard, in his able and eloquent address, touched, among other subjects, on the necessity of having a Central Board for the entire Dominion. The necessity and even urgency of this matter is being constantly referred to by speakers in all the Provinces. It appears that the time is about ripe for a final and successful effort. With this end in view, the Association nominated a committee composed of able and progressive men from the different Provinces. Elsewhere we report the chief features of a scientific interest connected with the meeting. The social part consisted in the usual dinner, together with a great deal of generous private hospitality by the London brethren. Dr. Bucke, with his colleagues of the London Asylum, entertained the members to a luncheon, which proved to be an enjoyable affair. Altogether, the London meeting of 1893 was a decided success.

We are pleased at the wisdom of the next presidential choice. Dr. Harrison, of Selkirk, has been a regular attendant at the meetings since the first. He well deserves the honour of the presidency.

THE CONTAGIOUSNESS OF TUBERCULOSIS.

At the meeting of the Montreal Medico-Chirurgical Society held March 17th, 1893, there was commenced a discussion on Tuberculosis, with special reference to the mode of its transmission from animals to man, man to animals and man to man, and also the means of preventing the spread of the disease. It was opened by Dr. McEachran, Dean of the Faculty of Comparative Medicine of McGill University, who dealt with the relationship between man and animals in the way of communication of disease, the one to the other. He was followed by Dr. Adami, Professor of Pathology, and Dr. Blackader, Professor of Materia Medica in McGill University.

The importance of the subject was recognized by the members present, as well as the able way in which the subject was handled, and, as the hour was late, the discussion was postponed until the next meeting of the Society, two weeks later.

The papers by Drs. McEachran and Adami were published in the May number of the JOURNAL, and that by Dr. Blackader in the July number. The discussion provoked is in the last number of the JOURNAL.

Dr. McEachran gave the results of his own investigations, and his experience has been that, among cattle, tuberculosis is a most contagious disease, and that the introduction of a single diseased animal is sufficient to spread the contagion through a whole herd. It is also a significant fact that wherever cows' milk is in free use tuberculosis prevails, and that in children, who are fed largely on milk, intestinal tuberculosis is the most frequent form in which the disease appears.

Dr. Adami points out the necessity for careful disinfection of the sputum, especially of phthisical patients, as a great means of preventing the spread of the disease from man to man.

Dr. Blackader dwells more particularly on the special means to be taken to carry out the disinfection and other means of prevention.

On reading over these papers, with their array of convincing facts, the thought must occur to many that by the custom of burial of the dead the disease is greatly spread. Each body

infected with tuberculosis put into the ground may serve as a focus from which many cases may occur. The burial in the ground does not kill the bacillus or even materially weaken it; the earth-worms, feeding on the body, ingest the bacilli and spores and carry them to the surface of the earth, there to be taken up by the animals browsing on the grass, or possibly the worms are eaten by birds. This danger may be far-fetched, but it is not altogether imaginary, and is a strong plea for cremation in this as in other infectious diseases.

Do we not read of the "accursed fields" where the sheep died by scores from anthrax, simply because the earth had become contaminated with the virus of this disease through the burial of the bodies of animals dead from anthrax! When we think this over, does it not seem possible that the same may take place with tuberculosis, to some extent at least! Surely this means of prevention should not be neglected in regard to all dead animals affected with any of the protean forms of tubercle.

This discussion, we trust, will make our readers reflect on the responsibility which rests with them as medical practitioners, the responsibility of spreading a knowledge of the causation of this disease and of the means to prevent it. People have been educated up to take precautions against the spread of small-pox and scarlatina, so why not against a disease which is infinitely more fatal than either of these? Let everyone remember the old proverb: "Prevention is better than cure."

CERTIFICATION OF THERMOMETERS.

The Secretary of the Observatory of Yale University makes the following remarks about the results of the examination of the thermometers submitted to them:—

"It continues to be true that only a small percentage of the instruments sold are sent to us for examination. It is presumably true, also, that those which are sent here for certification, by the manufacturers, are carefully selected, and, therefore, far more reliable than the average of those sold without certification. Nevertheless, we are sometimes compelled to reject

25, 50 and even 75 per cent. of those sent us. As a rule, these are not rejected without receiving double the care and time required by the large majority of those to which certificates are accorded.

“When there is taken into account the large percentage which the cost of certification adds to the manufacturer’s prices, it is not to be wondered at that when he has succeeded in continuously producing, for a season, instruments with few and uniform corrections, he should point to these conditions as justifying his customers in accepting his instruments without other certification than his own. In those cases of this sort which have come under our observation, we have noticed that apparently the workman, when he no longer has occasion to expect his work to be traversed by a disinterested authority, soon relaxes his efforts at an accuracy which is hardly yet fully appreciated by the ultimate consumer, and his instruments, when they come to us from his customers, are not quite up to the standard maintained when he was continuously, or at short intervals, submitting them to such test: possibly he is not making due allowance for his changing standards.

“It may not be out of place to again invite the attention of our public to some points in the construction of registering clinical thermometers, which are frequently overlooked by makers and users of these instruments.

“In those forms where the index is a short column of mercury—one-third to one-half an inch long—separated from the rest of the mercury by a small bubble of air, the index is often lost by being thrown down into the bulb, the bubble escaping into the attenuated atmosphere of the tube, and when the index is restored the separating bubble is not likely to be of the same dimensions, and the temperature indications will not be the same as with the former bubble. The difference in the lengths of the tube occupied by the old and new bubbles will account, approximately, for the difference in the readings. The bubble should always be as small as is consistent with its function of separating the columns of mercury. The tube should extend sufficiently beyond the maximum readings required, that the

compressed atmosphere at the top of the tube may not force back the index, when the support of the mercury in the bulb is withdrawn by cooling.

“In those forms where the ‘Indestructible index’ is maintained by a ‘trap’ near the bulb, the various constructions of this trap may, at certain points, cause the index to drop irregularly when the mercury below the trap has contracted, or may occasion a motion of the index by jumps: in fact, in most of the reliable instruments of this form, it is merely a question of the number of jumps taken by the index in rising one degree; most of those in which the index rises perfectly smoothly and without jumps will justify the suspicion that the index will drop as soon as the mercury in the bulb contracts from the trap. While the index is rising freely the motion may appear continuous, but when the index is within a degree or two of coming to rest and rising slowly, the jumps may, usually, easily be counted. Our recent practice has been that, when these jumps average $0^{\circ}.1$ or less, and the readings repeat themselves throughout within the prescribed limit of accuracy, the usual certificate is given: if the jumps average more than $0^{\circ}.1$ and less than $\frac{1}{4}^{\circ}$, the readings repeating themselves as before, we modify the certificate by making the limit of accuracy ‘ $0^{\circ}.2$ ’ on the same certificate form: and when the jumps average more than $\frac{1}{4}^{\circ}$, we give no certificate. The process of producing the trap leaves its walls in a somewhat unstable condition, so that moderate concussions may cause particles of glass to separate, which particles, acting as a plug, may temporarily sustain the index, which, when the plug is dislodged, may drop. The contraction here is so small, and the particles of glass so fine, that it is not always easy to detect them. The same dropping of the index may be due to the varying effect of air in the trap.”

Obituary.

THE LATE DR. DESROSIERS.—By the death of Dr. Desrosiers, which took place on the 28th of September, the profession loses one of its oldest members. The deceased had reached the ripe age of eighty years, fifty-six of which he had devoted to the practice of medicine.