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THE CANADIAN

Journal of Medical Science

VOL. II.

TORONTO, MARCH, 1877.

No. 3.

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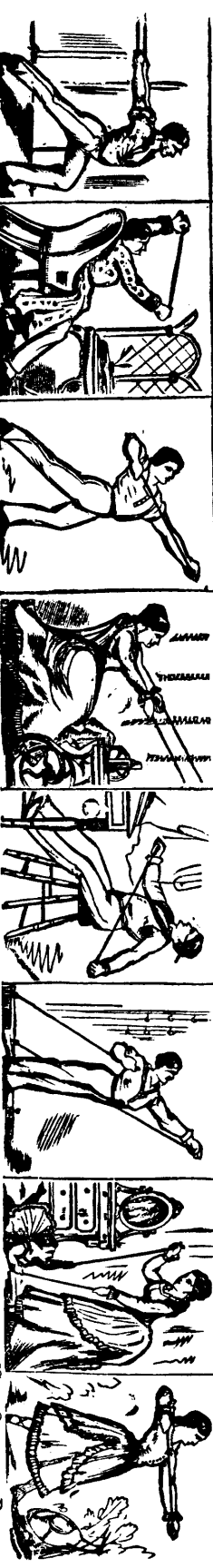
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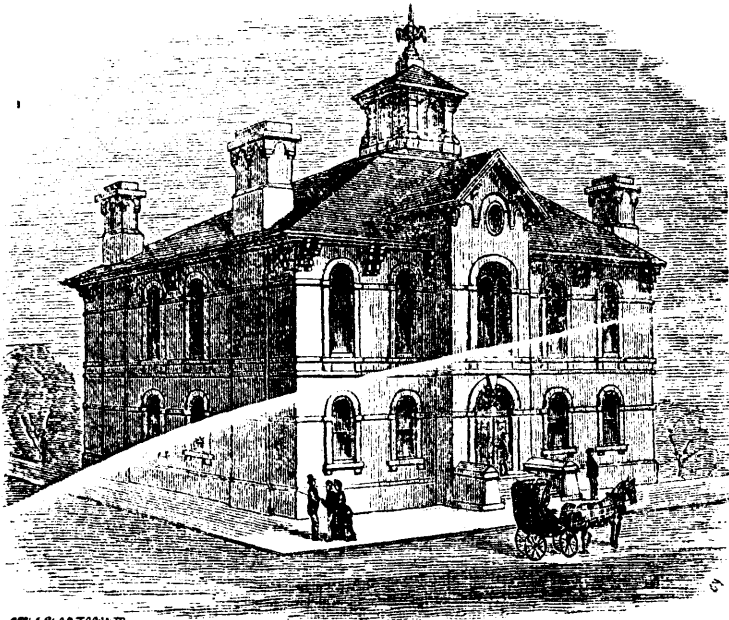


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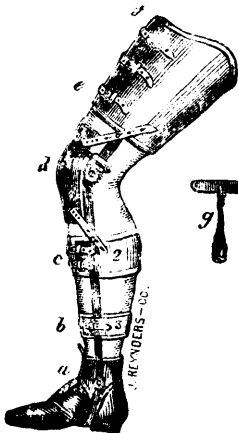
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THE PRELIMINARY AUTUMNAL TERM for 1876-1877 will open on Wednesday, September 13, 1876, and continue until the opening of the Regular Session. During this term, instruction, consisting of didactic lectures on special subjects and daily clinical lectures, will be given, as heretofore, by the entire Faculty. Students expecting to attend the Regular Session are strongly recommended to attend the Preliminary Term, but attendance during the latter is not required. *During the Preliminary Term, clinical and didactic lectures will be given in precisely the same number and order as in the Regular Session.*

THE REGULAR SESSION will commence on Wednesday, September 27, 1876, and end about the 1st of March, 1877.

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The Spring Session consists chiefly of Recitations from Text-books. This term continues from the first of March to the first of June. During this Session daily recitations in all the departments are held by a corps of examiners appointed by the regular Faculty. Regular clinics are also given in the Hospital and College building.

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Fees for Tickets to all the Lectures during the Preliminary and Regular Term, including Clinical	
Lectures	\$140 00
Matriculation Fee	5 00
Demonstrator's Ticket (including material for dissection)	10 00
Graduation Fee	30 00

FEES FOR THE SPRING SESSION.

Matriculation (Ticket good for the following Winter)	\$5 00
Recitations, Clinics, and Lectures	35 00
Dissection (Ticket good for the following Winter)	10 00

Students who have attended two full Winter courses of lectures may be examined at the end of their second course upon Materia Medica, Physiology, Anatomy, and Chemistry, and, if successful, they will be examined at the end of their third course upon Practice of Medicine, Surgery, and Obstetrics only.

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TORONTO. MARCH. 1877.

Selections: Medicine.

HYDRO-PERITONEUM.

This case illustrates hydro-peritoneum, or ascites. The enlargement of the abdomen, as you see, is excessive, and it is uniform. A sense of fluctuation can be easily obtained. It would seem that diagnosis, as relating to the contents of the abdominal cavity when it contains fluid, does not involve much difficulty; but there is a liability to error here, as elsewhere. Ascites may be confounded with an enormously distended, or a sacculated bladder; with pregnancy; tympanites; ovarian cyst; chronic peritonitis. These are the more common conditions, perhaps, that are liable to be mistaken for ascites, but there are some other conditions which we will not now stop to consider. This form of dropsy, like all others, is but a symptom. It is convenient, however, to speak of these different forms as we would of different forms of disease, for the reason that we are not always able to trace them to the primary condition upon which they depend.

When it occurs, as seen in this case, it is, in a vast majority of instances, indicative of cirrhosis of the liver. The essential pathological lesion of cirrhosis of the liver is an increase of the areolar tissue in the interlobular spaces. The development of fibrous tissue in that situation is due, it is supposed, to a chronic inflammatory action, which is ordinarily brought about by the use of spirits, and usually taken upon an empty stomach. Taken in this way, the spirituous liquors pass into the system very rapidly, and there is produced, as a local effect, this chronic inflammatory condition. A few

indulgences, occasional debauches, paroxysmal drinking, do not usually produce this condition; it is rather the continuous drinking that produces the development of fibrous tissue in this situation, which gives rise to mechanical pressure sufficient to obstruct the current of blood; hence portal congestion is followed by dropsy. Sometimes, in consequence of such portal congestion, hæmorrhages occur, such as hæmatemesis, and hæmorrhage from the bowels.

With this exceedingly brief outline of the more probable cause of the dropsy in this case, and clearly indicated by the history, we will pass at once to the question of

Treatment.—The object to be accomplished is to get rid of the accumulation of fluid; for, enormous as you see it is, it interferes in a most decided manner with the circulation through all the digestive organs, and consequently is a prominent obstacle in maintaining a proper amount of nutrition. Diuretics may be administered, but my experience has been such as to warrant me, I think, in saying that the chances of success by the use of diuretics in these cases is almost *nil*. Hydragogue cathartics would be better; but the effect of these would be to produce more or less exhaustion, and it will be necessary to repeat them over and over again and probably in the end success will not be obtained. Does it not look like plain common sense to introduce a trocar at once and remove this accumulation of fluid that is keeping up a continual embarrassment of the circulation of the digestive organs, thereby giving these organs the opportunity to perform their functions properly? It seems to me the answer is apparent. There has, however, been considerable discussion with reference to the proper time for

the performance of the operation. I have for some years past advocated early resort to this procedure. The more common practice is to postpone it as far as possible. I believe, however, that the sound practice is, the moment the patient suffers any inconvenience from distension, to withdraw the fluid by some mechanical means. It may be urged, in objection, that it will be necessary to repeat the operation when once performed; hence, it should be delayed until other means have failed to remove the fluid. After each tapping, however, there is a better opportunity for improving the general condition of your patient; so that, if it becomes necessary to repeat the operation, it can be borne much better than at first. It sometimes happens that paracentesis is performed again and again, and the general condition steadily improves, so that finally the ascites does not return.

The *prognosis* is not so bad in many of these cases, for if the fluid is removed and the general condition of the system is so improved that it does not return, the condition of the liver may be one that can be tolerated for a long time.

(The operation was performed by the House Physician in the usual manner, and about twelve quarts of fluid removed from the peritoneal cavity.)—(Austin Flint in *Virginia Med. Monthly*.)

NEW TEST FOR ALBUMEN IN THE URINE.

At a recent meeting of the Société de Biologie de Paris (*Le Lyon Médicale*, Nov., 1876) M. Bouchard read a paper on the employment of the double iodide of mercury and potassium as a test for albumen in the urine. According to him, the test is very delicate, and so much so that the absence of albumen may be positively affirmed, when the urine does not cloud on the addition of this reagent. There are certain sources of error in the test, however, which must be borne in mind:—

1. The error may depend upon the reagent itself, when it can be easily avoided by adding an excess of iodide of potassium to the solution.
2. If mucine be present in the urine, or

white precipitate analogous to the albuminous precipitate, it is formed on adding the double iodide, but it forms slowly, while albumen is thrown down at once.

3. If the urates be present, a precipitate may also be thrown down, but it forms slowly in the middle, instead of at the bottom of the test-tube; is not flocculent; and finally disappears under the influence of heat.

4. When the urine is alkaline, a precipitate may form, even if no albumen be present, but it has a gray colour, and becomes black in a few seconds.

5. The presence of alkaloids in the urine may also lead to the formation of a precipitate, but it is not flocculent, begins to form in the middle of the test-tube, and disappears under the influence of alcohol or heat.

In a word, every precipitate which persists after the employment of heat, is due to the presence of albumen in the urine.—*Med. Record*.

PLEURISY WITH EFFUSION.

Treatment.—When the quantity of effusion is small, other conditions being good, the pleurisy itself does not place the life of the patient in any great danger. The only immediate danger is from an unusually large and rapid accumulation of fluid in the pleural cavity; but such cases, fortunately, are not of frequent occurrence. In a case like this there is, therefore, no indication for the use of those measures sometimes resorted to to promote absorption when the quantity is large, nor for aspiration. The only indication is to palliate the suffering of the patient by the moderate use of anodynes, render him comfortable, and improve the general condition by the use of tonic remedies and nutritious diet. The patient is anæmic; his lips are pallid; and although he was in good health at the time of the attack, his appearance indicates that his general system is somewhat run down, and therefore demands support. Give it such support, and the pleurisy will take care of itself. We shall find cases, however, in which the indications for treatment, as far as the pleurisy is concerned, are distinct and prominent.—*Dr. Flint in Virginia Medical Monthly*.

MILK DIET.

In the London *Lancet* for December 16th is a clinical lecture by Dr. Geo. Johnson on the use of milk diet, which he commends most highly in chronic diarrhœa, dysentery, and acute Bright's disease. The chief stress is, however, laid upon the value of the method in *acute and chronic cystitis*, and one case of rapid and complete cure in a very severe case of two years' duration is reported. The method of administration is as follows:—

The milk may be taken cold or tepid, and not more than a pint at a time, lest a large mass of curd, difficult of digestion, form and collect in the stomach. Some adults will take as much as a gallon in twenty-four hours. With some persons the milk is found to agree better after it has been boiled, and then taken either cold or tepid. If the milk be rich in cream, and if the cream disagrees, causing heartburn, headache, diarrhœa, or other symptoms of dyspepsia, the cream may be partially removed by skimming. One reason among others for giving the milk, as a rule, unskimmed—that is, with the cream—is that constipation, which is one of the most frequent and troublesome results of an exclusively milk diet, is, to some extent, obviated by the cream in the unskimmed milk. As a rule, it is unnecessary, and, therefore, undesirable, to add bread or any other form of farinaceous food to the milk, which in itself contains all the elements required for the nutrition of the body. When the vesical irritation and catarrh have passed away and the urine has regained its natural character, solid food may be combined with the milk, and thus a gradual return may be made to the ordinary diet, while the effect upon the urine and the bladder is carefully watched.

There are some patients with whom, unfortunately, milk in any form, and even in small quantities, so decidedly disagrees that it is for them as unsuitable a diet as any other form of indigestible food would be.

The doctor also suggests the employment of the milk diet as a preparation for the operation of lithotomy, and states that he has seen two cases in which the vesical irritation and catarrh resulting from a stone in the bladder were

much mitigated by the milk diet, the patients being thereby brought into a more favourable condition to undergo successfully, the one the operation of lithotomy, the other that of lithotripsy.—*Phil. Med. Times.*

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HIGH TEMPERATURE.—Mr. J. W. Teale read at a meeting of the Clinical Society of London, Eng., notes of a case in which the temperature as shown by the thermometer was unusually high. The patient, a young lady, was thrown in the hunting field, on Sept. 5th, 1874, by her horse taking a standing jump at a five-barred gate, and catching his feet in the topmost bar, pulling heavily upon the rider. The lady staggered to her feet after momentary unconsciousness, and was seen in five or six hours after by Dr. Teale. She was in a state of collapse and complained of pain in the back. The left fifth and sixth ribs were fractured, but united kindly. There was some considerable pain and tenderness in the back, and the temperature remained from normal to 101° Fah. for some time. On Nov. 3rd, it was 105° Fah.; on the 4th, 106° Fah.; Nov. 8th, 110° Fah.; Nov. 11th, 116°; Nov. 12th, it fell to 110° Fah.; Nov. 13th, 122° Fah.; the utmost limit of the thermometer used. The range of temperature varied very greatly, and no less than seven different thermometers were used to guard against error, but they all registered the same. As the clinical thermometers registered only 118°, Mr. Teale had one of 122° made for this case, but it was not sufficient. He thinks the temperature probably rose to 125°. The patient recovered.—*Lancet.*

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SALICIN IN CHRONIC DIARRHŒA.—Dr. Matison, in the proceedings of King's Co. Med. So., recommends salicin very highly in chronic diarrhœa, and relates a number of cases in which it has proved successful after every other treatment had failed. He says:—"I commend salicin with confidence, firmly convinced that we have in it a remedy of *unequalled* power in what has long been regarded among the *opprobria* of medical art—chronic diarrhœa. It can be administered in pill, powder, or solution. To adults, preferably the former, in doses of five grains every four hours. To children under two years, one-half to two grains mixed with sugar, or in sweetened water or milk, every fourth hour. In any case, where improvement is not noted within a week, increased frequency of administration is recommended, and in *all* cases careful attention to dietetic details and hygienic surroundings is of decided importance." [We hope it will prove true, but fear it may be like salicin in rheumatism.—Ed.]

Surgery.

CLINICAL LECTURE ON THE TREATMENT OF WOUNDS.

Delivered at the Queen's Hospital, Birmingham.

BY SAMPSON GAMAGE, F.R.S., EDIN.,

SURGEON TO THE HOSPITAL, FOREIGN CORRESPONDING MEMBER OF THE SOCIETY OF SURGERY OF PARIS.

Gentlemen,—Wounds of all kinds must, while you are surgeons, be the objects of your care. The one great question for you to solve will be, how least painfully, how most speedily and most safely, you can assist or promote the natural process of healing.

Teachers, in text-books and hospital wards, differ very widely on the theory and practice of this fundamental part of surgery. I shall not attempt to enumerate their differences, much less either to confute or reconcile them. My present aim is to place before you the evidence of typical cases, in support of what I believe to be the first and essential principles which should govern the practice of surgeons in treating wounds.

I invite your attention to this little old gentleman, who has kindly attended here this morning for your instruction. He consulted me about two months ago for a cystic tumour, about as large as a hen's egg, in the right temporal region. The skin was very red, tense, and painful, and the hat, though a very soft one, was worn with much difficulty. After transfixing the growth vertically through the base, and peeling out the two halves of the cyst, with its bread-sauce-like contents, I dried the interior of the wound with a fine sponge. The edges were then very accurately approximated, and kept so with a few strips of lint soaked in styptic colloid. A few turns of bandage completed the dressing. When I removed it, at the end of five days, there was not a drop of discharge, adhesion was perfect, and afforded a simple but complete illustration of the surgeon's first intention in treating wounds—to secure direct union. All that is visible of the cicatrix is a very fine, pinkish line, extending upwards about two inches from the right ear.

Please to note—firstly, that the wound was thoroughly dried with a fine sponge; secondly,

styptic colloid was used to keep the edges in contact; thirdly, the parts were not disturbed until the fifth day, when union was complete and solid.

Drenching wounds with water during an operation, and washing them with it afterwards, are mistakes. Water favours decomposition, which is the enemy of healing action.

The styptic colloid, used to keep the edges of the wound together, is the admirable preparation introduced in 1867 by my friend, Dr. B. W. Richardson. In removing the styptic-colloid dressing common water should be scrupulously avoided, and a mixture of alcohol and ether employed, or equal parts of absolute alcohol and distilled water, warmed to a little above the heat of the body.

It has been noted that the dressing was not touched for five days after the operation. Once divided parts—be they hard or soft, bones or muscles, skin or nerves—are adjusted with a view to union, the less they are disturbed the better.

A case illustrating the same principles, though on a somewhat larger scale, is that of C. H.—, aged forty-three, who was lately in Ward 5, whose right breast I removed on the 20th May, with a small hard gland from the corresponding axilla. Of the operation it only need be said that, according to my usual practice, I cut down upon the sternal origin of the great pectoral and dissected it clean, so as to make sure of thorough removal of the diseased mass. I am convinced that many so-called rapid recurrences of cancer are only growths of pieces left behind, and that *thoroughness* is the very essence of success in extirpation of malignant growths. After removal of the breast, the edges of the wound were neatly brought together by numerous points of silver suture, and dressed with a layer of fine cotton wool and over it picked oakum. An evenly compressing bandage was then applied round the chest, and made to include the arm and hand in the flexed position, so as to fix them immovably to the side. The first night the temperature rose to 101.3°, but it never rose afterwards above 100°.

The wound was first dressed at the end of the fifth day after the operation. A great part

of it being healed by the first intention, a large number of the sutures were removed, and strips of adhesive plaster applied, so as to keep the edges in apposition; a pledget of oakum with a compressing bandage completed the dressing. On June 1st the remaining sutures were removed. The wound was then nearly all healed, and the same dressing applied. On June 3rd (fourteenth day after operation) the entry on the card is, "Patient dressed (as before), and sent home well."

The points in this case to which I wish to direct your attention are—(a) the numerous sutures; (b) the cotton-wool and picked oakum dressing; (c) the compressing bandage; (d) the rare dressing.

Metallic sutures so very rarely cause any irritation, that they may be inserted very near each other with impunity. Sutures far apart, with gaping intervals, are comparatively useless. If the cut surfaces are to adhere they must be brought into contact and kept there, and for this purpose metallic sutures half an inch apart, or even less, are most efficacious. I often apply intervening strips of lint soaked in styptic colloid, but in this case only placed over the wound a layer of fine cotton-wool and a pledget of picked oakum. The best cotton-wool for surgical dressings is that sold for jewellers in thin sheets, about eighteen inches by twelve, with alternate layers of tissue-paper. You will often see claims of priority for cotton-wool dressing. I do not pretend to say who first introduced it, but the credit of generalising its application in the treatment of a great variety of surgical injuries chiefly belongs to Burggraeve, of Ghent.

It has been recorded that the breast case was only dressed three times, in the fortnight which elapsed between the operation and the patient's discharge, in accordance with the principle of infrequent dressing, of the minimum of disturbance to ensure the maximum of rest, dwelt upon in the preceding case, and equally borne out by those to be presently brought to your notice. To the same end the smoothly and lightly compressing bandage round the chest very powerfully contributed. Of all surgical agencies none is so beneficent as compression, none requiring more delicate manipulation,

none so inadequately appreciated. Under a smooth and uniformly, while lightly compressing bandage, extravasations of blood are absorbed, the healing action is promoted, and a soothing influence is exercised. There must be no constriction—only equable adaptation of surface to surface with the light pressure which always comforts. There must be no squeezing like that of an old college friend's hand when seen after long absence; such pressure—as that, if continued, is intolerable constriction. The soothing surgical pressure is like that which you interchange with the hand of a lady, the pleasure of whose meeting is tempered by the respectful regard which she inspires. Your hand adapts itself to hers, and gently presses it wherever it can touch it, but nowhere squeezes it, for fear of offending. Such pressure as that, when employed by the surgeon in the treatment of injuries, always soothes and heals.

To apply a nicely compressing bandage well, you must practise hundreds and hundreds of times, bearing in mind that in surgical, as in all art, the greatest results are often obtainable from the simplest means, provided they be employed with the skill which can only result from the most patient assiduity.

These principles are illustrated by the two patients who have undergone amputations, and who are now before you.

I amputated the middle finger of this man's right hand in the course of my clinical lecture last week. As the result of old injury, the finger was bent and stiff, so as to be in the way. I therefore removed it at the metacarpophalangeal articulation, being careful not to wound the palm, and including in the elliptical incision so much of the covering of the phalanx as to admit of easy closure of the wound over the big knuckle. The edges were united by three points of silver suture, a fine drainage tube placed in the lower angle of the wound, which was covered with a pledget of picked oakum; a moist pasteboard splint was now bandaged to the palmar aspect of the limb from the tips of the fingers to the elbow, and the forearm suspended in a sling.

This other patient, aged sixteen, was admitted to Ward 3, the 18th May ult., with his forearm

crushed by machinery within two inches of the elbow. As the bones were not split into the joint, I amputated just below it, utilising some of the least damaged skin to cover it. Where the skin was quite sound the edges were brought together with two points of suture, elsewhere the parts were approximated with strips of lint soaked in styptic colloid, a drainage tube being left in the lower part of the wound. The stump was covered with a layer of cotton-wool and oakum, and rectangular pasteboard splints were applied with gentle pressure to insure perfect immobility and prevent swelling. When the apparatus was opened four days afterwards there was very slight sloughing of the margin of one flap, but the stump was of good colour and healthy temperature, without tension. The same dry dressing with pressure was applied, and the lad was discharged on the 17th of June, a month within a day from his admission, the stump, then quite healed, having been dressed altogether seven times after the amputation.

A parallel case is that of James B——, aged six, discharged the other day from Ward 6. The soft parts of his left lower limb had been extensively crushed by a waggon, and an attempt had been made to save the limb. Sloughing and profuse suppuration had been followed by such exhaustion that the lad might fairly be said to be moribund when I amputated the thigh in the upper third on the 22nd of April. I dressed with cotton-wool, oakum, pasteboard splints, and nicely compressing bandages, and the lad was discharged with a sound stump and in good health on the 15th of June. In the forty-seven days which elapsed from the operation to his leaving the hospital the dressing was only renewed six times.

Not to go over the ground already trodden in commenting on the other cases, I shall only remark on the splints and the drainage tubes employed in these amputations.

Coaptation of divided surfaces once effected, absolute rest is the first essential to the healing process. That rest is best secured, in the case of amputations, by moulding to the stump well-softened pasteboard splints, and fixing them with evenly compressing bandages. As in the case of fractures, the joint above the injury

should be included in the splints, and great contributory benefit may be derived from the nice adaptation of sandbags.

Of Chassaignac's drainage tubes in the treatment of wounds it is impossible to speak too highly; but useful as they are after amputations, removal of tumours, and such-like operations, it is in such cases as this breast that their advantages are perhaps most conspicuous.

When this woman was before you last week, her pale, drawn face betokened suffering and exhaustion; the big, pendulous, and exquisitely tender left breast discharged matter through half a dozen openings, the result of post-partum mammary abscesses and linseed poultices. I passed a long probe from the lower aperture on the outer side, under the mammary gland, obliquely upwards and inwards, out at the uppermost aperture near the sternum. A ligature secured to the eye of the probe enabled me to carry a good-sized drainage tube along its track, and I left it there with both ends depending, covering the breast with a good pledget of dry oakum, and suspending and compressing it with an evenly compressing bandage. The poor woman was easy at once, her appetite improved, and she slept well. When the dressing was removed, after a lapse of four days, the breast was soft and much diminished in size; the openings other than those traversed by the drainage tube were healing rapidly, and the woman is now cheerful and rapidly convalescent.

Here is an equally successful case of a different kind, yet illustrating substantially the same general principles which should guide you in the treatment of all wounds. This youth is the son of one of our principal ivory and bone turners, who, while practising the other day with a fine circular saw, nearly cut off the soft pad at the end of the right thumb. He did not consult me until the third day, when the little flap was swollen, the wound dirty, the whole thumb throbbing and being very painful. On compressing the radial joint above the wrist, the throbbing and pain ceased, and I taught my patient how to obtain the relief by effecting the compression himself with the left thumb. I then brought the edges of the wound together with narrow strips of emplastrum elemi, leaving

slight intervals for the escape of matter, covered the end of the thumb with a little fine-picked oakum, bandaged it so as to effect gentle uniform compression, and supported the hand at an acute angle with the arm, by means of a sling supporting the forearm and enclosing the elbow, as every sling, to be efficient, should do. Relief was immediate; the dressing was not touched for four days, and only twice afterwards, at intervals of three days. You see the thumb very nearly a match for its fellow, and a linear cicatrix is all that is left of the ugly wound.

This case illustrates, like the previous ones, the advantages of direct compression, with dry and rare dressings, in the treatment of wounds, and it further exemplifies the benefits to be derived from digital compression in the treatment of inflammation of the limbs.

In proof of the statement that the same principles of treatment are applicable, whether the wounded parts be soft or hard, skin, bones, or muscles, or all combined, you have here two very striking cases. A carter was brought into the accident ward with the scalp torn from the greater part of the right side of the head, and with two compound and depressed fractures in the parietal and frontal bones respectively. The large flap was cleansed, replaced, and united by eight points of suture, picked oakum, and a light bandage applied, and an ice-bag over all. The greater part of the wound united by the first intention. The cicatrix is now quite solid, and the man is doing his usual laborious work without ache or pain.

The last case which I shall now bring before you is that of a porter on the Midland Railway, who was brought to the hospital, a distance of fourteen miles, with the left femur literally smashed just above the knee-joint, a fully-laden coal-truck having gone over the limb. The soft parts were extensively torn, but both tibials pulsated, and I felt justified in the attempt to save the limb. Reduction effected and the edges of the wound approximated, a large drainage tube was passed into it, and a pledget of lint, soaked in styptic colloid, placed over it. The limb was now accurately encased in a pasteboard apparatus from the crest of the ilium to the toes. The apparatus was not opened for ten days, and once a week afterwards. The man barely limps in walking, and is now doing duty as a signal-man at Selby-cut. One and all these cases illustrate my favourite maxim, that REST, POSITION, and PRESSURE are the trinity of healing surgical graces.—*London Lancet.*

NOTES ON CASES OF TRAUMATIC COCCYGDYNIA.

RY F. W. ROCKWELL, M.D.

The disease which forms the subject of these notes was first described by Dr. Nott, of New York, under the name of Neuralgia of the Coccyx.

He removed the two terminal sections of the bone, which had been injured by a fall, and completely relieved his patient.

This operation, performed in 1844, although it attracted the attention of the profession at the time, seems to have fallen into complete disuse until revived and systemized by Sir James Simpson in 1861, who gave to the disease a name derived from its prominent symptom, and placed it permanently upon the list of recognizable maladies.

So little has been written on the subject in our text-books or reported in our current literature, that I may be pardoned if I glance hurriedly over the opinions of the few authors who have given it any special consideration.

ETIOLOGY.—Simpson himself believed that in almost every instance injury to the bone—such as fracture, dislocation or pressure during parturition, violence inflicted by falls, blows, etc., was the prime factor in the causation of the disease, and in this case he is closely followed by most recent writers, with the exception of Prof. J. G. Thomas, who thinks it “very generally a neuralgic state due to uterine or ovarian disease.”

Speaking of the coccygeal nerves, Prof. Erb, of Heidelberg, says (Ziemssen Cycl. Prac. Med., Vol. XI., p. 187): “Whether they can be the seat of a true neuralgia appears still to be doubtful, though a certain number of the cases described by Simpson are probably of a neuralgic character.”

Of its extreme comparative frequency among females, who are exposed to all of the causes enumerated above, there can be no doubt, though occasionally found in the opposite sex. Neither is it confined to adult life, two cases having been reported by Herschelman in children from four to five years of age.

PATHOLOGICAL ANATOMY.—Inflammation of the fibrous structures investing the part, or en-

tering into its relations with the sacrum and ischium, seems to be the most commonly accepted lesion. This may be due to injury or to the influence of cold on persons of rheumatic diathesis.

Simpson's first reported case was of this nature, occurring in a woman who had been exposed to its influence while pursuing her avocation as a washerwoman, and necessitating the partial extirpation of the bone for its relief.

Once set up, this inflammation may result in any of the pathological changes incident to its appearance in cartilaginous structures; and we accordingly have different observers reporting cases varying in type from the slightest noticeable lesion, through all the shades of inflammatory change, to complete destruction of the bone itself. Scanzoni found the coccyx very long in a number of cases, unusually movable, or deflected to one side. He also reports cases of inflammation, even suppuration, in the vicinity of the bone. (Schroeder, Ziemssen, Vol. X., p. 560.)

SYMPTOMS.—The sole symptom of the disease is the pain which is developed upon motion of the part either by muscular action or pressure, and which varies in intensity from a dull ache to the most exquisite agony. Sometimes pressure over the posterior surface of the bone will elicit it, while it may be touched from the rectum without any discomfort whatever. In other cases the sufferer can only obtain relief when sitting down, by supporting the weight of the body upon one buttock; while in others stooping, walking, defecation, micturition, or any act which calls the gluteal or perineal muscles into play may cause a paroxysm.

A careful physical examination is often necessary to differentiate this disease from others having the same symptom of pain localized in the vicinity of the coccyx, such as the fissure or ulcer of the rectum, painful hæmorrhoids, etc.; but in most cases the aggravation of pain produced by pressure or passive movements of the bone will serve to make the diagnosis. Simpson and Thomas lay considerable stress upon the difficulty which the patients find in rising from or sitting down upon a low seat.

TREATMENT.—All authorities agree as to the

obstinacy of the disease, and its intractability to any but the most radical treatment, especially in cases having a traumatic origin. Simpson expressed the opinion that permanent relief rarely followed anything but operative treatment, and was accustomed to isolate the bone from its attachments by subcutaneous incision. This is not by any means a simple operation and even in his skilful hands often proved unsuccessful. Thomas recommends as an improvement on this plan the exposure of the bone by incision, the last steps of the operation being completed by the scissors, cutting from below upward, and severing all the attachments between the coccyx and muscles or ligaments inserted therein. Should *this* fail, removal of the bone is the only resource left us. In the case reported below the simpler procedure was not resorted to, since the symptoms seemed to point to destructive changes in the tissues of the part, and the patients insisted upon certain and permanent relief.

The first case is that of Mrs. K., whom I saw with Dr. E. S. Bunker, under whose care she had been for several months. About two years previous to this time, while descending some steep steps into the yard—her arms being filled with something she was carrying—she slipped and fell, striking the sacrum against a sharp edge of the stair.

She experienced acute pain, but managed to crawl into the house after a little while, and in a few days resumed her usual duties. Gradually, however, the pain returned, and finally became intolerable. At times, even when sitting upon soft cushions, ease could only be obtained by resting upon one hip.

Defecation, walking and stooping were all extremely painful, and she was compelled to obtain ease by perfect rest. The doctor had exhausted routine treatment, opiates, tonics, subcutaneous injections, etc., but had only succeeded in mitigating her sufferings. Upon examination per rectum, an exquisitely sensitive spot was found near the base of the coccyx, the patient screaming out when this was touched, even with the greatest care. The coccyx was neither more nor less movable than usual, and pressure made in the direction of its long axis did not seem to increase the pain.

Believing the disease to be in the fibrous structures about the bone, its extirpation was advised and eagerly assented to by the patient.

She was anesthetized, and an incision about $2\frac{1}{2}$ inches long made over the bone. It was then detached from the soft parts covering it, bent sharply forward and disarticulated from the sacrum, where, without much difficulty, it was dissected away from the rectum and removed.

An ulceration extending through the entire thickness of the periosteum was found upon its anterior surface, in the location which had been so sensitive to pressure. The diameter of the ulcer was about three or four lines. The bone and its articular surfaces were all apparently healthy.

The next day the patient complained of some pain in the wound, but said "the old pain was all gone."

Owing to an accident, the wound, which had healed throughout its whole length, was reopened on the fourth day, and suppuration ensued. The cavity was washed out for a few days with a weak solution of carbolic acid, and the patient rapidly recovered.

The operation was performed in Jan., 1875, and the patient had had no return of the pain.

CASE II.—In the following spring I was consulted by Mr. F., who had heard of the case just mentioned, and came to see me in regard to similar symptoms which he had been suffering from.

His history was a most interesting one. About a year before, while descending the companion-way of a vessel, he fell, striking the brass plate of the step, and suffering acute pain referable to the sacral region.

As the steamer was then in port, a physician was called in, who treated him for, "Spinal Irritation."

After a few weeks he resumed his duties, but was again prostrated by the pain, and again treated by counter-irritation, sedatives, etc. He again improved and began to hope himself well, when, early in September, while sweeping out his state-room, he was seized with violent pain and trembling, and compelled to lie down in his berth. Arriving at Chicago, he was

taken to a hotel, medical advice was called, and he was cupped and blistered over the sacrum, and given phosphoric acid and strychnia for spinal irritation. After a month's treatment, as he was growing steadily worse, he changed his physician. His new attendant agreed with the diagnosis which had been made, but changed the treatment to one of the salts of zinc. After five month's confinement to bed he returned to his home in the northern part of this State, and was treated by his physician through correspondence until June, when he came to Brooklyn. I saw him just after his arrival, pale, emaciated, and excessively nervous. Judging from his history that a local injury was the cause of his trouble, I examined him per rectum and discovered an extremely movable coccyx, which upon firm pressure caused acute pain of the same character as that from which he had been suffering.

Suspecting an ununited fracture with disease of the bone or cartilage, I suggested the propriety of an operation for its removal.

The following day he was seen by Prof. Armor, who assented to the diagnosis and treatment.

The operation was performed on the 5th, the bone being readily disarticulated and removed. Rather free hæmorrhage occurred from the sacral, which, owing to its retraction into the fibrous tissue in which it lay, was, with some difficulty, secured with a ligature. The bone having been removed, the oozing which was rather free, was allowed to subside, and the wound closed with silk ligatures.

On examining the coccyx, it was found that the cartilages between its first and second pieces were softened and inflamed, and upon sawing open longitudinally the bone itself was found in the same condition, the pulpy detritus being easily scraped away with the finger nail.

The following morning the patient expressed himself as feeling better than he had in a year, and in a week or two was able to ride about and walk moderate distances.

Aug. 10.—A letter from him at Martha's Vineyard, written in fine spirits, though suffering at times from a nervous disorder, which he has had for years.

He is now living upon a farm, and but for

the occasional return of his nervous trouble would be a well man.

CASE III.—Last April, Lizzie C., a tall, spare blonde, entered St. John's Hospital for relief from a "neuralgic trouble," which had become so severe as to interfere with her occupation of seamstress. Eight months previous, when suddenly rising from a stooping posture, she struck the lower part of her spine against the sharp corner of a chair. Severe pain followed the injury and in a few months became almost constant. Efforts requiring any exertion of strength in a stooping position, rising from a chair after sitting a little while, straining at stool, etc., were sure to be followed by exacerbations of sufferings, which finally led her to seek medical advice. The usual remedies gave no relief, and she entered the hospital. On examination I found the coccyx very movable, projecting forward, and so sensitive to pressure that a touch served to elicit groans from the patient. A week or two was given to general treatment while the patient was passing through her menstrual epoch. She was then seen by Drs. Hopkins and Freeman, who agreed with me as to the propriety of an operation.

The patient was anesthetized and the usual incision made. On exposing the posterior surface, the seat of motion was found to be at the point of articulation with the sacrum, the bone having been violently separated from it at the time of injury. The subsequent inflammation must have been somewhat severe, as the posterior surface of the bowel was found adherent to the concavity of the coccyx, necessitating a rather careful dissection to free the bone. One vessel was ligatured, the wound closed with horse-hair sutures and dressed with carbolized oil.

Erosions were found upon the articulating surfaces of the bone removed, though the sacral ones were normal.

The patient made an excellent and rapid recovery, and has remained perfectly well since.—*Proceed. Med. Soc. of Kings Co., Brooklyn.*

A MAN who died in Dublin a few weeks since from the effects of strychnine, stated that he had taken, in one dose, half an ounce of strychnine, one ounce of chloral, and two ounces of opium.

CHRONIC INFLAMMATION OF WRIST AND KNEE JOINT.

Clinical Lecture by Professor LEWIS A. SAYRE, Bellevue Hospital, January 3rd, 1877.

Reported for the *Medical and Surgical Reporter*, by NELSON W. CADY, Student.

Case I.—J. W., girl, aged fifteen. Here is a girl sent to me by Dr. Elder, of Hoboken, with a diseased wrist joint. As the case is of unusual interest, I have asked her to come over here. As this disease is one which you are likely to come in contact with quite often, and which sometimes requires amputation, but which may be saved if properly managed, I thought I would ask her to show it to you. The disease has been going on three months; the cause of it she does not know. She lives out, and has to wash and wring clothes, and sometimes has to carry coal. She is fifteen years old.

Here you see a girl only fifteen years old—hardly developed—carrying heavy weights, a thing which often produces inflammation of the wrist joint. She has had it covered with iodine for a long time, which took the skin off. Then she applied a flaxseed poultice, and again put on iodine, and more poultices, for the last three months. You see its present condition.

The flexor muscles, being stronger than the extensors, have flexed the hand strongly. Here is an example of the universal law that you have heard me preach about so often; no matter what joint is involved, the first thing is reflex muscular contraction; that adds to the disease, by causing pressure of the inflamed surfaces together, promoting interstitial absorption, and at the same time produces distortion and deformity, as a secondary result. That distortion, as a result of muscular contraction, of course, accommodates itself to the strongest muscles involved in the irritation, and in the wrist usually assumes this attitude; very much like a luxation of the ulna or a fracture of the radius. It is often mistaken for such, but it is not so. It is simply this partial displacement of the hand, owing to the strong contraction of the adductor muscles on the front side of the wrist, and the absorption goes on. Then you have this fungous growth and exudation from the bones of the wrist, what Sir Benjamin Brodie

calls fungus articulari. As you look at it, you would take it for a *rose cancer*, but if you feel it you would think it to be full of fluid. There is nothing in it of that kind, however. It is filled and packed with a sort of gelatinous material, and has a semi-fluctuating feel to it. If you should puncture or aspirate it, you would get nothing, and if you attempted to incise it, you would get nothing unless you squeezed it, when there would come forth a substance looking more like pudding juice than anything else, a mixture of plums, currants, and jelly, and everything suggestive of an indescribable gelatinous mass. You may call it *scrofula*, if you like.

What must be done, is to apply the same principle as you have seen me apply to a diseased ankle, knee or hip; the same as you have seen me apply to this young one's body, viz.: extension and counter-extension, till you get it to proper position, and then fixation, to keep it there. We are going to put it up in a simple extension splint, and at the same time make her perfectly comfortable until a proper instrument can be obtained for her. A good method is to make a couple of splints of sole leather. These are dipped in cold water, to make them flexible and soft. They are applied back and front, holding the arm where you want it, in a position, not of pronation, but of supination, then moulding carefully to the arm, and finally securing with a roller bandage. Next day the leather becomes like a board. Then the splints are taken off and covered with adhesive plaster, adhesive side out. This is applied to the hand and arm, back and front, and covered firmly with a roller commencing at the hand. When you get as far up as the wrist, make extension and counter-extension, and carry the roller bandage the rest of the way up. The plaster prevents slipping and the leather prevents telescoping.

But this method takes a day or two for its application, and this girl lives in Jersey, and she cannot come over to-morrow. But I can put a contrivance on her arm which will enable her to keep comfortable on the way home. I use a paper splint formed of half a dozen layers of newspaper, which has sufficient elasticity to accommodate itself to the curves of her arm,

and enough stiffness to keep up extension. This I cover on both sides with adhesive plaster, adhesive side out. I shall apply it in the manner just described, and follow it up with a roller bandage.

You see that we have here a partial luxation of the wrist. You notice, the moment I touch her hand she has pain. I take hold of her hand gently, and press it toward the body. You see her face gives evidence of pain at once; now I will make it take a different position, and give her ease. The hand is flexed and pronated—why? There is a reason for everything. The pronator muscles are stronger than the supinators, and consequently the pronator drags the hand into the position it now has, flexed and pronated. The hand must be extended and supinated, so that the palm of the hand looks toward the mouth; for if it were left, the girl might be able to carry coal and scratch her neighbour's face, but she could not feed herself with that hand. You may think this is not very much, but it is highly important. And besides, it is just as well to carry the hand in a natural position, as it is to carry it in an abnormal position. If you are going to undertake the treatment of these diseased joints, you must remember this law—always remember to place the limb in the position where it will be of most use to the patient. I can make that girl comfortable in one position as well as another; flexed, extended, pronated, or supinated. Do not, gentlemen, neglect all these little details in your treatment of diseased joints. Remember that that joint and limb is to be of use hereafter, and remember to so fix it that it will afford a maximum of usefulness. So, instead of fixing this hand and arm as they now are, I will, in addition to making extension, make gradual supination, very gently and slowly. You will observe that I am getting it gradually into a natural position, and, as I do so, you can observe that partial luxation more plainly than before. The great secret of doing these things, is to cause as little pain as possible. There is no necessity of hurting your patient at all. And if at any time I cause them pain, I do so merely to convince you that there is disease.

The limb is now in its natural position, and

we apply the paper splints as far down as the carpo-phalangeal articulation in front, and the same behind; then we apply this roller bandage, moulding the paper to fit the hand. Having carried it up as far as the joint, my assistant makes extension, and the roller is carried the rest of the way up the arm, allowing the splints to mould themselves to the arm as we proceed. In order to make the splints stronger, and to prevent telescoping, we apply on the back and front of the arm these narrow, roughly perforated tin strips, and secure them also with a roller bandage.

I have now secured the bones from pressure against each other, by extending and fixing them. Now I am going to make use of the same principle that has caused this absorption of the bones, in order to get rid of the abnormal deposition in and around the joint; I am going to try to get rid of this gelatinous exudation.

We pour the opening full of Peruvian balsam, which is an excellent antiseptic, and allow it to percolate down through that joint. Then we apply a roller bandage over the part, drawing it as tight as I can draw it, and it gives her no pain, as the joint has already been extended. Now this outside bandage shall, from time to time, be increased in tightness, as soon as absorption takes place, so as to get rid of the effusion, and if that is not sufficient, we shall have to place a seton through it, and if any diseased bone is left in the joint, it will have to be dug out.

This is a simple, practical, efficient and inexpensive plan of treatment, and you should have ingenuity enough to apply it anywhere, without being compelled to resort to instrument makers.

Case 4.—Herman —; man, aged twenty-eight. You remember this young man, who came to us three weeks ago last Saturday, to have his leg amputated above the knee, for chronic disease of the knee-joint. He has had the disease eight years, the result of injury during violent exercise. He was a great athlete and gymnast. It ended in ulceration of the cartilages, and suppuration at the joint, and he was sent to me last June, by a good surgeon, to have an amputation performed. I aspirated the joint, getting about four ounces of matter, and after the joint was emptied, I

could bring it in tolerably fair position, and then applied the extension splint, which he is now wearing. He returned home, and for three or four weeks was greatly relieved, until the plasters wore out, and the instrument required re-adjustment. His physician re-applied the splint, as he thought, thoroughly, but it was ineffectual, the plasters being inefficient. He sent him back to me, with a letter, saying that it was useless to continue the treatment any longer, and that an amputation alone could save him, but that he would yield to my superior judgment in the matter.

You can observe the change that has occurred in the period of three weeks. You remember how greatly enlarged were the veins over the knee, and how enormously enlarged was the knee itself. There was a semi-fluctuating feel, and the skin was so tight that it could not be pinched up. Now, the veins are nearly normal in size, and the skin has become loose again. The knee was so sensitive at the time, that a touch would all but set him crazy, and the slightest compression of the articular facets of the femur against the head of the tibia made him wild with agony. This had been his condition for so long a period that his general health became broken down by it. Therefore his physician believed it to be of constitutional origin, and that it could not be remedied save by amputation.

You will come in contact with these cases quite often. All that I did, as you will remember, was to apply fresh strips of Maw's adhesive plaster, put on the instrument properly, apply extension until he could bear vertical pressure without pain, then applied the actual cautery over the internal coronary ligament and bandaged the knee with great firmness. The actual cautery has had the effect of completely relieving the pain, and he says that now it is the soundest part of the knee. I make pressure with great firmness over the point which was so sensitive three weeks ago, and he says it causes no pain.

[The patient made voluntary motion of his knee with great ease, and no pain, flexing and extending his leg quite rapidly.]

Will any man here talk about taking that man's leg off now? He is making voluntary

motion. Three weeks' total rest from pressure, by relieving the parts with this instrument; then by the application of the cautery, changing the action of the distended vessels, and causing them to contract and empty themselves; then by means of firm compression around the part, to cause the absorption of the deposition within the joint, this has effected the change which you see to-day in this man's condition. Now he has got to the point where *massage* comes in; they call it *massage* now-a-days, but I call it rubbing, and manipulation, and friction.

There is another thing I want to call your attention to: that when you use the actual cautery, to let the eschar alone; don't cover it with greased rags, or anything else, but just let it *alone*, allowing it to scab off by itself, and you will have no trouble. There is a peculiar sand-papery grate under the patella as I move it, and I shall move it only enough to knock those rough points down level, then stop.

Here is another point: If you put that supporting bandage around that man's knee, and neglect to guard the edge of the patella you will set him nearly crazy with the agonizing pain. The only pain he has suffered since this dressing was applied was the result of neglecting to guard the edge of the patella. These *little* things must be looked after very carefully. The tendons of the biceps and semi-tendinosus require to be padded with a little wad of cotton before the bandage is carried over them. Sometimes I make this bandage of india-rubber; but, when that is used, it is necessary to exercise great judgment. It is a very dangerous bandage to use, unless you exercise judgment and skill, for you may get it drawn tighter than you wish, and it keeps on contracting all the time, so that a great deal of damage may be done.

Now, to finish up the dressing of this leg, it is necessary, on account of the partial luxation backward of the tibia, caused by reflex muscular contraction, to overcome that contraction in this manner. To accomplish this I first turn the ratchet, to cause firm extension; then I pass a roller bandage *over* the end of his femur, and *under* the framework of the instrument, causing the femur to be forced backward. The same sort of process is repeated with the leg, the bandage being passed *under* the tibia and *over* the framework, and secured by a pin. And now the dressing is finished.—*Phil. Med. and Surg. Reporter.*

WESTMINSTER HOSPITAL.

ORCHITIS TREATED BY PUNCTURING THE TESTICLE.

(Under the care of Mr. Macnamara.)

The treatment of acute orchitis by means of puncturing the testicle having within the past twelve months attracted a considerable amount of attention, the following notes, for which we are indebted to Mr. George Shaw, will doubtless prove of interest. The subjoined cases, as far as they go, certainly seem to present very satisfactory evidence of the value of puncture, while, according to Mr. Macnamara's wide experience, such instances are by no means rare.

Case 1.—H. C—, aged forty-one, a gold-refiner, was admitted on Oct. 17th last with acute inflammation of the left testicle. He was a temperate man and a hard worker, but out of health in consequence of being constantly exposed to nitro-hydrochloric acid fumes. On Oct. 11th he strained himself while at work, and shortly afterwards his left testicle became swollen and very painful, so that he was quite unable to continue his work, and, as the treatment he received at his house did not relieve him, he was taken into the hospital. Ice was kept constantly applied to the inflamed gland, and the ordinary saline purgatives were administered. Under this treatment the symptoms subsided, but on the 24th, without any known cause, the orchitis returned, and on the following day, during his visit to the hospital, Mr. Macnamara ran a grooved needle into the testicle, and allowed a few drops of serous fluid to escape externally along the groove, after which the instrument was withdrawn. The relief was both immediate and permanent; the inflammatory symptoms all passed away, and the patient left the hospital on Nov. 3rd perfectly cured.

Case 2.—Thomas W—, aged thirty-five, was admitted on Nov. 4th suffering from long-neglected gonorrhœa and acute inflammation of the right testicle, the latter having come on suddenly on Oct. 29th, from which time he had been in very great pain. Immediately after admission the house-surgeon, Mr. Poynder, passed a grooved needle into the testicle, and, after a small quantity of fluid had escaped externally, withdrew the needle. The patient alleged that within five minutes the pain had

entirely gone, and did not return again from that time. He left his bed on Nov. 12th, and left the hospital cured on Nov. 20th.

In reference to these cases Mr. Macnamara remarked that they were fair examples of the effect produced by puncturing the testicle in acute orchitis. So far as he was concerned he was unable to determine in any given case if the inflammation was confined to the epididymis, or affected only the proper structure of the testicle; but it seemed to him scarcely probable that inflammation, if attacking one of these organs, would not extend to the other, and under any circumstances it followed, almost of necessity, that an effusion of fluid from the distended bloodvessels would escape into the tunica vaginalis, and perhaps, also, into the tunica albuginea. Every surgeon who had punctured the testicle in acute orchitis must have observed that the escape of a small quantity of fluid along the groove of the needle was not unfrequently followed by instant relief of the pain and a diminution in the hardness of the testicle, and it had always appeared to him that the relief was analogous to that afforded by diminishing the tension of the eyeball in acute glaucoma. Mr. Macnamara further remarked that he could claim to speak with some degree of confidence on this subject, for, some years ago while riding, he was thrown forward on the pommel of his saddle, and injured his left testicle. Symptoms of orchitis soon set in. Happily having been informed by his friend, Dr. Herbert Baillie, only a short time previously of the case of an artillery officer whose testicle had been punctured for orchitis after the plan recommended by Mr. Henry Smith of King's College, Mr. Macnamara got Mr. Culcliffe to run a grooved needle into the inflamed and injured testicle. The relief in his own case was not only instantaneous, but permanent, and for these and other reasons he said he had never hesitated to employ the same treatment on his patients. He himself had never seen any but favourable results follow this mode of treatment, though, of course, he was not prepared to say it was always curative. He added that he felt himself under a personal obligation to Mr. Henry Smith for having introduced into modern practice the plan of puncturing the testicle in cases of acute orchitis, and he could with confidence recommend his pupils to follow this treatment in similar cases, because there are few diseases in which pain can be more effectually and speedily removed.—*London Lancet.*

THE TREATMENT OF ABSCESES BY HYPERDISTENTION WITH CARBOLIZED WATER.

(*The British Medical Journal*, November 4, 1876.)

Mr. George W. Callender calls attention to the difficulty which often occurs in the treatment of abscesses, owing to their cavities being divided by septa, or extending among tissues in such a way as to be really multilocular. In such cases, when they are washed out in the ordinary way, they are not treated to advantage because parts of them are ineffectually cleansed. By hyperdistention of such abscess-sacs, carbolized water can be forced into cavities, however complicated and irregular, and this treatment can thus effect for these abscesses the same result as an ordinary injection will insure with a simple abscess. Mr. Callender describes three cases, one of angular curvature of the spine, another of disease of the lumbar vertebræ, and a third of renal calculus, each attended with abscesses of this character, and in all of which hyperdistention was most beneficial, removing all the serious constitutional symptoms at once, and speedily reducing the abscesses to small non-suppurating sinuses.

The operation may be performed while the patient is under the influence of ether, or the integuments may be frozen by the ether-spray. The following are required: a scalpel where an incision is needed, no open sinus existing; carbolic acid lotion (one part in twenty) diluted to one in thirty by the addition of warm water before using it; a perforated elastic drainage-tube; carbolized oil (one in twelve) on lint for dressing the wound, and gutta-percha tissue for covering this; some ordinary adhesive plaster; some tenax to receive any subsequent discharge (which, however, is very slight); an ordinary two or four-ounce syringe. When it is desirable to make continuous pressure over an abscess after opening it, a pad shaped to the needs of the case, and filled with shot, will be found useful. It acts more effectually than a sand-bag, and is easily made and adapted.

The operation is begun by cutting into the abscess (if no sinus exist), the opening made being of sufficient size to admit one of the fingers. The pus is then allowed to escape, the abscess being emptied as completely as possible.

The nozzle of a syringe is next passed through the opening, and the skin is drawn closely around it by the operator with his left hand; the contents of the syringe are then passed into the abscess-sac. Care must be taken, in doing this, that no pressure is made upon the abscess-wall, or the distention of the sac will be incomplete. Either by using a syringe which throws a continuous stream, or equally well by closing the wound with a finger whilst the syringe is being refilled by an assistant (very little fluid being lost in its reintroduction), the abscess-sac will presently distend quite to or even beyond its original size; and, under these circumstances, the carbolized water necessarily finds its way (as a rule which has few exceptions) into all parts of the cavity, however irregular, and along any channels leading from it. When the abscess has been opened, the amount of injection may be roughly measured as being rather in excess of the quantity of pus let out. When distention has been effected, the fluid is allowed to escape, and if much pus be mingled with it, a second injection may be practised. An elastic drainage-tube, its size varying with that of the abscess, is then inserted and secured, and over the end of this, and over the wound, a piece of lint, twice folded and soaked in carbolized oil, is laid. This is covered with a sheet of gutta-percha tissue and some tenax, and these dressings are secured with some ordinary plaster.

Subsequent treatment consists in the renewal of the dressings, which, to myself, it seems desirable to see to daily. The drainage-tube is gradually shortened as the abscess-wall contracts, and through its canal, if there be any sign of puriform discharge, a little carbolized water may be occasionally injected.—*Med. and Surg. Reporter.*

DEATH FROM CHLOROFORM.—In the issues of the *British Medical Journal* for November 11th and December 16th are recorded cases of death occurring in boys during chloroformization. In both cases the operation for section of the hamstrings was being performed. In both cases inversion of the body was practised, but produced no good results.

CASE OF SPINA BIFIDA, TREATED BY THE IODO-GLYCERINE SOLUTION.

BY JAMES MORTON, M.D.,

Professor of Materia Medica, Anderson's University; and Surgeon and Lecturer on Clinical Surgery, Glasgow Royal Infirmary.

In the beginning of September last (1876) Dr. Milroy, of Kilwinning, informed me by note that, a few days before, he had attended at the birth of a child which was the subject of spina bifida in the lumbar region, and wished to know when it would be proper to operate upon it. To this the reply was that it would be well to allow the child to be fairly over the accidents of birth, unless there was reason to fear the speedy bursting of the tumour, and the consequent draining off of the spinal fluid.

When nearly a fortnight old, the child was brought to Glasgow to be under my care, and this was then done from a fear that an ulcerated or abraded surface on the most prominent part of the tumour might possibly result in perforation of the sac and escape of the fluid, which is known to be so fatal. This abraded surface was more than an inch in diameter. There was no paralysis.

On the 14th September I saw and examined the tumour, and on the day following operated on it by puncture and injection of the iodo-glycerine fluid, which I have used and recommended for such cases. As the sac was neither very large (the size of an ordinary peach) nor very full, little escape of the clear serous fluid was permitted, and about half a drachm of the iodo-glycerine solution was injected. Collodion was, as usual, applied to the opening, and over that a square inch of lint dipped in collodion, which effectually closed the wound. No disagreeable symptoms followed; the sac seemed in part to solidify, and soon appeared to be about half the size it was previous to the operation.

Watching it from day to day, it did not seem to shrink readily, or so quickly as I could wish, and on the 26th September it was again punctured and injection attempted. The size of the swelling at this period was so much reduced that I was very cautious in pushing the trocar into it, and the canula had so little hold and space that it slipped out, when I tried to inject

a little of the solution by placing the nozzle of the syringe in the opening, but I suspect that very little, probably only a few drops, obtained admission. Collodion and lint were applied as before. Next day the whole tumour seemed slightly inflamed, and from that date has continued gradually to solidify. By the 4th or 5th of October, the abraded surface had completely healed, and on the 12th the parents were permitted to return with the child to their home in the country.

It occurred to me that collodion might aid in producing or favouring that corrugation of the skin which is known to take place in favourable cases, and a piece of lint covered with it was laid over the tumour. Whether this expectation may be well founded we cannot at present say, but the application is sufficiently safe, and, indeed, somewhat protective.

The following is, in substance, the report of it sent to me on the 24th October:—"Child well, tumour shrunk a good deal. Has a thick cord of skin a little raised all round it. There is still about the breadth of a shilling of thin bluish-coloured skin covering the centre of it, but it feels firm to the touch underneath, and is nearly quite flat."

This is now the fourteenth case of spina bifida (of which we have any account) which has been subjected to treatment by injection of the iodo-glycerine solution, and of these eleven have proved successful. In all the lumbar cases which I have treated it has been uniformly fortunate, and lumbar cases are known to be much more numerous than dorsal and cervical put together.—*London Lancet.*

TORONTO GENERAL HOSPITAL.—A new plan for admissions has been instituted by the Trustees. Fifty dollars per annum entitles a subscriber to send four patients in the year to the hospital, without further charge. The subscriber has also a vote for trustee, and is eligible for that position. Municipalities, small towns, and villages can now have their sick poor skilfully treated and nursed at a small cost. The charge for beds in the public wards is now forty cents per day; private wards, eight dollars per week.

Midwifery.

LECTURE ON PROLAPSE OF THE WOMB FROM ELONGATION OF THE SUPRA-VAGINAL PORTION OF THE CERVIX.

BY WILLIAM GOODELL, A.M., M.D.

Clinical Professor of the Diseases of Women and Children in the University of Pennsylvania.

While our patient is getting her ether in the waiting-room let me briefly give you her history. Bridget A. professes to being but thirty-seven years old, although she looks fully forty. She has been married for seventeen years, and has borne eight children, the youngest of whom is three years old. All her labours very easy and her gettings up natural, save the last one. This one was delayed by metritis, and by an attack of intermittent fever, which yet lurks in her system, and breaks out on the slightest provocation. She never afterward felt like herself, or found herself altogether free from "the whites" and from "bearing-down feelings." Before long a tumour began slowly to protrude, more and more, from the vulva. It was and still is reducible, but, when returned into the vagina and kept there by a pessary, it gives her so much pain that she prefers to let it hang outside, unsupported. Menstruation is free, micturition painful, and the urine, no longer voided in a jet, dribbles over her person. She straddles in her walk, and complains very bitterly of the constant dragging weight, which keeps her from active house work, and is, as she says, wearing her life out. Her conjugal relations are impaired, and this is, of course, another source of domestic trouble.

When admitted, two weeks ago, into this hospital, she looked very decidedly cachectic, and was much reduced by night sweats, and by a diarrhoea of some weeks' standing. She was put to bed, and treated by large doses of quinia, and by frequently-repeated quarter-grain doses of the silver nitrate, guarded by one-twelfth of a grain of opium. Under the use of these remedies her complexion has cleared up, her diarrhoea is under control, and her strength has so far returned as to permit her now to be brought before you for an operation of some severity.

As I separate her thighs, all of you, even

those on the furthest benches, can see this unsightly tumour projecting from the vulva. It is cylindrical in form, rugous in front, and smooth behind. It looks uncommonly like the penis of a horse, and the resemblance is heightened by an apparent meatus urinarius at the apex. The sound, introduced into this opening, passes a distance of a little over five inches up what is evidently the uterine canal. The perineum is greatly relaxed, the vagina wholly inverted. Partly overlapping it and the cervix lies a true excavated ulcer, attributable, as I believe, to the friction of the clothing, to exposure to the air, and to the scalding of the dribbling urine.

I cannot pass this sound into the bladder in the usual way, but on turning its concavity downward I find that it slips in readily enough, and I now feel its tip outside of the body, and at a point not half an inch from the apex of the tumour. Clearly, then, a portion of the bladder and the anterior wall of the vagina form the front and rugous half of the tumour. By passing my index finger into the rectum I can hook it into the posterior wall of this tumour. In other words, there is also a pouch of the anterior wall of the rectum in this protruded mass. Then, again, you all know that the peritoneum is so closely fused to the posterior *cul-de-sac* of the vagina, that the descent of the latter must needs drag down a fold of the former.

So far, good. We have learned that the cervix uteri, the inverted vagina, a pouch each of the rectum and the bladder, together with a fold of peritoneum, go to make up this hernial mass. We are, as schoolboys say, getting warm; but what is it? Now there happen to be just four morbid conditions in which the whole womb, or some portion of it, appears outside of the vulva: (a) Inversion of the womb. (b) A simple decent or prolapse of the womb as a whole. (c) Prolapse of the womb from hypertrophic elongation of the vaginal portion of the cervix. (d) Prolapse of the womb from elongation of the supra-vaginal portion of the cervix. Since, very unfortunately, the last three are called by the same general name, that of *prolapse of the womb*, and are accordingly mistaken the one for the other, and since also each one of these four disorders needs its own special treat-

ment, it is of vital importance to determine which one it is. There must be no mistake made here.

Let us reason this matter out. It cannot be the vaginal cervix unduly elongated, for then it, and it only, would form the tumour; nor would the vagina be inverted. Nor can it be either an inverted womb or a simple prolapse of the same organ, because the sound showed not only a uterine cavity, which does not exist in cases of inversion, but one of preternatural length, which places the fundus high up in the pelvis, and it therefore cannot be prolapsed. Again, by firmly compressing the base of the tumour, one can trace high up the stem-like cervix, which feels about the size of one's little finger. The conclusion is, then, inevitable, that the case before us is that most common variety of uterine prolapse, technically termed *prolapse of the womb from hypertrophic elongation of the supra-vaginal portion of the cervix*. In other words, there is a descent of the vaginal cervix without any descent of the fundus, and, consequently, that portion of the cervix above the vaginal collar of attachment must be lengthened out.

Of course, as intelligent men, you will next wish to know the nature of this disease and its causes. Unfortunately these are not so readily given, for it yet remains a moot point whether this elongation is owing to growth or to traction. I incline to the opinion that it is the conjunction of traction and growth—traction mainly, and growth secondarily—that works the mischief, I have not the time for a lengthy discussion on this subject, nor would our patient be the better for it; but suppose that a woman's lying-in has been complicated by some uterine or pelvic lesion, such, for instance, as parametritis or as perimetritis, and this is the usual history of these cases, there will often follow a permanent arrest in the process of involution, both in the womb and the vagina. Even that great abutment of the vaginal column, the perineum, remains lax and limp. Unsupported by the perineum, the now thickened and heavy vagina, and with it the bladder, to which it is closely fastened, tend to sag down and drag with them the womb. Now, if the uterine stays yield to this traction, the result is a simple descent of the

womb as a whole, and we get a prolapse proper of the womb. But, should the uterine stays resist this traction, then that portion of the non-involutcd, or of the otherwise congested, soft, and ductile womb, lying between them above and the vaginal attachment below, is stretched out. By the constant dragging of the vagina and bladder upon their belt of attachment, the veins of the presumedly softened cervix become constringed, and the blood stasis thus induced gives an excess of pabulum to the part, and growth ensues.

This interpretation may not be the correct one, and the elongation may arise less from traction than from growth. But the main question after all is, Can this woman be cured? She can be; of that I am sure, for have I not promised her that she shall be made as good as new? Could her womb be released from the constant dragging of the vagina and the bladder, the cervix would undoubtedly shorten. You might, then, infer that the proper treatment here is to keep up the unstable pelvic organs by some properly constructed pessary. Theoretically you would be right, but practically you will find that when the womb is stretched out so far as to peep out of the vulva, the pressure of a pessary can rarely be borne by the patient; for when the womb is then returned into the vagina its stem-like neck is forcibly bent double. This I have tested so frequently, and by so many varieties of pessary, that I can speak authoritatively. Were this woman, on the other hand, put to bed, and kept there for many weeks, she might possibly get well. The womb would, undoubtedly, shrink back, but, like an over-stretched rubber band, it would never become so small as when in health, and would tend to return to its morbid condition whenever the upright position is assumed.

What we here need, in order to effect a cure, are a good perineal support to the vagina, and a structural change in the ductile womb. The latter indication is met by removing the vaginal, the only removable portion of the cervix; the former, by constricting the vulvo-vaginal opening. The filip thus given to the dormant uterine and vaginal tissues, and the prolonged suppuration needful for repairing these tissues, set up the process of involution, which will

shorten and consolidate the whole uterine body, and thin down and tone up the thickened and flabby vagina. Besides all this, the vaginal column gains a firm foundation in the new perineum.

But the cervix happens to be a very vascular body, and in its erectile tissue it is no easy matter to catch up and tie a bleeding vessel. So it is best amputated, either by the cold wire of the *écraseur* or by the red-hot wire of the galvanic battery. But, whatever the instrument, the operation is attended with the risk of cutting off a piece of the bladder or of the retro-uterine pouch of peritoneum. Of the two modes of operating I much prefer that with the hot wire, because the cut is cleaner, and the risk less of dragging into the line of incision important neighbouring organs.

Placing the woman in the lithotomy position, with the thighs supported by two assistants, I first draw off her water, and next proceed to dilate the urethra. By gently stretching open this short and elastic tube by means of a uterine dilator, I am able in a few minutes' time to coax in my little finger. With it the lower boundary of the bladder can be accurately mapped out, and as you plainly see, its tip reaches down to within half an inch of the end of the cervix. With such precautions the bladder should always escape the bite of the wire, but not so with Douglas's pouch. There are no landmarks by which to gauge the depth of this peritoneal fold, and the mishap of its injury has happened to the best operators—with no great risk of life, however, if every case has been honestly reported.

Guided by the finger tip, I now transfix the cervix antero-posteriorly with a platinum skewer, entering it just below the lower margin of the bladder, and slanting it upward and backward so that its point shall emerge on a higher level, but not high enough to reach the rectocele. That portion of the cervix lying on the bladder side of the skewer is now noosed in the loop of the battery. While my chief assistant, Dr. Bray, gradually tightens the wire, I carefully feel with my little finger whether any portion of the bladder is nipped. Its walls are out of harm's way, of that I am sure. Would that I could affirm the same thing of the peritoneal fold, but that must be left to chance.

For reasons before stated, I prefer the hot wire. Yet, when called to a distance to perform this operation, as the battery is bulky and its acids dangerous to carry about, I always use the wire—*écraseur*. But the cold wire does not readily cut through the tough mucous membrane, and, besides, it tends to slip in the direction of least resistance, dragging in the tissues of that side. To remedy these defects, a groove

should be cut around the cervix directly in front of the skewer, viz., between the skewer and the os, and the wire laid in it. A second skewer may also be passed at right angles to its fellow. The wire will now be connected with the battery, and its loop kept taut, and not above a red heat. As soon as the thick mucous membrane has been burned through, I make firm traction at the os with a volsella, and counter-pressure with the electrode. This lengthens out the ductile cervix and brings down more of it to be cut off. See how bloodlessly we have cut through this very vascular body. From the traction made on it, the amputated portion of the cervix is conical, while the seared stump is cup-shaped. From alternate heatings and coolings of the wire, the cut surface also shows concentric circles, like those summer and winter rings by which the age of a tree is told.

My past experience in these cases, and it is not small, assures me that this operation will be successful in reducing the womb to its natural size. It may at the same time also cure the dislocation of the vagina and bladder. For you will bear in mind that the fundus of the womb has not sagged down, and that the same stays that have hitherto sustained it, and which by their firmness have, in my interpretation, caused the lengthening out of the cervix, will afterward, in a measure, sustain also the vagina and bladder, through the medium of the constricted and consolidated cervix. Since, however, the vagina is much relaxed, and the perineum, although anatomically whole, is functionally imperfect, it will be more prudent to narrow the vulvar outlet, and give the vaginal column a firmer base of support. This operation I cannot perform before you to-day, because my hour is up. But it is the same as that for laceration of the perineum, and one which you will have repeated opportunities of seeing me perform this winter.

As soon as this second operation is over, and I shall do it at once in my private room, our patient will have her knees bound together and be put to bed. When pus begins to form, the vagina will be washed out once or twice a day by carbolyzed lotions. On this day week all the perineal stitches will be cut, and for two weeks, at the very least, the woman will keep her bed. If left to itself, the cervical wound will not skin over under four or five weeks' time, but the healing process will be hastened by vaginal suppositories of tannin and opium, or by an occasional touch with the silver nitrate. Should the os uteri tend to close, as it sometimes does, through cicatricial contraction, it will be stretched open by the uterine dilator. Finally, in one month's time, if all goes well, our patient will return home a sound woman.—*Phil. Med. Surg. Reporter.*

PUERPERAL GLYCOSURIA.

At the meeting of the Biological Society of Paris on the 11th November, M. Gubler made an interesting communication (*Le Progrès Médical*, Nov. 18th) embodying the results of his researches upon glycosuria in the puerperal state. He finds that saccharine urine follows suspension of lactation in healthy women, from diseases of the infant, and also when lactation is arrested on account of some slight ailment on the part of the mother, but not if her disease be a severe one—e.g., typhoid fever. The glycosuria can be prevented by slight purgation; it is never very marked, but the presence of sugar in the urine is always sufficient to be detected by the usual reagents. A solution of bichromate of potash and sulphuric acid gives a larger precipitate than the ordinary reagents, possibly because of the existence of some other substance besides glucose. The absence of albuminuria is accounted for on the ground that human milk is rich in lactose, but poor in casein and butter. The conclusion drawn is that glycosuria appears when lactation is suspended, but only when the general health is not much disturbed; it is usually slight, appears in twenty-four to thirty-six hours following the arrest of lactation, and lasts for about a week. Pregnant women sometimes pass saccharine urine, and especially primiparæ, towards the end of pregnancy.—*London Lancet.*

MEDICAL IMPOSTORS.—How to deal with pretenders—men who without education or conscience, and with the sole credentials of a tin sign, set out to practice medicine—is everywhere a baffling question. In London the profession has recently formed a protective association for the purpose of prosecuting illegal practice. In this land of freedom, where quacks have just as good a standing before the law as Esculapius himself, prosecuting is simply out of the question. But that some good may be done here by associated action is seen in a recent event in New York. In that city, especially on the east side, a large German-speaking population affords a grand field for imposture. A man named Cilulke, said to be a Bohemian barber, but claiming to be a Vienna graduate, set up a dispensary, where he offered advice and medicine for 75 cents. Certain suspicious diagnosis and certificates of death aroused the neighbouring physicians to combine and set on foot inquiries which have resulted in a public exposure and an erasure of his name by the Health Board. The man now proclaims his intention to secure an American diploma, while the east side profession indignantly call upon the authorities to put an end to the existing fraud-inviting system. Brooklyn has its east side as well as the other cities mentioned.—*Proceed. of Med. Soc. Kings Co., Brooklyn.*

Medical Jurisprudence.

THE BORDER-LAND OF INSANITY.

With Examples Selected from among the Illustrious Insane.
(Being a Condensation of a Popular Lecture recently Delivered by Invitation at Different Places in North Carolina.) By EUGENE GRISSON, M.D., Superintendent of the Insane Asylum of North Carolina, Raleigh.—(*Virginia Med. Monthly.*)

Between the kingdom of Genius and the habitation of Madness, there lies a strip of unknown breadth, which we may term the Border-land of Insanity. In this Border-land have dwelt great numbers of the marked men of their race. The history of those of our fellows who have had glimpses into the greatest glories and the most frightful sorrows that may befall humanity, has for us a fascination beyond the wanderings of a Livingstone in equatorial wilds, or a Kane, amid the frozen secrets of the arctic North.

Philosophers have delighted in distinctions between what they call the faculties of the mind, for the want of a better term. Thus they name the power which receives and registers impressions from without, by means of the senses, *Perception*; the power which compares these and reasons upon them, *Intellect*; the power which is capable of response to outer influences and circumstances, *Emotion*; and the power which, in turn, sets in action the answer of the mind, the *Will*. But these are names, after all, and a mere approach in expression to such and such a capability of the mysterious being within us—the one and really indivisible essence which we call the immortal mind.

I must repeat some facts so well known as now to be simply truisms; but these statements are indispensable in their relations to the conclusions, to which I invite attention.

The instruments with which the immortal part within us reaches the material world is the human brain. Thousands of facts tell us that from that centre, through the nerves of special sense, and also from the spinal cord, by numberless minute branches of nerves to the remotest parts of the body, go the telegraphic wires which bear the mandates of the mind.

There has arisen at this day a school of philosophers who aver that the mind is the mere secretion of the brain,—a force and

nothing more, expended in the act, created anew for each operation, and necessarily dying with the body that gives it existence, in the dreary death of annihilation. This specious philosophy, this glittering solution of the complicated phenomena of the mental world, making men the automata of physical force, when pressed to its logical end, knows no conscience, no right or wrong, no Divine law, and, indeed, no God in all the universe—only the likes and dislikes of atoms, and the blind whirlwinds of physical attraction. This dream—for it is only a dream—is spread over the length and breadth of the land, in our papers and magazines, in cotemporary addresses and poems, and is supposed to be entertained by many gentlemen of eminence in the medical world. It has perhaps become necessary for the protection of the young, to show that the faith of our fathers is impregnable, and founded on the rock of truth.

The mind that dwells within us is a spark of the Divine essence, destined to a life beyond the grave. Did I say that the nerves were the telegraphic wires of the system, and the brain the central battery? True; but the operator is the mind, separate and independent from the machinery at its command; and the battery, while sending forth currents of influence to the farthest wires when the connection is unbroken, gives the jangle of unintelligent motion until the directing power of the operator impresses thought upon its quiverings, or direction upon its force, and registers his will in intelligible language. But if the wires are suddenly broken, or slowly rusted away; or if, in the lapse of time, the currents of the battery grow feeble, and die away finally for want of the feeding acids and metals, the play of whose mutual action is transmuted to electric force; or if the lightnings of Heaven seize and for a while range these wires with uncontrollable force—in any and all these cases the operator stands powerless to express his will. But he is nevertheless still existent, and if the damages be not irreparable, he is ready to resume control, so far as the delicate apparatus is re-adjusted and re-connected, and supplied again with the pure and efficient pabulum of its operations.

The proposition I assert is, that there is no such thing as a diseased mind, where the body is in perfect health, implying the brain natural in size, unaffected in its structure or functions by disease, and supplied with pure blood, unvaried by excess or diminution. The *mens sana* always resides *in corpore sano*.

Let any one of these conditions be destroyed by imperfect organization of the brain at birth, or by mechanical injury to its vessels, whether by violence or disease, or by poisoned blood circulating through its structure, and there comes a period when thick clouds envelop the spirit, and obscure mental appreciation, or even directly interrupt its every-day intercourse with men and things, and, by degrees and insensible shades, the man drifts into the catalogue of the insane.

We cannot too distinctly realize that insanity is purely a physical disease, and as such calls for sympathy and care, and restoration, if possible. The time was when insanity was regarded as the possession of demons. As, in the dark ages, the hospitals were attached to the morastic establishments, it was not unnatural, in one point of view, that the discipline enforced among the monks for evil words and deeds, should be applied to the wretched patients committed to their hands. Hence, among the Franciscans, who enforced severe self-chastenings, each miserable lunatic received ten lashes per day to drive out the evil spirit. Stripes, chairs of restraint, tortures equal to the direst imaginations of the Inquisition, bleedings with the lancet, whirling chairs, whose gyrations reached a hundred revolutions a minute, iron cages suspended by chains over tanks of water so that the victims might be submerged to the neck—this frightful picture, which I will not further pursue, presents the system of treatment for these unfortunates, lasting even to 1790, over a great part of the civilized world.

But, by the efforts of the wise and good, men have learned to know that this mysterious possession that for centuries blasted its victims, and set them apart from their fellows as the objects of wrath, or the playthings of devils and demons, was but a disease—one of the ills that flesh is heir to. Like other afflictions,

sometimes insidious in approach, sometimes bursting on the sufferer with terrific suddenness, it is nevertheless, like them, a condition to be accounted for on a physical basis, preventable within certain bounds, and its cure, blessed be Providence, also possible, and even probable with favouring circumstances.

Can the mind suffer disease? Then it is pierced with mortal taint and will surely die, beyond hope of resurrection. Thousands of men come back to life and happiness, after even what some would call the death of mind. Why are they not new men, if the soul is a secretion of the brain? How is it possible that each man comes back to his own identity? Who has ever found himself or recognized another as a new being, gifted with a separate and independent mind after the passage through a season of lunacy, even of years? Voice, expression, language, views, tastes, education, whatever individualizes or differentiates one man from another, comes back to stamp him as such a creature of God, his Maker, and no other one.

What constitutes insanity and how the change occurs, I will not attempt to discuss. Hardly any two agree to-day upon precise distinctions in the former case, and the latter is yet an unrevealed book. But we do know its indications and accomplishments. Under ordinary circumstances, it is not the work of one generation. By this it is not meant that the parent must necessarily present the phenomena that we recognise in this disease, but he prepares the way for its development. And this he may do in a great many ways, but chiefly by abnormal and unnatural modes of life. He may gorge the brain with stimulating drinks for years; he may narcotize it with tobacco, or excite it by the fever of gambling at the card-table, or in the chances of speculative business; he may neglect the dictates of a reasonable hygiene, and give his life to mental exertion, keeping the brain filled with blood to its utmost endurance, in the intent study of an idea, forgetful of the needs of physical exercise; he may abandon himself to sensual excess, or neglect the demands of sleep, or pursue the rewards of political ambition, or the vanities of social extravagance, until he has no life to

transmit his offspring, except that which carries with it impaired force and defective structure.

It is a startling fact that this is the sin of the age—excess in one or many of these forms in this era of rushing social currents and conflicting destinies, and day by day retribution strikes her knell. One man is paralysed; another is on the couch of a babe with profound nervous prostration; another is epileptic; another falls under the lightning stroke of apoplexy, like Dickens, or dies like Horace Greely, the victim of insanity; while others again slowly drag out an intellectual night like that of the poet, Joseph Rodman Drake (author of the exquisite Culprit Fay, and for so many years past an inmate of an asylum), while others (in the words of a maniac himself) dwell in a land where

“ There is a winter in my soul,
The winter of despair;
Oh, when shall spring its rage control?
When shall the snowdrop blossom there?
Cold gleams of comfort sometimes dart
A dawn of glory on my heart,
But quickly pass away,
Thus Northern lights the gloom adorn,
And give the promise of a morn
That never turns to day.”

Insanity appears to require both predisposing and exciting causes, where it is not the result of overwhelming violence to the brain. The great predisposing cause is left a heritage somewhere in the ancestry of the child. Thousands of years do not obliterate the Jewish nose; the Mongolian eye remains; the fair skin of the Northmen, transplanted eight centuries ago to secluded valleys in Italy, is yet preserved; nay, such a trifle as the Bourbon mouth is retained for centuries. Who does not see the stamp of parentage in expression, in the very shape of a nail, or tone of a voice? Who can doubt that there is at least a similar tendency to transmit the acquired conditions of the brain and nervous system; and the more so as this, of the whole frame, is the most impressible portion?

Just what changes in the structure of the brain invite the access of insanity, it may be impossible to tell. Sometimes there are enormous abscesses within its substance, or areas of hardened or softened convolutions; again, it is

studded with minute points of tuberculous or dead material; or there may be but the faintest blush of inflammation; not unoften the lesion defies the naked eye, and only after the brain has been artificially hardened, and a thin paper-like slice rendered transparent and coloured with carmine, and exposed to long examination under the microscope, do the minute degeneration of its tissue, or the enlargement and false arrangement of its circulating vessels, betray themselves. Yet the difficulties here, as brave and industrious as pathologists are in the struggle to surmount the obstacles, are by no means greater than those which confront us on the threshold of inquiry in many diseases, and indeed in the final recesses of every physiological operation. What we call disease is, after all, but a collection of manifestations we term symptoms, hardly absolutely alike in any two cases.

If I must ask you to follow me through the devious ways of philosophers in explaining the road to the goal I would reach, it is that I am ignorant of other modes of approaching it.

We have spoken of faculties, for convenience sake entitled Perception, Intellect, Emotion and Will. Let us briefly trace the successive involvement of these, in the production of insanity.

Through *perception*, the mind takes knowledge of the objects around, and with the aid of memory, marshals them in their absence into a conception. Unreal perception is illusion—the first step away from just observation and conclusion. This is as common as the affairs of everyday life. Any disordered sense may give rise to it. To a jaundiced tongue all things are bitter; in certain affections of the ear, bells are ever sounding, or waves roaring. We pass along a road at night, and are suddenly startled by a white milestone, which assumes the shape of the white-robed ghost of our childhood. Reason soon assures us that this is a momentary dazzle and disturbance of the sense of vision from its true work. But in some lives, illusions by thousands chequer and disturb the whole course of existence. Let us go patiently on to observe.

A *conception* of an absent object is the revived impression which has been preserved in

whole or part by memory. So a hallucination is an illusion that reason does not dispel, but which hangs about the mind seeking admittance into the domains of admitted truth. If we do not dismiss the momentary sight of the ghostly milestone as the glare of disturbed sense, but fly before it, and every moment turn to see it pursue, we are the victims of hallucination. That which more distinctly illustrates hallucination as disordered conception, is the striking fact that men whose eyes are out may have hallucinations of dread visions before them, and so of the other senses.

Perhaps the hair's breadth between the excitement of the sane mind and the beginning of the insane condition lies somewhere here; the one may still compare his hallucinations with past knowledge, and refuse to accept their dominion over him; the other may submit without question, and be lost. Yet, the question has been asked, can the mind be both sane and insane at once?—can these hallucinations ever be the legitimate children of a mind perfectly normal?

The next downward step is to absolute delusion. If pursued by the spectral hallucination which we have described, we some day, in uncontrollable weariness and despair, turn and strike down the monster by our side, and so unwittingly destroy a wife or a child at our feet, fixed delusion has done its work, and henceforth we are numbered among the host of maniacs. Who shall say where the subtle line was crossed? Who shall say what under-current of life drifted us into that maelstrom?

The lamented Greisinger affirms ideas which, briefly stated, show that those whose fate it is to be stricken with a hereditary disposition to this disease, turn imperceptibly to crooked paths which lead only downwards; their cerebral actions are different from those of the majority of mankind. The impressions of the outer world impinge upon an abnormally excited centre; uncommon conditions arise, unnatural dispositions are excited; by-and-bye active irritation sets in; a tendency to weariness follows; imaginations which are for the moment the passing whims of healthy brains are cherished and maintained; by-and-bye the

dark and bitter side of life is all they see. The brain disease becomes fixed, its results are reflected in diminished and perverted nerve power throughout the system, and so by impoverished blood, back again to the fountain-head in circling rounds, down to helpless dementia.

It is not the least extraordinary fact, in this curious subject, that what are called the primordial delusions of insanity are so well defined and constantly repeated. The famous man from whom I have quoted ascribes such recurring delusions, not to emotional foundations as their source of production, but rather attributes their direct origin to cerebral disturbances. He beautifully illustrates, by comparing this with the contrast of the walk of the man in health, and that of him whose nerve force in the spinal column has been impaired by disease: "As the ganglion-cells of the spinal cords work together in the most exquisite manner, receiving exact sensitive impressions of the floor as touched by the foot in a regular motor manner, making complete harmony, so by such disease as shows anomalous action of the cells, there is produced, whatever may be the effort of the will, such a walk as exhibits the fatal mark of want of harmony." This occurs in some of the most intractable cases that affect the frame of man.

By completing analogy, the processes giving rise to imaginations, take place in the ganglion-cells of the outer surface of the brain; in the normal state, these actions, though numberless, work together in beautiful regularity; but by the anomalous action of the cells of the cortical substance of the brain, words and imaginations appear without a real existence.

We shall find that the great of this earth have often been the unhappy subjects of the most cruel hallucinations, and even the victims of confirmed delusions, ending not unoften in outbreking mania or lingering melancholia. We shall find, to the confounding of those who would ignore the nobler part of man and reduce mind to the level of a material secretion, that sages, philosophers and poets have given their grandest productions to the world between the attacks of disease, and during the interval, as it were, when the veil was withdrawn

and the bars broken down that resisted the control of the immortal part over the poor frail shell that subserves its uses in the fleeting present of this life.

I would not rashly say that all the great names to which I shall presently advert, must be placed upon the rolls of the undoubtedly insane; but I will aver that there is not one whose life does not show at some time the evidence of perverted or impaired cerebral force. And in proportion as we discover a tainted parentage, a badly trained childhood, an intense mental strain, or extraordinary physical excess or disturbance, just so far may we trace their wanderings into the mysterious Border-land that I have described—the realm where Genius and Madness rule with divided sway. In the language of Erskine, "To constitute insanity, it is not necessary that Reason should be hunted from her seat; it is enough that Distraction sits down beside her, holds her trembling in her place, and frightens her from her propriety." It is Lord Brougham who declares that "the inability to struggle against a delusion constitutes unsoundness of mind." And in regard to partial insanity, he affirms that the disease is always present, and only not apparent by the accident that the proper chord is not struck at the time. It has often been proposed as a test, that it is indicative of the affection that there be a delusion, if but rarely manifested, and a state of mind incapable of mastering it.

Hallucinations take possession when the reason, having a cloud before it, cannot correct the misapprehension of the lower senses. "It is a state of ideal intellection," says the celebrated Prof. Ordronaux, "in which the reason, after long struggling to maintain its ascendancy over the judgment, has finally yielded, but after yielding can still apprehend and compare correctly the relation of things. Thus even the insane rarely have hallucinations of more than two senses."

It is a pregnant fact in this connection, that the original basis of hallucination is often prolonged reverie. Perhaps it is of little consequence whether the cerebral fulness that gives rise to disordered brain action be the result of congested brain without voluntary effort, or the

sequel of long continued voluntary and strained attention, especially if the blood vessels, by inheritance, have been weakened to the point of yielding. The melancholy result is the same. Long ago Aristotle said: *Nullum magnum ingenium sine mixtura dementiæ*; and this has been a prolific text. Some writer, indeed, has ventured the observation that "all who have been famous for their genius, whether in the study of philosophy, in affairs of State, in poetical composition, or in the exercise of the arts, have been inclined to insanity or epilepsy, or one or the other of these diseases has existed in the same family."

I will ask you now to consider with me some of the innumerable men of power or of genius who have signally exhibited the fate of humanity when hallucination or delusion leads it away into the Border-land of Unreason.

Charles IX. of France, the impotent boy whose name ruled France, under the sway of his mother, goes to the Castle of Blois to welcome the Protestants Chieftains after long and useless civil strifes. He agrees to the marriage between his sister, Marguerite, and Henry of Navarre, his cousin, and cries, "I give my sister in marriage, not only to the Prince of Navarre, but, as it were, to the whole Protestant party."

The scheme effected, and the Protestants safely insnared in the city of Paris, upon the occasion of the wedding solemnities, the wretched boy gives the signal to the alarm bell that tolls two o'clock on the morning of Sunday, 24th of August, 1572. Old men, terrified maidens, helpless infants, venerable matrons—all are stricken down in their blood. Trembling at the very sound of the deep echo to the alarm, he cries out to stop, but too late. Beacon fires have lit their baneful glares, and alarm bells are sending the signal to the remotest corners of France. Recovering from his terror, fury seizes him, his eyes glare with frenzy; he shouts to the assassins, and grasping a gun, he joins the work of death, shooting, from the window of the palace, the wounded and the flying. Torches are held on high, that his own body-guard may slaughter in the very courtyard of the palace, the fugitives who stream to the King for protection. "Let not one Protestant be

spared to reproach me!" was his mad shout. What pen can ever picture the terrors of the massacre of St. Bartholomew, which spilled the blood of a hundred thousand Frenchmen! The world was struck with horror. Geneva, to this day commemorates it with fasting and prayer. Elizabeth hung her court in mourning. The pulpits of Scotland rang with the tale. John Knox declared, "Sentence has gone forth against that murderer, the King of France, and the vengeance of God will never be withdrawn from his house."

And the day of retribution did speedily come. The echo of the world's indignation was in the heart of Charles. He, who had, with sublime hypocrisy, told Admiral Coligny, when suffering from an assassin's wound: "Father, you received the wounds, but I the sorrow;" and yet who had seen that venerable body dragged through the streets three nights after, and hacked to pieces in his very presence, was overcome now—not by the fear of man, but with a frightful, indescribable, nervous horror. Everywhere around him he saw the spectres of the gory slain, showing their gaping wounds and attended by threatening demons. He became morose, gloomy, and finally, completely silent. He left all society, and month after month the scorpion fangs of remorse gnawed his heart. Finally, his very bedclothes were crimsoned with a sweat of mortal agony. His aspect of profound misery drove off all human companionship. He groaned and wept and forever cried, "Oh, what blood!" He is deserted by all but his nurse, and he calls out with despairing cries, "What blood have I shed?" and dies—cut off at twenty-four. The very courtiers turn away from a corpse so accursed, and but three gentlemen in all France are found to accompany the body to its tomb in the vaults of St. Denis.

The history of royalty is full of proof that the brain whereon the crown rests is often no more fit for royal cares, than that which the plaited straw surrounds in yonder poor maniac's dream.

Thus read a page or two of the life of Frederick the Second of Prussia, the father of Frederick the Great. For a dozen years before

his death, and after long and repeated seasons of the extremest debauch, the King's health gave way; what the world recognizes as hypochondria, set in; a state of profound despondency and bodily suffering. He became as austere in religious observance as before he had been wild in excess. All conversation in the royal family was forbidden, except upon religious topics; he compelled all its members daily to read sermons and sing hymns. He obliged the prince and his sister to eat most nauseous dishes—would even spit in their food—addressed them always in severe language, and struck at them with his crutch. His disease was plainly exhibited when he tried to strangle himself; but his life was saved by the Queen.

Having beaten Prince Frederick more than once to the point of exhaustion, he seized him finally by the hair and threw him to the ground (for his physical strength was great), beat him as long as it gave him satisfaction, when he dragged him to the window in maniacal fury to throw him headlong, but was happily prevented by those who came to the rescue. Failing in the effort to secure a renunciation from the Prince of his right of succession, he allowed him to attempt to escape, in order that he might obtain sentence of death upon him, by a court-martial; and that he tried to anticipate by an attempt to run him through with his own sword. Failing in the sentence of death, he condemns both the Prince and his sister, his child and tender daughter, to the cold cell of a prison, and begins a course to convert them to Christianity.

Writing a letter to the prisoner's chaplain, he betrays the long cherished delusion that had mastered his brain. He knew, he said, that his son had a heart of iron, and was a puppet in the fangs of Satan. All this was to drive out the demon and convert his unhappy boy to a reasonable being. The Prince was confined in a miserable room, and on the very edge of starvation for a great length of time. The King never recovered his reason; yet such was the ignorance of that day and the sacredness of power; that he grasped the crown to the very last. It may even be doubtful if the child of so much persecution, the great Frederick, did

not himself exhibit the deep mark of his father's malady, in a thousand minute details which we will not stop to reckon here.

Indeed, so far from peace and health and strength as the heritage of the imperial purple, the dazzling seat of power has always held some uneasy, toppling wretch, whose sceptre was half unreal in his nerveless grasp. Philip of Macedon was once insane; King Saul is clearly pictured so; Mahomet was an epileptic, given to magnificent visions; Cæsar was another epileptic, and, as Cassius says, like a sick girl when the fit was upon him. Napoleon believed in his star as ruling his destiny; he is reported also to have suffered from epilepsy, twin sister of madness; he is known to have lost a great battle when in much bodily suffering and confusion of ideas from a fit of indigestion; he was not unoften surprised in profound solitude watching some airy figure of his brain, and holding his hand to the retreating shade.

On the other hand his antagonist, Castlereagh, the architect of the Union of Ireland with England in one legislative body, whom parliament thanked for his labours in the settlement of Europe, after the fall of Napoleon, became shattered in mind from the great labours of the session of 1822; and although known to be in a fit of insanity, his physicians allowed him to go to his seat in Kent, where he soon took his own life.

(To be continued.)

CASES OF ANIMAL POISONING IN GLASGOW.

The last meeting of the Glasgow Pathological and Clinical Society was completely taken up with the consideration of three cases of animal poisoning. Of the three fatal cases of hydrophobia lately in the hospitals, two were examined after death, and these two were brought up for consideration at this Society.

In the first case, Dr. Forrest gave some interesting information as to the retriever bitch which had inflicted the bite on her master's hand. She had just had six whelps, and before

inflicting the bite she had become peculiarly ill-natured, had refused to let her pups suck, and had snapped at various persons; she had also bitten her pups, one of which, at least, had died under some suspicion of hydrophobia. Dr. Dunlop gave a full account of the man's condition after admission to the Royal Infirmary, and described minutely the excitement and the spasms from which he suffered. The other case (the last one occurring in Glasgow) was that of a police sergeant who had been bitten on the hand by an unknown retriever, which met the officer while he was walking along the street. Symptoms of hydrophobia became developed in a month; he had been under observation all this time by Dr. McGill, the police surgeon, who at once removed him to the Western Infirmary on the appearance of the symptoms. Dr. Alex. Patterson detailed the course of the illness while the patient was in his wards. The man died on the fourth day; on the night before his death the spasms had almost completely disappeared, and his general appearance of improvement was such as to mislead the nurses into supposing that he was much better. The wound in the first case had been cauterised immediately with nitrate of silver; in the second case it was cleaned with a strong solution of carbolic acid immediately after the injury. The post-mortem appearances were negative, except as regards the microscopic examination. Dr. Joseph Coates showed to the Society numerous sections under the microscope, exhibiting in the pons Varolii, in the medulla oblongata, and in the cord, a very marked infiltration of the sheaths of the vessels with inflammatory cells, and in one instance the section made revealed a small hæmorrhage. He also found some such accumulation of cells around the vessels in the neighbourhood of the bite, this being apparently out of proportion to the other appearances of inflammation present. These lesions were found in both cases.—*Lond. Lancet.*

Aphthæ, vesicular eruptions, diarrhœa, hæmorrhage from the bowels, giddiness and sore throat, have, in some cases, followed the use of salicylic acid.

Translations.

ON FREE INCISIONS IN DISEASES OF BONE.

From *Le Progres Médical*.

In the course of the present (last) year M. Gosselin published a lecture, which has actively attracted the attention of the savants of our country (Ireland), upon the advantages which result from free incisions in serious affections of the bones. Every surgeon had long since recognised the necessity of a similar treatment when there was reason to suspect the presence of an abscess. The views of the learned professor have given a new impetus to this surgical operation, and have favoured its application to other diseases of the bones. The following case, which recently came under my observation, corroborates the value of the treatment in question. The woman, B. R—, a servant, hurt her left elbow in November, 1871. A trivial discomfort was the immediate result; the trouble increased up to March, 1872, when she was obliged to enter the hospital. She remained there three months, and experienced, after various methods of treatment, a certain amelioration. She then left the hospital, and after going out the pain continued to increase, with varying degrees of intensity, up to November, 1874, when she found herself obliged to re-enter the hospital. The pain had then become intolerable, and the arm manifested several local symptoms, which gave rise to a belief in the presence of an abscess in the bone. All the efforts of the physician were futile, and the suffering of the patient was extreme. Sleep had entirely forsaken her. Nothing could procure her the least relief. Everything strengthened the belief that she would end her days in the midst of distracting torments. Believing in the presence of an abscess, I resolved to do an operation. The patient was put under the influence of ether by my clinical assistant, Dr. Hourigan.

The bones forming the elbow-joint were exposed by means of an incision over each condyle, and the edge of the bistoury divided the periosteum, and entered slightly into the bone. I removed, moreover, a circular morsel of the external condyle at the same time as the tre-

phine, taking this piece of bone precisely at the spot where I suspected the presence of the abscess. I was mistaken in my expectation; *no abscess appeared. Nevertheless, an immediate relief followed*, and the patient was never so delighted. She slept perfectly the next night, and every night for several weeks, without any pain. Some days after the operation I removed some bits of charpie, in order to hasten the cure; the pain reappeared immediately; I persuaded myself to replace the charpie, and the suffering disappeared. I withdrew a second time, after fifteen days, and the pain did not recur. For several months the woman was entirely free. Later, the pain gradually returned, and compelled the patient to enter the hospital a third time, in December, 1875. She experienced no pain in the outer side of the arm, which had been trephined, and the pain on the inner side of the elbow, although severe, was as nothing, compared with what had been felt before the operation.

Encouraged by the partial success of the first operation, I resolved to trephine the inner condyle. This operation, like the first, resulted in the total relief of all suffering; but, as on the first occasion, the pain returned after some months, but always in a mitigated form. In looking at the effects and results of the foregoing operation, we do not wish to, and we could not exactly, regard it as a complete success. We dare, however, affirm that an operation which procured an evident relief, even though not permanent, to a patient suffering such excruciating agony, in whom all other treatment had failed, is a great boon to humanity, and a very valuable addition to our therapeutic science.—TH. LOFFAR.

NOTE UPON BOILS AND CARBUNCLES AND THEIR ABORTIVE TREATMENT.

BY DR. THEODORE ROTH, OF EUTIN (DEUTSCHE KLINIK).

From *L'Union Médicale du Canada*.

Murray, of Glasgow, having recommended caustic potash as an abortive remedy for benign carbuncle after a previous crucial incision of the swelling at its commencement, the writer, moreover, observing that when this cauterisation is done in a very superficial man-

ner, it can produce a favourable change in the carbuncle, depriving it of its deleterious character, states that this cauterisation is always, so far as the medical attendant is concerned, a practice which demands the greatest attention, because this caustic agent so readily becomes liquid on exposure to the air, and can then burn more deeply than the physician may desire. He also recalls with emphasis, and as giving support to his point of view, two new observations, in which he recommends the methodical and energetic employment of grey mercurial ointment as an abortive remedy in cases of anthrax and furunculus, a remedy which he extols again as mild, innocuous, sure, and speedy. In a few hours it causes a mitigation of the violent pains in the neighbourhood of the carbuncle, and in three or four days causes them to disappear completely, whilst the anthrax does not only not extend further, but even becomes less in all its dimensions, so that in about a week the patient is no longer inconvenienced, and at the end of some days the swelling is entirely dissipated.—*Revue de Thérapeutique Médico Chirurgicale*.

CURE OF AMBLYOPIA AND AMAUROSIS BY THE NITRITE OF AMYL.

From the *Gazetta Medica Italiana*.

A lady, forty-two years of age, not having menstruated for two months, was seized with a severe metrorrhagia, which lasted a whole day, and was followed by great prostration. After five days the vision of the right eye was perceptibly diminished. In the evening the amaurosis was complete; on the following day the left eye was seized. At the end of about a week, the time necessary for the partial restoration of her strength, the lady presented herself to Dr. Steinheim. On the left side the blindness was complete. On examination the retina of the left eye appeared at one point to be sensible of the action of the light; the pupil was moderately dilated, but absolutely immovable. The dioptric media remained transparent, but the opening of the pupil was grayish white and turbid. The margin was surrounded by tortuous vessels, arterial and venous. The artery was conspicuous from its fineness; but,

on the other hand, the vein was engorged with blood and much dilated. The author poured out on some cotton eight drops of the nitrite of amyl, and directed the patient to forcibly inhale the vapour. When the vascular turgescence, caused by the inhalation, subsided, the dose of the liquid was repeated. Subsequently the patient was kept in a darkened room and strictly dieted. The medicated inhalations were employed several times during the day. Nine days after the commencement of this treatment, the amelioration was perceptible, and, after five weeks, the cure might be regarded as complete.—*Revue Méd. Chir. de Vienne e Bulletin Gén de Thérap.*, Dec., 1876.

TREATMENT OF CONVULSIONS IN CHILDREN.

From the *Revista Medico-Quirurgica* of Buenos Ayres.

M. Blachez, in charge of the Supplementary Children's Clinic, laid down in one of his last lectures the following rules of conduct which ought to guide our practice in these cases:

If the attack is single, and shows no signs of recurrence, the physician ought to content himself with calling hygienic measures into force, such as proper conditions of ventilation, &c. If the attacks are persistent or repeated at short intervals, revulsives should be employed, running over the whole of the lower limbs, and applications to the temples of compresses wet with cold water, or water mixed with ether.

At the same time it is right to employ compression of the carotids recommended by Trouseau. By this means the improvement commences in two or three minutes, and if, after this time, it does not manifest itself in a very evident manner it will be useless to persist in it. Then it will be convenient to have recourse to inhalations of chloroform, given gently, and never in a rough manner, it being here more important than ever to remember the sage precept of allowing the air to penetrate, mixed with the vapours of chloroform. In certain cases there may be some special indication to fulfil, as for example, the administration of an emetic, if it is well established that indigestion is the cause of the convulsion.

Once the attack subsides, it is necessary to modify the general eclamptic tendency, by

having recourse to antispasmodic remedies. There is need for much prudence and no lack of importance in the dose which is ordered. In a child from 8 to 15 months, the powder of gentian ought not to exceed 30 centigrammes; and in children of 7 years, not more than 50, always beginning with 5 centigrammes. The maximum dose of Belladonna powder would be about 10 centigrammes, beginning with one and gradually increasing. In the administration of this substance it is necessary to exercise the closest observance of the throat and pupils. The oxide of zinc in doses of ten centigrammes every two hours, and the same of James' powder in which M. Blachez does not recognize any special advantage. For the fulfilment of all the indications the bromide of potassium and the hydrate of chloral are preferable. Of the first, 10 to 20 centigrammes every two hours until 50 or 60 are reached in a child of the first-named age, and 2 or 3 grammes in one of 7 years. In case the effect of the medicine has not become apparent in twenty-four hours the dose must be increased. The bromide of potassium, mixed with the chloral, gives the best results, the dose of this last being 25 centigrammes in the infant and 50 in the older (child). — (*Crónica Médico Quirúrgica de la Habana.*)

ON THE TREATMENT OF FRACTURES OF THE ELBOW IN CHILDREN.

From *L'Union Médicale Du Canada.*

The work of Dr. Berthomier, inspired by M. Laroyenne, Surgeon-in-chief to La Charité de Lyon, raises a point of surgical practice of the utmost importance. In the case of fracture of the elbow in a child, ought one to fix the limb in extension or flexion? According to these writers, what is most to be feared in the child is not traumatic arthritis, which is almost nil and rarely produces ankylosis, but the vicious position of the fragments, which in almost all cases is the cause of the difficulty in movement. They have been able to verify this fact in a large number of children. Now, setting out with this view, that the only position capable of securing an exact co-aptation of the fragments is extension, they have treated, for several

years, all fractures of the elbow in children by this method. In all the cases (of which the notes are related in this thesis) they have been able to observe that the consolidation once obtained in this good position, the joint stiffness does not resist an appropriate treatment of 15 or 20 days duration, sometimes less, so that the articulation enjoys the whole extent of its movements or very nearly so.

They take care to add that in some cases the opposite indication presents itself when there is reason to fear complications arising from the constitutional condition of the patient, such as white swelling in serofulous subjects, &c.

Finally, according to these gentlemen, the epiphysary luxation backward of the epicondyle (a rare accident) requires the immobilization in the flexed position. (Thèse de Paris, 1875.—*Bulletin Gen. de Therap.*)

From *Le Progrès Médicale.*

At the session of the Biological Society, on Dec. 9th, 1876, M. Tripiet presented a communication upon the different action of the right and left pneumogastric nerves. He first recalled the experiments made by himself and M. Arloing, from which it appears that the right pneumogastric acts more especially upon the heart, and the left upon the lung; but he mentioned that variations exist, according to the kinds of animals and individuals. Section of one of the pneumogastrics may produce death. There exist, in the records of science at least, two cases of death in man after section of the right pneumogastric nerve. In the ass, out of twelve sections, M. Tripiet has observed seven deaths, the section being four times on the right side and three on the left; in the rabbit, out of nine sections, three deaths, three times on the right side; in the horse, on the contrary, out of more than forty sections, he had seen death result on only one occasion; this was after section of the right pneumogastric. It appears that in some cases the cause of death was due to a paralysis of the lower part of the œsophagus from the accumulation of boluses of aliment in that part of the digestive tube, and their penetration into the air passages. In ligature of the great vessels of the neck it would, therefore, be dangerous to compress the pneumogastric nerve. M. Moreau, in the name of M. Philippeaux, communicated a series of experiments, having for their object to determine how many days after the section of one pneumogastric the other might be cut without killing the animal. The interval between the two sections ought to be thirty days in the case of the cat; sixty, in the dog, and eighty, in the Guinea-pig.

From *Le Progrès Médical*.

In a concise and interesting thesis, M. Le Dr. Hoelling shows—(1) That the whole etiology of lymphangitis of the newly-delivered can be summed up in one expression—fissure of the nipple; and that (2) we can, by means of appropriate treatment, obtain, as a constant result, cure of the disease, and arrest of the development of the abscess. In order to do this it is necessary to have recourse, without delay, to compression. A poultice of linseed meal is applied to the affected part; the breast is wrapped up in a layer of cotton-wool, and the bandage, known in minor surgery under the name of “triangle-bonnet for the breast,” is applied. The piece of bandage is a triangle, about a metre (39·37 inches) in length, from one extremity to the other, and fifty centimetres (about 20 inches) from apex to base. The base of the triangle is placed obliquely beneath the affected breast; then one end is brought under the corresponding axilla; the other over the opposite shoulder, and they are tied together upon the shoulder blade. The apex of the triangle is then brought over the front of the affected breast; it is carried over the corresponding shoulder, and is fixed solidly behind. The essential indication to be fulfilled is to thoroughly raise (support) the breast. The effects of the treatment thus carried out will be almost marvellous, according to Dr. Hoelling. For his part, he has always seen a cure rapidly follow, and no abscess is developed under these conditions.

From *Le Progrès Médical*.

At the meeting of the Biological Society, on the 2nd Dec., 1876, M. de Sinéty said he had examined the genital organs of a young hysterical woman who had died in M. Charcot's wards. She had been regular for thirteen years; and her courses had last appeared two months before her death. The uterine mucous membrane presented all the characters usual at the time of menstruation, and yet no Graafian vesicle existed in the ovary, even at the approaching period. Putting several facts together with this, he came to the conclusion that ovulation and menstruation may be performed separately. M. Tubler reminded them that in his work on “*Les Epistaxis Uterines*” he had pointed out this independence of the two functions.

THE CANADIAN

Journal of Medical Science,

A Monthly Journal of British and Foreign Medical Science, Criticism, and News.

TO CORRESPONDENTS.—*We shall be glad to receive from our friends everywhere, current medical news of general interest. Secretaries of County or Territorial medical associations will oblige by sending their addresses to the corresponding editor.*

TORONTO, MARCH, 1877.

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PROFESSIONAL JEALOUSIES.

The jealousies existing among the members of the medical profession cannot fail to be the subject of deep regret to all who are sincerely devoted to its advancement. The conviction forces itself upon us, moreover, that, by the great mass of the profession, the gravity of the consequences of these jealousies, not to the members of the profession alone, but to society at large, is not as fully appreciated as it ought to be. With so many of us the remunerative aspect of the profession becomes so all-absorbing that anything relating to our professional improvement is completely overlooked. One cannot help feeling, after a close observation of the course of some medical men, as if their interest in the profession was measured entirely by the pecuniary returns to be realized. Their whole behaviour exemplifies the idea that, only in proportion to the remuneration they can secure from anything they undertake are they willing to labour. And thus we are being carried along by the ever-widening current of this professional selfishness. Alienations from each other are becoming more marked every day, and the general aspect of the relations of medical men in their intercourse with each other is constantly becoming graver. If, as a class, we could keep more prominently before us the

grander and more philanthropic aims of the profession, the bond of union between us would be much stronger, and, as a consequence, we would be much more helpful to each other in the struggles so common to our calling.

Various circumstances are the occasion of these professional jealousies. A very prominent one, here, has grown out of the existence of rival schools of medicine. We do not desire to be understood as intimating that professional jealousies are a necessary element of the existence of rival institutions; although we do think it will be granted that they are a pretty constant characteristic of their history in this country. But we see no good reason why, when such institutions *do* exist, their relations with each other should not be of the most friendly character. Their aims should be, in all respects, precisely the same, namely: to render their character such as to afford the most abundant facilities to their patrons for the pursuit of their education, and so attract as many as possible within their walls. No one would object to a rivalry so generous as this. On the contrary, the school established and conducted upon the basis that no lawful expedient should be omitted which can in any way contribute to the thoroughness of the discipline offered to its students, is entitled to the largest share of consideration. But when this rivalry is degraded into that kind of petty jealousy which prompts the advocates of any school to resort to the most questionable devices in order to secure an advantage over the rival school, we have a condition of things very much to be deprecated. Bitterness must, of necessity, spring from such a line of conduct, and it will develop itself among individual members of these rival bodies, and be carried into private practice. Surely there can be no reason why feelings of animosity and general distrust should be created between members of the profession because they happen to be actively engaged in rival institutions labouring in the interests of medical education. It were, doubtless, well if, in a place of the population of Toronto, only one efficient medical school existed. The work accomplished by both of the schools now in existence might be quite as well done by one. But even this much is not certain. A fair and

honourable rivalry has many wholesome features connected with it. The very existence of a vigorous opposition often results in a degree of energy on the part of both contending parties such as would not exist but for that opposition. We are not, therefore, inclined to deprecate the existence of rival schools so much as the manner in which the rivalry is conducted, and its inevitable consequences.

Another of the sources of professional jealousy is the disposition on the part of many medical men to underrate the abilities and general professional attainments of their neighbours. This is, undoubtedly, a grave offense. Public caprice is so great towards our profession that the bare intimation by one physician that another has exhibited a want of skill in the management of a case is taken as a *bona fide* assurance of gross incompetence. We all know how easy it is, in case of the fatal issue of disease, for the friends to be impressed with the idea that if Dr. B—— had only been called in when Dr. A—— took charge of the case, a very different result would have followed. In the great majority of cases such reflections are groundless. And if a medical man has conscientiously used every effort which commended itself to his judgment, and has not been guilty of a reckless disregard for the life or safety of his patient in any way, he ought not, upon a mere probability that he has committed an error, be subjected by a professional brother to the imputation of unskilfulness. The fair presumption is, that no one passes through his entire professional career without making some mistakes. To intimate the contrary would be to presuppose that medical men have attained to a degree of perfection not known in any other sphere of human activity. So long, therefore, as the most skilful and the most judicious are liable in this respect, it must be manifestly unfair to attempt to make one man more responsible than another so long as his general professional career is marked by a satisfactory acquaintance with his calling and an honest devotion to its various objects. Well, it is this disposition on the part of many men, calling themselves respectable, to make capital out of the accidental failures of their professional brethren, which is constantly creating breaches that often widen rather than otherwise. We are prepared at all times to expect such treatment from professional quacks who live and often fatten upon misrepresentation and vilification. But we have a right to expect that every medical gentleman, professing to follow the same general system of treatment with ourselves, shall not, by depreciatory inuendos, damage the reputation of his neighbour for the sake of elevating himself in public estimation.

Jealousies often manifest themselves among the senior members of the profession towards their less experienced brethren for no better reason than that they have the advantages which matured experience brings with it. Ripe experience is, perhaps, more valuable in our profession than in any other. The oldest of us are liable to come in contact with a phase of disease entirely novel, and so to learn something every day of great practical import to us. We would not, therefore, seek to undervalue practical experience in any branch of our profession. But we do think that, when young men are treated as though their opinion upon any question of medical practice was of no moment, and they are continually being reminded by their senior brethren of the fact that they are only children yet, and that, therefore, they ought not to be heard at all, professional jealousy has reached an offensive and very undesirable point. Besides, it is the most uncalled for manifestation of jealousy. A man of large experience in his profession, and who has utilized such experience to the utmost of his ability, has so vastly the advantage of the young man that he can well afford to be generous. He is never in danger of being supplanted so long as his vital energy is such that he can still devote himself to the vigorous pursuit of his profession. Even in his declining years, he is always regarded by the young man as a valued counsel in cases of emergency and doubt. It is much to be regretted, then, that, in not a few instances, the older members of the profession are disposed to behave as if they had never been young themselves, nor required the sympathy which young men always feel that they need so much. If young men could feel that the bond between them and their fathers in the profession was more like that existing between the natural parent and child, their pathway would be rendered much smoother, and their courage, often faltering, would be greatly increased and confirmed.

These jealousies, so common among medical men, always weaken the influence of the profession wherever they exist and in proportion to their extent. In the first place, public confidence must be greatly shaken as to our claims that our science is based upon philosophical principles. With many of the most intelligent portion of the community we stand no better at this moment than the veriest empiric in our midst. We are often met with the intimation that, while all professing to be guided by the same general principles, no two of us can agree upon any matter affecting medical diagnosis and treatment. Dr. A—, who has received his medical education altogether, or in part, in the old world, is inclined to look disparagingly upon Dr. B—, no matter what his abilities, because

he has not gone beyond the limits of his own native land to acquire his medical knowledge. He seems to act as if not only professional knowledge was to be acquired, but that any deficiency in brains that may perchance exist can also be made up by a trip to the Old Country and the addition of three or four significant letters to his name. Now, we do not desire to be understood as uttering one word depreciatory of the very great advantages at which young men of ability and industry are placed in the beginning of their career by enjoying the privilege of visiting the Old Country, attending one of the large hospitals, and coming in contact with the great minds of the age, as well as receiving their instructions. Such a privilege as this is confessedly most desirable in more ways than one; and he who is earnestly desirous of adding to his stock of information and of acquiring greater precision in any department of his profession, cannot, perhaps, attain his object more effectually in any other way than by visiting a large city like London or some of the large cities of the continent. But the experience of the past has confirmed us in this conviction, that if a man has ability, physical energy, and a determination to rise in his profession, he need not go beyond the limits of his own country. The almost unlimited and ever-increasing facilities placed at our disposal by the press of the present day, give us advantages not enjoyed by the profession in former times. So that now there is nothing new in the profession under the sun of which the industrious student may not possess himself almost as quickly and effectually as if he was on the very spot where the novel principle has been evolved or practice adopted. The time has passed when; in order to become acquainted with the views of the leading minds of the age in any country or upon any subject, it is absolutely necessary that we should see and hear them for ourselves. Surely no one will pretend to say that, apart from the gratification of seeing and hearing a man like Sir James Paget, the earnest student will be any better informed regarding the views of that eminent surgeon than he would be by reading his published works and carefully digesting them. So we might with equal propriety speak of every man of any considerable distinction. Not a solitary man of prominence in the profession in any of its departments has failed to present through the press his views upon his favourite subject in the most matured and carefully prepared form. So that often what men of distinction have written is much more to be relied on as the correct expression of their views than what they may have said at a hospital clinic. It is an unjust principle upon which to judge of professional attainments to

inquire where a man has been educated; because he may not have gone beyond the limits of the city of Toronto, and be vastly more intelligent and better informed in every branch of his profession, than his neighbour who has travelled round the world and has an appendage to his name almost equal to the letters of the alphabet. We don't hesitate to characterize the man who shows a disposition to taboo his neighbour for no better reason than that he had not been *abroad* to obtain his medical education, as exhibiting a degree of narrow-minded snob-business unworthy of a gentleman belonging to a profession so grand and philanthropic in its purposes as ours.

It would be very much the safer rule to follow to judge men, not so much upon the place and manner in which they have received their professional training, as upon the acquaintance they exhibit of their profession, and the earnestness and devotion with which they apply themselves to every expedient which can in any way render them effective in practical life.

Professional jealousies are, in many instances, proving destructive to the influence which professional men ought to have upon each other. It is a subject of deep regret that, in a city like Toronto, there is no properly organized society of medical men, where they can meet together from time to time for an interchange of views upon any of the important matters relating to the profession. Our profession is confessedly progressive in its character and aims. It is almost startling to anyone who reads at all extensively and profitably, to observe the rapid strides that are being made in throwing light upon many points that were once obscure and in improving upon points of practice that formerly obtained. Association with each other in a friendly way, it will not be denied, tends to personal improvement among men of almost any class, but more particularly among those devoted to any branch of science. Well, we are not saying more than we have a right to say when we claim for the members of the medical profession in this city an amount of intelligence and thorough acquaintance with their work, as well as success in the treatment of disease, not excelled by their brethren anywhere else. We can refer with honest pride to the success achieved by many amongst us in the various departments of the profession. But we are pained to think that rival interests and personal infidelity to each other are so dividing us that all the useful information which necessarily would result from the attrition of mind with mind is constantly being lost, particularly to the younger members of the profession. We claim that ours ought to be preeminently an unselfish profession, and that we ought to be willing, by mutual sympathy and aid, to contribute of our

everyday experience anything that would prove helpful in rendering our labours more efficient to suffering humanity. This can only be effectually done by regular meetings together and the presentation of anything striking in our individual experience. In the past, all efforts at keeping alive and in vigorous operation a medical society have proved abortive; and we have reason to believe that our failures can be traced to but one cause.—We have become gradually estranged from each other by the personal jealousies arising out of rival interests and the growing disposition to build ourselves up individually upon the ruins of our neighbours. Doubtless, much of this feeling of distrust that now exists would be largely obviated by more frequent and general contact, such as would be secured by general association; and many members of the profession, now apparently obnoxious to each other, would become most valued friends. We have no doubt that, if many of us would only seek a more intimate acquaintance, many seeming incompatibilities would be entirely removed, and a harmony would exist amongst us most desirable for our personal enjoyment, and eminently conducive to our advancement professionally. Let us forget our past differences, and seek, by every lawful means, to break down those barriers to our mutual profit which have too long torn us asunder, and rendered us more like armies arrayed in conflict the one against the other than the compact, sympathizing brotherhood which we ought to be.

MIDLAND AND YORK.

Is it not time that a Medical Association should be formed for the Territorial Division of Midland and York? The medical men resident in this division must feel that Medical Societies or Associations are neither necessary nor beneficial, or else, owing to inertia and indifference, no one has hitherto taken action in a matter which we think somewhat important. Many territorial divisions in Canada, many towns and counties in the United States, have Medical Societies, whose proceedings are a credit to their members and a benefit to all who take part in them. That the medical profession of Midland and York, strong as it is in numbers and talent, should be behindhand in this matter, is certainly an anomaly that should at once cease to exist. True it is that in Toronto there are resident a larger number of physicians, from which almost a Society might be formed, than many places having five Medical Societies possess; but, for some reason or other, a Toronto Medical Society has not been successfully worked. We think that a larger and more representative Association, where all personal jealousies and ill-feeling, all sectional and

school differences might be sunk, could, and should, be organised and worked. Every member of the College of Physicians and Surgeons has a duty to perform; every physician has an interest in the proceedings of the council of that body of which he is a member.

How better can constituents fortify their representative with their views on medical legislation than by a careful discussion of their opinions and his actions in meeting assembled? How better can a representative explain or defend his words or his votes in the council than when brought face to face with the constituents who sent him there? No one is too old to learn; no one lives or practises long enough to meet with every phase of disease. Everyone has some opportunity for observation and deduction, and the imparting of knowledge or information is mutually beneficial. To meet together in a friendly spirit; to discuss one's doubts and difficulties, one's opinions and experience, with those of others who are working for the same end, cannot but result in some pleasure and profit to all, and if not essential, is, at any rate, a subject of sufficient importance to be urged upon the medical men resident in the Division of Midland and York. We would suggest that our representative should call a preliminary meeting to decide upon the best means of accomplishing this object. The details could be gone into at a larger meeting afterwards.

THE ONTARIO MEDICAL ACT.

The Bill introduced by Mr. Wills to amend the Medical Act, so as to allow British graduates, and licentiates, &c., to register in Ontario without examination before the Board, was withdrawn. This is as it should be. Ample provision was made at the time the Act was last before the House, to enable the Council to grant a *quid pro quo* to British graduates, and as the only *quo* we have received so far, is an intimation from the Board of Trade in London to the agents of the Allan line of steamships that henceforth their steamships will not be allowed to clear the Custom House in England unless the surgeons on board are provided with diplomas from some college in England, Ireland or Scotland, we hope the Medical Council will have sufficient self-respect to continue to refuse to register any one that has not complied with the provisions of the Act. Sir Hugh Allan, in a letter to Dr. Campbell, of Montreal, states that he is not disposed to submit to the requirement of the Board of Trade, it being an

injustice to the institutions of this country, and a slight to the Dominion itself. He furthermore states that having for twenty years carried Canadian surgeons as well as English ones on his vessels, he has found Canadian ones quite equal, both in professional acquirements and gentlemanly bearing, to those received from the colleges in England.

BOOKS AND PAMPHLETS RECEIVED.

The Functions of the Uvula and the Prominence formed by the Azygos Uvulae Muscles. By THOS. F. RUMBOLD, M.D., St. Louis.

The Use of the Membrana Tympani as a Phonautograph and Logograph. By CLARENCE J. BLAKE, M.D., Boston.

The Transactions of the Medical Society of Virginia for 1876. These transactions have been bound with the January number of the *Virginia Medical Monthly*, edited by Dr. LONDON B. EDWARDS, of Richmond. They contain, besides addresses by the President, Dr. Cunningham, and Dr. McDonald, able papers by the Chairmen of eight committees drafted to report on the advances made in the various branches of medicine. A paper on "Aspiration," by Dr. Hooper, and the proceedings of the annual meeting complete a volume that is highly creditable to the medical men of Virginia, who show zeal and co-operation worthy of our imitation.

CANADIANS IN LONDON.—The following gentlemen have passed the primary Examination for Membership of the Royal College of Surgeons of England:—F. R. Eccles, M.D., Duncan Fraser, M.B., A. H. Wright, B.A., M.B., and John Wishart, M.B. Herbert Stanley Stone, M.B., New Brunswick; William T. Ward, M.D., of Stanhope; John Kirkpatrick, M.D., Toronto, have been admitted Members of the Royal College of Surgeons, England.

PERSONAL.—We are glad to see that Dr. Rosebrugh has resumed his professional duties, after a rest of four or five months, spent in New York, Philadelphia, and Boston. We hope that the benefit which has resulted to his health will be permanent.

Communications.

To the Editor of the CANADIAN JOURNAL OF MEDICAL SCIENCE.

A SIMPLE ASPIRATOR.

BY A. GROVES, M.D.,
Fergus, Ontario.

Having noticed in the last number of the CANADIAN JOURNAL OF MEDICAL SCIENCE an article from the London *Lancet* on a "New Aspirator," I thought it might be of interest to your readers to describe an instrument which I devised about a year ago, and have used several times since. I had, first, a tubular needle made by a watchmaker out of the largest sized tubing, commonly used for making hinges for watch cases; then I took an ordinary elastic enema syringe, and broke off the expanded part at the extremity of the suction tube, over which one end of a piece of rubber tubing, eighteen or twenty inches long, was slipped and secured by a thread tied tightly around it; the other end of the tubing was slipped over the needle and secured in a similar manner. The tubing used was that sold by druggists for nursing bottles, and answers perfectly. The whole cost, in addition to the syringe, is not over one dollar. My method of using the instrument is, first, to place the delivery tube under water, so as to prevent the possibility of air passing into the cavity; then an assistant compresses the bulb of the syringe; an incision is now made through the skin, and the needle plunged into the cavity to be aspirated. Alternate relaxation and compression of the bulb will now be carried on until all the fluid is removed, or from some cause it is deemed proper to stop the operation. I always compress the suction tube with the fingers during compression of the bulb, and the delivery tube during its relaxation, lest the valves should not work perfectly.

By removing the valves, injection of the cavity can be carried on. With this instrument I have withdrawn sixty-six ounces of fluid at a single operation from the pleural cavity, affording immediate relief, which was soon followed by perfect recovery. Indeed, in every case in which I have performed aspiration of the chest with this instrument, recovery has been rapid and complete. The chief advantages I claim for it are:—

Its Cheapness.

Its Simplicity.

Its Durability.

Its Efficiency.

Its Portability—the needle and piece of tubing can be carried in the vest pocket.

Its Safety—there is no danger of rupturing delicate structures by too much suction power.

There is one point in the using of aspirators, particularly in the pleural and pericardial cavities, which is too much neglected, but which it is most essential should be impressed upon operators. It is, that the needle should not be kept projecting perpendicularly into the cavity, ready to pierce the expanding lung or the ever-beating heart. Keep the needle lying against the side of the cavity.

I have lately devised a needle, by the use of which the danger of piercing internal structures will be obviated, and of which I shall, perhaps, at some future time, send you a description.

Miscellaneous.

Sir William Fergusson died on Feb. 11th.

DR. W. S. PLAYFAIR aided the Duchess of Edinburgh in her late performance of domestic duties at Malta.—*Phil. Med. Times*.

A "lymph" famine prevails in England in consequence of the large number of persons desiring to be re-vaccinated.

At a meeting of the Ottawa Chirurgical Society, the following officers were elected:—John Sweetland, M.D., President; Henry P. Wright, M.D., Vice-President; A. Horsey, M.R.C.S., second do.; A. Henderson, M.D. Sec.-Treasurer.

THE DOCTOR.—There is a kind of freemasonry between the doctors and the women that we and they understand, and with which outside barbarians have nothing to do. Nobody loves the doctor like the women, and I am happy to say this regard is most cordially reciprocated. A few of them (I mean the women), however, have a most insatiable ambition to be doctors without being graduates—that is, some of them are

very much inclined to be quacks. And very officious, persistent, meddlesome quacks they make, seeming to think that they know more than the whole medical faculty combined; in a word, that they know it all, or if by chance there is anything they don't know, it is not worth knowing. But taken as a class, the women are the best friends the doctors have; indeed, they are indispensable to us: we can't do without them, and, deprived of them, I verily believe the entire medical fraternity would break down before the next centennial, or, at least, become very infirm and decrepid. As nurses, some women are perfectly charming, and a slight attack of sickness is sometimes absolutely refreshing, if not luxurious, when nursed and cared for by some of them.

"O woman, in our hours of ease,
Uncertain, coy, and hard to please,
And varying as the shade
By the light, quivering aspen made!
When pain and anguish wring the brow,
A ministering angel thou!"

A good nurse is, like the poet, *nascitur, non fit*. As a class, women seem to have a great talent for nursing and caring for the sick; hence the ambition or desire some of them are manifesting to become doctors. Well, if they are willing to bear the wear and tear, the toil and labour, the mortification and responsibility that attach to the physician's life, in God's name let them try. That female labour has been too restricted and too unremunerative, is beyond question. That many have been and are continually driven to destruction and ruin by the want of compensating employment, may be demonstrated beyond a doubt all over the country, but especially in the large cities. So far as I am concerned, I extend to them the right hand of fellowship, and it seems to me that if I was just a little sick I would prefer one as my doctor; indeed, I am not sure but that I would like one as a partner, especially if she was interesting and good looking. As a class, they are true to us, and "anathema maranatha" be to him who is not true to them.—*Dr. McDonald's Address, in Virginia Medical Monthly.*

Births, Marriages, and Deaths.

BIRTHS.

At Whitby, on Sunday, 18th Feb., the wife of Dr. Bogart, of a son.

At Campbellford, on the 22nd inst., the wife of R. J. Ough, M.D., of a son.

On Janary 31st, 1877, at the Hermitage, Richmond Hill, the wife of L. H. Evans, Esq., M.D., Toronto, of a daughter.

At Thornton, County Simcoe, on the 29th January, the wife of John Madill, M.D., of twin daughters.

MARRIED.

On Monday, Feb. 19th, by Rev. J. G. Laird, Dr. Sylvester, of Galt, to Lottie, youngest daughter of the late R. Reed, Esq., Bowmanville.

On the 21st Feb., by the Rev. John Gilchrist, Frank J. Patten, M.D., to Miss Annie E. Mainwaring, youngest daughter of H. Mainwaring, Esq., all of St. George, county of Grant.

On the 21st inst., at the residence of the bride's father, Gloucester-street, by the Rev. W. Hay, Scotland, uncle of the bride, William Henry Miller, M.D., to Belle, daughter of A. T. McCord, Esq.

In Acton, on the 15th February, at the residence of the bride's father, by Rev. G. W. Calvert, assisted by Rev. D. B. Cameron, of Acton, and Rev. Thos. Lowrey, of Brantford, William H. Lowrey, Esq., M.D., to Miss Ann Jane, eldest daughter of Chas. Hill, Esq., all of Acton.

DIED.

On the 5th inst., at Port Ryerse, Dr. Henry Bogue, aged 52, formerly of Fifeshire, Scotland.

On Sunday afternoon, at the residence of Dr. Barrick, No. 97 Bond Street, Caroline Elizabeth, youngest daughter of Dr. William Newcombe, aged 13 years.

At 97 Bond Street, Toronto, on the 23rd inst., of inflammation of the brain, Beatrice Maud, daughter of Dr. E. J. Barrick, aged 3 years.

On January 25th, at his late residence, York-street, of congestion of the lungs, Robert Hornby, M.D., in his 68th year.

At York Mills, on the 13th inst., Ada Maud, only daughter of Dr. Armstrong, aged three years and eleven months.

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THOMAS SPENCE, MANAGER.

ANALYSIS BY PROF. GUSTAVUS BODE, OF MILWAUKEE.

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Total quantity of soluble salts, 20°002 grains, consisting of	
Chloride of Sodium	0.179 grains.
Sulphate of Soda	1.213 "
Bicarbonate of Lime	10.725 "
Bicarbonate of Magnesia	8.875 "
Aluminium	0.225 "
Silica	0.723 "
Iron	a trace.

Toronto General Hospital, Nov. 4, 1876

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J. H. McCOLLUM, M.D.,
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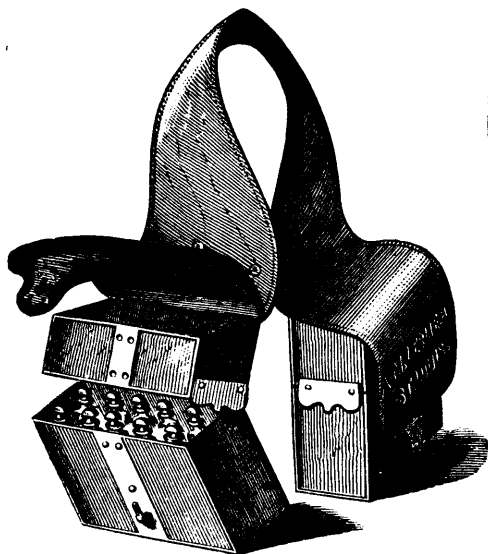
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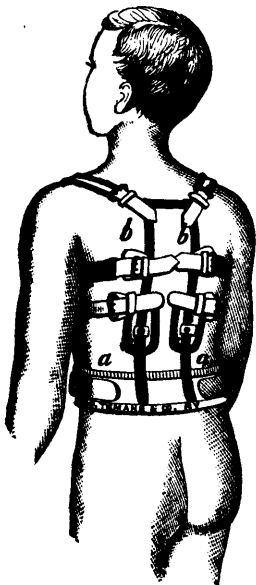
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“ Colo. Comp	“	0 12	Plumb. Acet.	lb.	0 20	“ Ergot	“	0 75
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“ C. Cret	“	0 10	“ Rhei	“	1 90	“ Verat. Virid.	“	0 90
“ Nit. Oxid	“	0 10	“ Zingib	“	0 40	Ung. Hyd. Nit	“	1 00
“ Bichlor	“	0 10	Quin. Sulph	oz.	3 25	“ Sulph. Co	“	0 40
Iodine	“	0 50	Santonine	“	1 10	“ Zinci	“	0 40
Jalapine	“	1 75	Sodæ Bicarb. (Howard's)	lb.	0 20	Vin. Aloes	“	0 60
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Analysis by Prof. J. W. Mallet, of the University of Virginia.

The Mass appears as a stiff dough, or soft solid, of a light gray color, and marked acid reaction to test-paper. The contents of several bottles having been thoroughly mixed, the following composition was found for the mixture in 100 parts:

Aluminum Sulphate.....	15.215	Potassium sulphate.....	.060
Ferrie sulphate (per-sulphate iron).....	4.628	Sodium sulphate.....	.226
Ferrous sulphate (proto-sulphate iron).....	.412	Lithium sulphate.....	.019
Nickel sulphate.....	.162	Ammonium sulphate.....	.022
Cobalt sulphate.....	.014	Sodium chloride.....	.326
Manganese sulphate.....	.257	Calcium fluoride.....	trace.
Copper sulphate.....	.008	Calcium phosphate.....	trace.
Zinc sulphate.....	.301	Silica.....	1.504
Magnesium sulphate.....	16.006	Organic matter.....	.128
Strontium sulphate.....	trace.	Water.....	42.938
Calcium sulphate.....	17.638		
			99.769

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