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A Monthly Journal of Medical and Surgical Science,
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(Index next page.)

Vol. XIV
No. 4.

TORONTO, DECEMBER 1, 1881.

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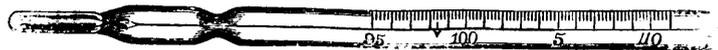
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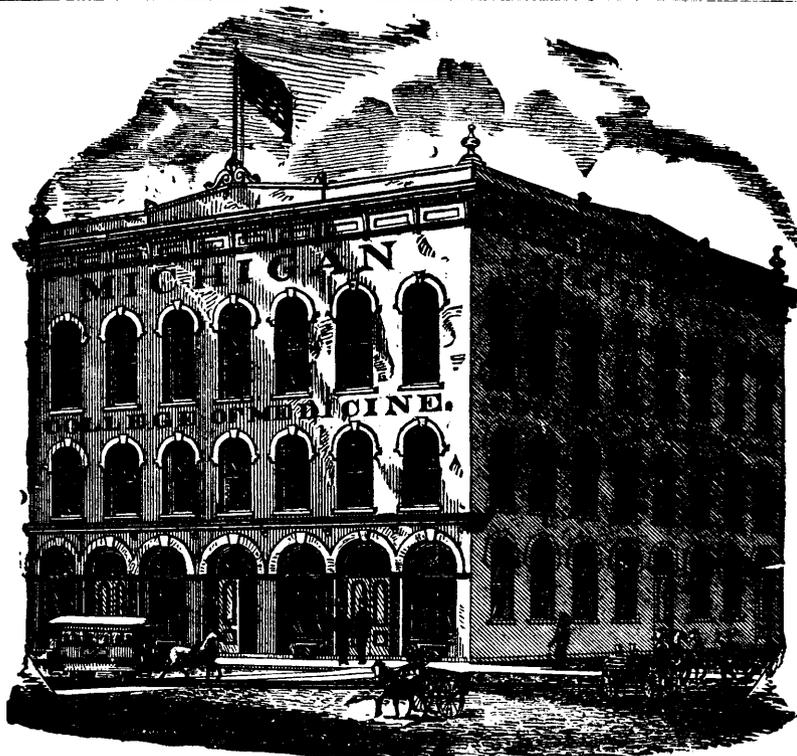
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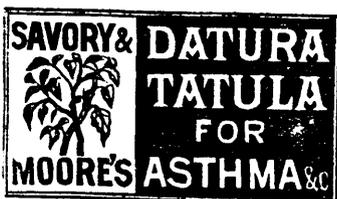


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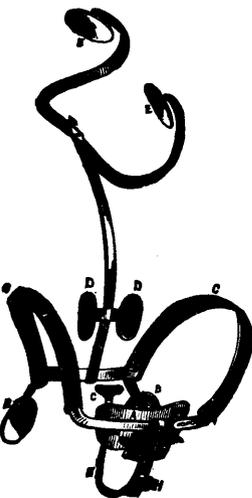
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THE IMPROVED BODY BRACE.
FIG. 3.



ABDOMINAL AND SPINAL SHOULDER AND LUNG BRACE.
FIG. 8.



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FIG. 19.



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1st. Around the body, two inches below the tips of hip bones.
2nd. Around the chest, close under the arms.

3rd. From each armpit to corresponding tip of hip bone.
4th. Height of person. All measures to be in inches. Measure over the linen, drawing the measure moderately tight.

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FORMULÆ AND THERAPEUTICS.		PER 100 MEDICAL PROPERTIES. Doses. Each.	
AGUE,	{ Chinoidin, 2 grs. Ext. Col. Co. $\frac{1}{2}$ " Ol. Pip. Nig. 1-6 " Ferri. Sul. $\frac{1}{2}$ "	Antiperiodic.	2 to 4 75
ALOES, U. S. P.	{ Pulv. Aloes Socot. 2 grs. Saponia, 2 grs. }	Stimulating Purgative. Directed to lower portion Alimen'y Canal.	1 to 3 40
" COMP. (Ph. Gent Comp.)	{ Pulv. Aloes Socot. 1 $\frac{1}{2}$ grs. Saponia 1 $\frac{1}{2}$ grs. }	Tonic, Purgative.	2 to 4 40
" ET ASSAFETID.	{ Assafetida, 1 $\frac{1}{2}$ grs. Pulv. Saponia 1 $\frac{1}{2}$ grs. Pulv. Aloes Socot: $\frac{1}{2}$ gr.	Purgative, Antispasmodic.	2 to 5 40
" ET FERRI,	{ " Zingib. Jam: $\frac{1}{2}$ gr. Ferri Sulph: Exsic: 1 gr. Ext. Conil, $\frac{1}{2}$ gr. }	Tonic, Purgative.	1 to 3 40
" ET MASTICH:	{ See Pil. Stomachicae. }	Stimulating Purgative.	1 to 2 50
" ET MYRRH. E. U. S. P.	{ Pulv. Aloes Socot, 2 grs. Myrrha, 1 gr. Croci Stigmat, $\frac{1}{2}$ gr. }	Cathartic, Emmenagogue.	3 to 6 50
" ET NUC. VOMICA.	{ Pulv. Aloes Soc: 1 $\frac{1}{2}$ grs. Ext. Nuc. Vomica, $\frac{1}{2}$ gr. }	Tonic, Purgative.	1 to 2 50
ALTERNATIVE,	{ Mass. Hydrarg. 1 gr. Pulv. Opil, $\frac{1}{2}$ gr. Pulv. Ipecac., $\frac{1}{4}$ gr. }	Alterative, with tendency to Mercurial Impression.	1 to 2 50
AMMON. BROMID, 1 gr.		Sedative, Alterative, Resolvent.	1 71
ANDERSON'S SCOTS.	{ Pulv. Aloes Socot, " Sapon Hispan " Fruct. Colocynth. " Gambogia, Oleum Anial. }	Cathartic.	2 to 5
ANTHELMINTIC,	{ Santonin, Calomel, ss, 1 gr. }	Anthelmintic.	1 to 2 1

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ANTI-CHILL,	{ Chinoidin, 1 gr. Ferri Ferrocyan 1 gr. Ol. Piper. Nig. 1 gr. Arsenic, 1-20 gr. }	Antiperiodic. Applicable to ob- struate intermittents.	1 to 2	1 00
ANTI-DYSPEPTIC,	{ Strychnia, 1-40 gr. Ext. Belladonna, 1-10 gr. Pulv. Ipecac, 1-10 gr. Mass. Hydrag, 2 grs. Ext. Col. Co, 2 grs. }	Applicable where Debility and Impaired Digestion exist.	1 to 2	1 00
ANTIMONII COMP., U. S. P. [See Pil. Calomel Comp.]		Alterative.	1 to 3	40
APERIENT,	{ Ext. Nuc. Vom, ½ gr. " Hyoscyam, ½ gr. Coloc. C., 2 grs. }	Aperient Tonic.	1 to 2	85
ASSAFOETIDÆ, U. S. P.	2 grs.	Nerve Stimulant.	1 to 3	40
" COMP.	{ Assafoetida, 2 grs. Ferri Sulph. Exsic, 1 gr. }	Nerve Stimulant.	2 to 4	40
ASSAFOETIDÆ, ET RHEI,	{ Assafoetida, 1 gr. Ferrum, 1 gr. }	Tonic and Nerve Stimulant.	2 to 5	40
BISMUTH, Subnit: 3 grs.		Tonic, Laxative, Nerve Stimu- lant.	2 to 4	75
" Subcarb.: 3 grs.		Sedative, Antiperiodic.	1 to 5	75
BISMUTH et Ignatia,	{ Bismuth Sub. Carb., 4 grs. Ext. Ignatia, ½ gr. }	Sedative.	2 to 5	75
" et Nuc. Vomica,	{ Bismuth Sub. Carb., 4 grs. Ext. Nuc. Vomica, ½ gr. }	Sedative, Antiperiodic, Tonic.	1 to 2	1 50
CALOMEL, ½ gr.		Sedative, Tonic.	1 to 2	1 50
" 1 gr.		Alterative.	1 to 3	40
" 2 grs.		" Purgative.	1 to 3	40
" 3 grs.		" Cathartic.	1 to 3	40
" 5 grs.		" Cathartic.	1 to 3	50
" Comp. (Plummer's) 3 grs.	{ Calomel, 1 gr. Oxysulph Antimony, Guaiacum Resin. }	Alterative, Anti-Rheumatic.	1 to 3	40
" ET OPII,	{ Calomel, 2 grs. Opium, 1 gr. }	Cathartic, Anodyne.	1	85
" ET RHEI,	{ Calomel, ½ gr. Ext. Rhei, ½ gr. Coloc. C. ½ gr. " Hyoscyam, 1-6 gr. }	Mild Purgative.	1 to 3	75
CAMPHOR ET EXT. HYOSCYAMUS,	{ Camphor, 1 gr. Ext. Hyoscyamus, (Eng.) 1 gr. }	Anodyne. Cerebral Stimulant.	1 to 2	50
CATHART.: Comp., U. S. P.	{ Ext. Coloc. Comp. 1½ gr. " Jalape, 1 gr. Calomel, 1 gr. Podophyllin, ½ gr. }	Cathartic.	3 to 4	50
" " Vegetable.	{ Ext. Colocynth, 1 gr. Virgini Scammony, 1 gr. Aloes, Soap & Ginger. }	Cathartic.	2 to 3	50
" " Imp.	{ Ext. Coloc. Comp. 1 gr. Jalap, 1 gr. Podophyllin, Leptandrin, 3 grs. Ext. Hyoscyamus, 1 gr. Gentian, 1 gr. Ol. Menth Pip. }	Cathartic.	2 to 4	50
CHAPMAN'S DINNER PILLS,	{ Pulv. Aloes Soc. 1 gr. " Rhei Opt. 1 gr. Gum Mastich. }	Stimulating Laxative.	1 to 3	80
CERII OXALAT: 1 gr.		Nerve Tonic.	1 to 3	1 00
CHINOIDIN, 1 gr.		Tonic, Antiperiodic.	2 to 4	40
" 2 grs.		Tonic, Antiperiodic.	2 to 4	50
" COMP.:	{ Chinoidin, 2 grs. Ferri Sulph. Exsic, 1 gr. Piperina, ½ gr. }	Tonic, Antiperiodic.	1 to 2	1 00
QUINCHON, SULPH. 1½ grs.		Tonic, Antiperiodic.	1 to 3	75
COCCIA,	{ Pulv. Res. Scammony, 1 gr. " Soc. Aloes, 1½ grs. Colocynth, ½ gr. Potass. Sulph. ½ gr. Ol. Caryophyl. ½ gr. }	Hydragogue-Cathartic.	2 to 4	90
COOK'S, 3 grs.	{ Pulv. Aloes Soc. 1 gr. " Rhei, 1 gr. Calomel, ½ gr. Sapon. Hispan ½ gr. }	Purgative.	2 to 4	50
COLOCYNTHIDIS COMP., 3 grs. (Ext. Coloc. Comp.) U. S. P.		Purgative.	2 to 5	80
COLOCYNTH ET HYDRARG ET IPECAC,	{ Pulv. Ext. Coloc. Comp. 2 grs. Pulv. Hydrag. 2 grs. Pulv. Ipecac. 1-6 gr. }	Cholagogue Cathartic.	1 to 3	75
COLOCYNTH ET HYOSCYAM.	{ Ext. Coloc. C. 2½ grs. " Hyoscyamus, 1½ gr. }	Gentle Laxative.	1 to 2	75
COPAIBÆ, U. S. P., 3 grs.		Alterative to Mucous Mem- brane.	2 to 6	50
" ET EXT. CUBEBAÆ.	{ Pil. Copalib, 3 grs. Oleo-resin, Cubebæ, 1 gr. }	Alterative to Mucous Mem- brane.	2 to 4	80
COPAIBÆ COMP.	{ Pil. Copalib, 1 gr. Resin Guaiac, 1 gr. Ferri Cit, 1 gr. Oleo-resin Cubeb, 1 gr. }	Alterative to Mucous Mem- brane, Tonic.	2 to 4	80
DIGITALIS COMP.	{ Pulv. Digitalis, 1 gr. " Scilla, 1 gr. Potass. Nit, 2 grs. }	Arterial Sedative.	1 to 3	50
DIURETIC,	{ Sapo. Hispan. Pulv. 2 grs. Soda Carb. Exsic. 2 grs. Ol. Bacca Junip. 1 drop. }	Diuretic, Antacid.	1 to 3	50
DUPUYTREN,	{ Pulv. Guaiac, 3 grs. Hydg. Chlor. Corros. 1-10 grs. Pulv. Opii, ½ gr. Ergotine, 1 gr. Ext. Hellebore Nig. 1 gr. }	Specific Alterative.	1	50
EMMENAGOGUE,	{ Aloes Socot, 1 gr. Ferri Sul. Exs, 1 gr. Ol. Sabine, ½ gr. }	Active Emmenagogue, Tonic.	1 to 3	1 40

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THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

VOL. XIV. TORONTO, DEC. 1ST, 1881. No. 4.

Original Communications.

ELECTRICITY IN THE TREATMENT OF SPECIAL DISEASES.

BY A. M. ROSEBRUGH, M.D. SURGEON TO THE TORONTO EYE AND EAR DISPENSARY.

Read before the Toronto Medical Society, Nov. 17th, 1881.

Recently there has been a revival of the use of static or franklinic electricity in medicine, and important sedative and tonic effects are claimed for it. It is claimed by others, however, that these sedative and tonic effects are not equal either in variety or degree to those obtained by general faradization and central galvanization, and that they should be much superior to them, to compensate for the great practical difficulty in using static or franklinic electricity. It is claimed, moreover, that much as electricity is now used by the profession, it would be used still more were it universally known how valuable it is (as a general sedative and tonic) in the treatment of neurasthenia, hysteria, hysteroid diseases, certain phases of epilepsy, neuralgia, dysmenorrhœa, amenorrhœa, exophthalmic goitre, and in the sequelæ of certain acute diseases.

In the preparation of this *resumé* of practical eletro-therapeutics the following works have been consulted:—"Medical electricity," by Julius Althars, M.D., F.R.C.P.L. (1873). "The clinical use of electricity," by J. Russell Reynolds, M.D., F.R.S., (1874). "Clinical electro-therapeutics," by A. McL. Hamilton, M.D., (1873). "Lectures on electricity," by A. D. Rockwell, A.M., M.D., (1879). "Medical and Surgical electricity," by Beard and Rockwell, (1878 and 1881), and "Medical electricity," by Roberts Bartholow, A.M., M.D., LL.D., (1881).

PARALYSIS FROM DISEASE OF THE BRAIN.

In treating cases of *paralysis from disease of*

the brain, (hemiplegia), the faradic and the galvanic batteries, are both required; the latter should contain 12 or 18 cells. The localized faradic current, applied just strong enough to cause muscular contractions, may be applied to the affected muscles within a week or two of the attack, and two or three weeks later a continuous current from 8, 10, or 12 cells of the galvanic battery may be applied to the head, back and side of the neck. A few weeks later still, the faradic current may be used as a tonic in the form of general faradization. In treating the paralyzed muscles, good results have been obtained both from the faradic and the galvanic current, but the best results may be expected from their combined use. The treatment may be commenced with the galvanic current, slowly interrupted, and followed by the use of the faradic current. Paralyzed muscles respond more readily to a slowly interrupted galvanic current than to the momentary flashing to and fro of the induced faradic current. Hence, in cases where farado-muscular contractility is very much weakened, or entirely absent, the galvanic current is used until the muscles respond to the faradic as well as to the galvanic current.

In using the galvanic current for paralysis of the arm, for instance, a large sponge electrode, well wetted, (usually the positive), is placed on the shoulder, and the other sponge electrode, also well wetted, is slowly moved down the arm, on all sides, so as to bring all the fibres of each muscle under the influence of the current *seriatum*. When one or both sponges are movable it is called a *labile* application, and when both are stationary it is called a *stabile* application. An application of the galvanic current made *labile*, is practically the same as an interrupted current, and when the application is thus made, a special current interrupter is not necessary.

A battery with 12 cells is sufficient for making these peripheral applications. The current should be used daily, or in alternation with the faradic current. The weakest current is to be used that will cause contractions when the current is interrupted; and it is a curious fact, that a paralyzed muscle will, in some cases, respond to a weaker galvanic current than the corresponding healthy muscle. These reactions are called *the reactions of degeneration*. In using either the galvanic or the

faradic current, the muscles should not be fatigued. A few seconds to each is sufficient.

In using the faradic current, for instance to the arm, instead of keeping one electrode in a fixed position on the shoulder, the two electrodes kept together—preferably by holding the insulated handles in one hand—are slowly moved over every part of the paralyzed muscles. More vigorous contractions will occur and with less pain, by making the application in this manner.

After the muscles of the arm and fore-arm are put in a better condition, special attention must be given to the muscles of the hand, and the applications made to individual muscles—first with the galvanic and afterwards with the faradic current—by means of small metallic electrodes covered with flannel or chamois, and well wetted. Duchenne's olive pointed electrodes are the best for this purpose.

In applying galvanism to the head, great care is necessary. The current should not be broken abruptly. The sponge electrodes should be kept steadily in one position, and the current gradually increased from the minimum to the maximum, and as gradually decreased to the minimum before the sponges are moved. In the Bartlett battery this is accomplished with the commutator or current-selector, and in the McIntosh battery, by means of a bifurcated cord-electrode and a step-by-step arrangement. When great care is used, I find that the same end may be obtained very simply, by using large sponge electrodes and modifying the strength of the current by moderate or firm pressure on the sponges. A maximum of say 12 cells are put in circuit and the positive electrodes applied with very gentle pressure to the forehead. The negative is next very lightly and cautiously applied to the nape of the neck, and the pressure on the sponge very gradually increased, and afterwards the pressure increased on the positive electrode. On removing the sponges the process is reversed. It is well to bear in mind that the sudden opening of the circuit either by the sudden withdrawal of an electrode or by the loosening of the wire connections, will cause a shock even greater than that caused by the sudden closing of the circuit. The positive electrode is applied over the eye or on the temple of the side affected, and on the side opposite to that of the hemiplegia. Another plan is to apply the nega-

tive pole over the stomach, while the forehead, top of the head, nape of the neck, spine and cervical sympathetic are brought successively under the influence of the positive pole,—the same as in central galvanization.

In hemiplegia, much benefit is derived from passive motion of the limb, kneading of the muscles—doing it thoroughly and systematically—and applying dry heat. The skin should be well soaked with warm water before each application of the electrodes, and when the electrode is applied to a muscle, the patient should at the same time make an effort to contract it. Both at the time of the application and during the interval, the paralyzed muscles should be kept relaxed.

The prognosis is good in those cases where the electro-muscular contractility is simply diminished but not altogether lost. It may be even lost to the faradic current, but if there is any response to the slowly interrupted galvanic current, the case is susceptible of great improvement.

The prognosis is bad in two class of cases, first where there is absolutely no response either to the faradic or the galvanic current, and second, where the paralyzed muscles are plump, well-nourished, and respond normally to the faradic, as well as to the galvanic current.

Paralysis from Disease of the Spine.—In *paraplegia*, applications are made both to the spine and to the affected muscles, and both the faradic and the galvanic currents are used. In the acute stage, the treatment is confined to the muscles. The local treatment must be commenced promptly, to prevent wasting and degeneration. After all the acute symptoms have subsided, the spine is to be treated with the galvanic current and from 18 to 36 cells used. The sponge-electrodes—large and well wetted—are applied, the negative to the sacrum and the positive to the upper part of the spine. The latter is passed slowly down and on each side of the spine, so as to include the spinal nerve roots, and the sponge is rested specially on any tender points. Galvanization of the spine is also used in *chronic myelitis*, and striking results are claimed for it. A powerful battery is required, some using as high as 60 cells. The skin and the electrodes are well wetted and the current allowed to flow about two minutes.

The local treatment is commenced early and the applications made at first with the galvanic current.

Later, the faradic battery may be used, if the muscles respond to the faradic current. The weakest current is employed that will cause contractions.

Infantile Paralysis.—The electrical treatment in infantile paralysis should be commenced immediately after the termination of the fever. The galvanic battery is used, the negative pole being placed on the sacrum and the positive pole on the spine, just above the upper level of the diseased part of the cord. After one or two minutes, the negative electrode "is passed over the affected muscles in turn below, making each one contract several times,"* but fatigue is to be avoided.

A battery power of from 12 to 18 cells is used, and with the positive electrode above the diseased part of the cord and the negative on the muscles, the applications may be partly *labile* and partly *stabile* and the entire *seance* made to last from five to seven minutes.

The good effects of galvanism in these cases is due, according to Onimus et Legros, not so much to muscular contractions, as to its influence over the circulation, and over nutrition, and over the trophic system.

Peripheral Paralysis.—The best type of peripheral paralysis is that of facial paralysis. It may be caused by rheumatism, by injury, or by neuritis from disease of the middle ear. These cases are treated locally only. At the outset the galvanic current is used, and when nutrition is sufficiently restored to enable the muscles to respond to the faradic current, the latter is used to complete the treatment. In using the galvanic current, the positive electrode is applied over the seventh nerve in front of the ear, and the negative electrode is applied to the peripheral portions of the nerve. For the first few days a continuous current, from 12 or 18 cells, is used. Subsequently, the application is made *labile* and only 6 or 8 cells used; or the least number of cells that will cause contractions when the current is interrupted. The applications are made daily and for only a few minutes at a time. The muscles should be kept relaxed both during the interval and at the time of the application. The angle of the mouth may be drawn towards the ear and kept in this position, at least during a part of the time, by means of a metallic hook secured to a band fastened around

the ear. In case of ptosis, the upper lid is elevated and strapped to the forehead.

Lead Paralysis.—This disease usually takes the form of paralysis of the extensor muscles of the hand, although other muscles are sometimes affected. The electrical treatment is principally by means of local galvanization. The positive electrode is placed in the arm-pit or on the nerve-trunk and the paralyzed muscles are each in turn brought under the influence of the negative electrode, the application being *labile*. A current from 10 or 12 cells is used for about ten minutes at a time, daily. The patient may also be treated by general faradization and central galvanization.

Diphtheritic Paralysis.—The treatment of cases of paralysis from diphtheria and other acute diseases is by galvanization of the nerve centres (central galvanization) and galvanization of the paralyzed muscles,—a weak interrupted current, say, from 3 to 4 cells, being used for a few minutes daily.

Hysterical Paralysis.—In hysterical paralysis the affected muscles are always plump and well nourished, and respond both to the galvanic and the faradic current, but the skin is not sensitive to the stimulus of the latter.

The constitutional disease is treated by general faradization: the paralyzed muscles by local faradization—using moist electrodes—and the anæsthesia by the faradic current and the electric brush. A single strong application of the faradic current to the larynx, is, in some cases, sufficient to relieve hysterical aphonia.

Progressive Muscular Atrophy.—These cases are treated by central galvanization and the application of the galvanic and the faradic currents to the affected muscles, using the currents alternately.

Locomotor Ataxia.—These cases are treated by central galvanization and general faradization, and the anæsthesia by the electric brush.

TREATMENT OF PAIN.

According to Dr. Anstie, "The constant current is a remedy for neuralgia, unapproached in power by any other, except blistering and hypodermic morphia, and the latter is often surpassed by it in the permanence of its effect, while it is applicable in not a few cases where blistering would be useless." Dr. Bartholow says, "There is no fact more certain than the power of galvanism to relieve pain." Drs. Beard and Rockwell, while admitting

* Bartholow.

that true neuralgia is most successfully treated by galvanism, claim that "hysterical neuralgia and so called pseudo-neuralgia, which are simply forms of pain, occupying certain areas, and running seemingly in the direction of certain nerves, *yield most readily to faradism.*" They claim also that the effect of *pressure* is a useful guide in selecting the proper current—that in the majority of cases where firm pressure over the affected nerve aggravates the pain, the galvanic current is indicated; and that in cases where firm pressure does not increase the pain, the faradic current is indicated. The faradic current is also most efficacious in certain forms of headache.

When the galvanic current is used in ordinary cases of neuralgia, a battery of 12 or 18 cells is used; but in rebellious cases of sciatica and lumbago, from 40 to 60 cells are sometimes required. The electrodes should be large and well wetted, but not with salt water. The applications are made daily, twice a day, and in some cases three times a day according to the severity of the case.

In *sciatica*, the positive electrode is placed over the nerve, either at its exit from the pelvis or in the rectum; and the negative electrode is applied by the labile and stabile methods over the distribution of the nerve. In recent cases from 12 to 18 cells are sufficient. The application is continued from 10 to 15 minutes. A bulbous insulated electrode is used in the rectum, and is directed to the position of the affected nerve.

In *lumbago*, the applications are made two or three times a day, at the outset; and afterwards, once a day. The electrodes are placed on each side, and strong transverse currents are used for about ten minutes at each application. The treatment may be commenced with 18 cells, and afterwards, a stronger battery used if necessary. A single application may give decided, though perhaps temporary relief; but in many cases perseverance is necessary.

In *cervico-brachial neuralgia*, the positive electrode, large and well wetted, is placed over the cervical plexus, and the negative is passed slowly over the shoulder, arm and forearm. The applications are made daily, and continued for 8 or 10 minutes. In recent cases 12 or 18 cells are used, but in old cases 24 or 36 cases may be necessary.

In *facial neuralgia* the positive electrode is

applied to the painful part, and the other to the back of the neck, or on the stomach or held in the hand of the patient. In using the galvanic current about the head or face, great care must be taken not to interrupt the current abruptly. The number of cells used should be determined in each case by the sensations of the patient; it should not be strong enough to cause pain but strong enough to cause a warm, tingling sensation. The faradic current is also useful in facial neuralgia. It may be applied with the hand of the operator. The patient takes the negative electrode in both hands, and the operator taking the positive in his left, makes the application with the fingers of his right hand.

In the epileptiform variety of this affection, galvanization of the brain and cervical sympathetic may be tried. It has been successful in relieving "a certain proportion" of these terrible cases.

In *headache*, the best results according to Beard and Rockwell, are obtained from the faradic current, applied in the form of general faradization—the negative electrode being applied to the feet or coccyx, and the positive to the head, back of the neck, and in some cases to the stomach and bowels as well. The current is applied to the head with the hand of the operator. In some cases central galvanization is found to be the most efficacious. General electrization is useful in preventing attacks of headache by the improvement which it imparts to the tone of the system.

In *pain of the stomach or bowels*, the best results are obtained from central galvanization—the positive electrode being applied to the back of the neck, just above the 7th cervical vertebra, and the negative to the part or parts affected. Dr. Bartholow applies the positive pole to the cervical sympathetics and pneumogastrics (behind the angle of the jaw) and to the dorso-lumbar enlargement of the cord. He also applies the positive pole to the rectum by means of an insulated electrode. In some cases he uses the faradic current—"a mild current for anodine effects, and a strong current to the dry skin as a counter-irritant."

DISEASES OF THE SKIN.

Dr. Althaus, in the third edition of his treatise on "Medical Electricity," published in 1873, devoted but a single paragraph to the electric treatment of skin diseases. It is as follows: "Dr. Beard has used his proceeding of 'central galvani-

zation' in certain diseases of the skin, such as prurigo, eczema, and lichen, with good results, without an application to the diseased surface. In obstinate cases of this kind, therefore, which do not yield to other treatment, galvanization deserves a trial."

Dr. Bartholow says that very brilliant results have been obtained from galvanism in the treatment of trophic affections of the skin. He employs galvanism with success in the treatment of *acne* (*acne vulgaris*). One electrode is placed in front of the ear and the other is passed over the eruption on the face, without reference to the direction of the current. From 5 to 10 cells are used. Scleroderma is also reported to have been cured by galvanism. In one case the positive electrode was placed on the spine, the negative applied to the diseased surface, and from 12 to 27 cells used. In using central galvanization in the treatment of diseases of the skin, Drs. Beard and Rockwell use a current from 12 cells. The negative electrode, large and well wetted, is placed over the stomach, and the positive electrode is applied to the head, neck, and the entire length of the spine. It is also applied to the cervical sympathetic on both sides, care being taken not to break the current abruptly. Electricity is also used for the relief of the pain of herpes, and the itching of prurigo. A mild galvanic current is used for the former and dry localized faradization for the latter. For anæsthesia, the faradic current and the dry metallic brush is used.

(To be continued).

THE OPHTHALMOSCOPE IN THE DIAGNOSIS OF BRAIN DISEASE.

BY W. F. COLEMAN, M.D., M.R.C.S. ENG.,

Surgeon Eye, Ear and Throat, St. John, N.B.

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MR. PRESIDENT AND GENTLEMEN,—Our knowledge of the physiology and pathology of the central nervous system is so limited, the diagnosis of brain lesions so difficult, the well-known conditions of the eye in those lesions so unmentioned or dubiously mentioned by the text-books on medicine, as to furnish me with some excuse for urging the claims of the ophthalmoscope in the study of the intra-ocular end of a brain nerve during its struc-

tural changes and in the diagnosis of diseases of the brain and cord. Though the matter may embrace a limited personal experience, and little originality, I freely admit the testimony of such authorities and special writers as Drs. Allbut, Jackson and Gowers, and Mr. Nettleship, and, incidentally, many others. While the nature of many diseases within the chest and abdomen is revealed to touch and the ear, the maladies of that most inaccessible part of the body—the cranium—give out no certain sound, and will not disclose themselves to any wizard's touch; so it remained for the genius of VonGraefe and Sichel, the patient, skilful labors of Sæmisch, Liebreich, Schweigger, Sœlberg-Wells, Jackson, Allbut, Gowers, Hamilton and others to illuminate with the ophthalmoscope the dawning light through which men were eagerly striving to discover the nature and situation of intra-cranial diseases.

The popular idea that the oculist has, and perchance *needs*, no knowledge of general medicine to successfully treat the eye, is no less false than the, I fear, professional belief that the general practitioner can gain little from the ophthalmoscope. With the herculean task of acquiring a fair knowledge of the structure, working, derangement and repair of the general system, it is not to be expected that even a Hercules could also keep abreast of the information and experience in regard to any special organ. Yet, since the whole is made up of all its parts, and the parts are interdependent and dependent upon the whole, any approach to a comprehension of the whole organic system must involve some familiarity with every part. No more striking illustration of this can be cited than the evidence of cerebral lesions that may be elicited by an ophthalmoscopic examination of the intra-ocular end of the optic nerve, called the optic disc or papilla. In the pre-ophthalmoscopic period (prior to the great invention of Helmholtz in 1851), there certainly had been something done to trace the connection between amaurosis and brain disease in atrophy of the optic nerve, but a meningeal inflammation propagating itself along the optic nerve as a descending neuritis had not been thought of; and the cause is not far to seek, for in brain disease, accompanied by very considerable optic neuritis, the sight may be perfect, hence disease of the optic nerve was unsuspected. It thus happens that many patients having symptoms of brain dis-

ease, with some lesion of the optic nerve, have, on account of perfect vision, no disposition to consult an oculist, and while so few men in general practice use the ophthalmoscope, one most important sign of encephalic disease will be frequently overlooked. As the optic papilla is the chief intra-ocular part concerned, and furnishes the most palpable and constant information in intra-cranial disease, let us briefly consider the anatomy of the optic nerves. Under the name of the optic tracts, they take their origin just in front of the cerebellum, in the tubercula quadrigemina or optic lobes to which visual perception is attributed, also in the corpora geniculata; they then pass forward along the under surfaces of the crura cerebri, taking on their way some fibres of origin from the optic thalami and reaching the olivary process of the sphenoid, just under the floor of the third ventricle, unite to form the optic commissure or chiasma. The distribution of the fibres of the chiasma sometimes enables us to fix the site of lesions interfering with vision, e. g., the right tract supplying optic fibres to right half of each retina, and the left tract fibres to the left half of each.

As the optic nerves pass forward from the chiasma they receive at the optic foramina a loose sheath, from the dura mater, which becomes lost in the sclera. The nerve is about $\frac{1}{8}$ of an inch in diameter, before it perforates the cribriform plate of the sclera, and contracts to $\frac{3}{4}$ of this diameter at its intra-ocular end, where it spreads out to form the internal layer of the retina. The nerve is also invested by a second close fitting inner sheath, which is continuous with the pia mater, and sends processes between the nervules of the optic bundle. Between this inner and the outer sheath is the vaginal space of Schwalbe, which is continuous posteriorly with the arachnoid space of the brain, and anteriorly within the posterior part of the sclerotic opening, is by some, said to be continuous with lymphatic spaces in the substance of the optic nerve, by others to be closed. Evidently the vaginal space may become distended by sub-arachnoid fluid, for there is *not* a reflection of the arachnoid at the optic foramen to prevent it. As the internal carotid artery emerges from the inner wall of the cavernous sinus, it gives off the ophthalmic artery, which after passing through the optic foramen gives off the arteria centralis retina; this enters the optic nerve, runs forward in its sub-

stance, perforates its disc near its centre, then subdivides and radiates to its distribution in the retina. The retinal venules, converging, unite to form the two venæ centrales, which pass out through the disc near the artery and in the nerve trunk unite to empty into the ophthalmic vein, which passes through the sphenoidal fissure and empties into the cavernous sinus.

Further and most important to the subject, the blood supply to the optic nerve and disc is according to Galezowski, independent of the ophthalmic artery (which more particularly supplies the retina) being part of the vascular system of the brain. He describes a posterior optic artery to the testes; a middle optic from the choroid plexus to the geniculata; and anterior optic from the middle cerebral to the optic tract; and capillary branches from the pia mater to the chiasma.

The appearance of the optic disc, the first time I discovered it with the eye mirror and a $2\frac{1}{2}$ inch lens, struck me as resembling a cream-rose full moon, about the size of a large split pea, rising in a pink sky of surrounding choroid, which, by its contrasting color, gave a well-defined sharp border to the disc. The retinal vessels radiate irregularly from the nasal side of the centre of the disc, the larger branches, passing upward and downward, completely avoiding the temporal sides.

The changes in the disc produced by cerebral and spinal diseases are—*Congestion, Inflammation, and Atrophy*. The congestion of the disc may be a simple hyperæmia; if attended by œdema, it is the stanungs papilla of VonGraefe, the "choked disc" of Allbut, or ischæmia of the disc, or congestion papilla. In intra-ocular neuritis, or, as it is called, papillitis, the papilla alone may be affected; in other cases, the neuritis occupies the length of the optic nerve, as has been shown in autopsies by Allbut, Hulke, Virchow, etc. Atrophy of the disc may be primary or simple, or it may be consecutive as a consequence of papillitis. Authorities are in accord as to the great frequency of *optic neuritis* in intra-cranial disease. Annuske and Reich collected 88 cases of intra-cranial growths with ophthalmoscopic examinations and autopsies, and found ophthalmic changes in 75 per cent. By common consent, the most frequent cause of optic neuritis is intra-cranial tumor; next to it, meningitis. Cerebral abscess and softening are occasional causes, and hæmorrhage a very rare one. Tumor is nearly

always attended by optic neuritis (Hughlings-Jackson). Allbut writes: "My own opinion certainly is that changes either of a congestive, neuritic or atrophic character may be found in the discs at some time or other in the course of almost all cases of intra-cranial tumor." "From my own experience (Gowers) I should say that neuritis occurs in about four-fifths of the cases of intra-cranial growths." Encephalic disease may also manifest itself through paresis or paralysis of the ocular muscles, producing squint and double vision. That optic neuritis may possess diagnostic significance of brain lesion, the extra-cranial causes which produce, or are associated with, neuritis must be borne in mind, such as albuminuria, lead poisoning, the exanthemata, suppression of the menses, pernicious anæmia, loss of blood, exhausting diseases, neuralgia of fifth nerve, in rare cases secondary syphilis (Nettleship), and tumors in the orbit. It may occur idiopathically without obvious cause (Gowers). Simple *congestion* or *hyperæmia* of the papilla very commonly precedes atrophy. It is sometimes the expression of a state of congestion and degeneration of the whole optic nerve, but sometimes apparently limited to the disc (Gowers). It frequently is the first stage of tobacco amaurosis, the last being atrophy.

Choked disc, or hyperæmia with œdema, is the first stage of neuritis, and frequently associated with it. Its principal causes are said to be the same as produce neuritis, viz., tumors, meningitis, and hydrocephalus.

Primary atrophy of the disc is more frequently associated with locomotor ataxy than with any other disease. Often I have seen it occur without assignable cause, and once from a blow on the eye. Galezowski gives a table of 166 cases, embracing the causes of primary and consecutive atrophy.

Cerebral causes.....	40
Locomotor Ataxy.....	33
Traumatic.....	22
Alcoholism.....	13
Syphilis.....	12
Other causes.....	46

—166

Allbut is of opinion that primary atrophy is generally due to mischief at the base (tumor), or to ventricular dropsy, which may compress and sever the nerves or tracts at some point in their course. From the evidence of Messrs. Critchett, Wordsworth and Hutchinson and others, and my own experience, I think that tobacco in excess will pro-

duce atrophy of the discs, though many deny it. To be able to distinguish between a *normal* appearance of the papilla and the inception of a pathological, much experience is required, and the attempt will soon prove the saying, "Pathology is but the shady side of physiology." A full-blown neuritis may be quite palpable to an amateur ophthalmoscopist, while an expert may be unable to decide as to a slight hyperæmia or say whether a disc is pale from incipient atrophy or decoloration. *The* indication of hyperæmia is an abnormal redness, which has a tendency to blur the edge of the disc. Comparing the eyes may give some help, and noting whether the redness increases from time to time. The signs of neuritis and choked disc are similar, and vary with the stage. In the first stage the disc is less swollen and red, and the edge, though blurred, may be still distinguished, while in intense papillitis the color of the disc is so blended with that of the surrounding choroid that it can be frequently distinguished only as the point of convergence of the retinal vessels. Impairment or loss of sight is the chief symptom in intense neuritis, though there may be marked neuritis without any impairment of sight. Pain in the eye is rare. Vision usually begins to fail first in one eye, and sight may fail completely in a few days or decrease very slowly. Restriction of the visual field is common, and color-vision may be defective. The neuritis of tumor is double, rarely unilateral. Dr. Jackson has pointed out that the neuritis often coincides in its onset with an obvious increase in the other symptoms of the cerebral tumor. It appears that neuritis is usually a late production of tumor. Dr. Jackson recorded one case in which a man had had symptoms of cerebral tumor for nine years; during the last three years his discs had been repeatedly examined and found normal; six weeks before death, neuritis was discovered.

The signs of atrophy are pallor and later depression of the disc, with shrinking or absence of the capillaries. When the atrophy is marked there is diminished vision, nearly always more considerable in one eye than the other. There is a concentric irregular marginal limitation of the field of vision. Frequently there is a defect of color-vision.

The relation of papillitis to intra-cranial disease is still a vexed question. I shall refer briefly to the principal theories. VonGraefe gave the first in 1859. He distinguished two cases. In one the

change in the disc (neuritis) was slight, with a tendency to invade the adjacent retina. In this case there was meningitis, and inflammation of the nerve trunk was found by Virchow, which inflammation was assumed to have been communicated to the optic nerve from the inflamed meninges, and to have descended the nerve to the eye. This Von Graefe designated, "descending neuritis." In other cases of considerable swelling, hæmorrhages and vascular distension of the papilla (stanungs papilla), accompanied by cerebral tumor, no signs of inflammation were perceptible on naked examination of the trunk of the optic nerve. This condition of the papilla he attributed to increased intra-cranial pressure, which obstructed the return of blood from the eye through the optic vein by compressing the cavernous sinus.

The theories of Schmidt and Manz are largely accepted in Germany. Manz showed that distension of the vaginal space around the optic nerve is frequent in neuritis, and believed the extension to be due to intra-cranial pressure or increase of sub-arachnoid fluid. Further, he found that injections into the subarachnoid space, of animals, passed into the sheath and caused fulness of the retinal veins, and in some cases transient redness and swelling of the papilla. Schmidt demonstrated that a colored liquid injected into the sheath passed into the lymph space of the nerve at the lamina cribrosa, and suggested that neuritis is produced by the irritation of the liquid passing into the lymph spaces.

A theory was put forward by Schneller, in 1860, extended by Dr. Hughlings-Jackson in 1863, supported by Brown-Sequard, and was formulated by Benedikt in 1868. It assumes that the tumor acts as a source of irritation, which has a reflex influence through the vaso-motor nerve upon the optic disc, leading to its inflammation. Of these theories, that which accounts for changes in the disc by inflammation of the meninges propagated along the nerve trunk, appears the best supported by the frequent determination upon *post mortem* and microscopical examinations of the conditions upon which the theory is based. Although neuritis may occur in tumor of any size or kind, in any part of the brain, it is rare in tumor of the convexity, while it is common in that of the base and most common in that of the anterior lobes (Russell-Reynolds).

Again, *meningitis* limited to the convexity is *seldom* accompanied by intra-ocular changes, while *basilar meningitis* is *usually* attended by neuritis. In many cases of tumor, a local meningitis in the vicinity of the growth and accompanied by inflammation of the optic tract has been found. Now the proximity of this *inflammation* of the basilar meninges (whether independent or the result of tumor) to the optic tracts makes its communication to the tracts highly probable, and the fact of the so common association of inflammation of the meninges and tract increases the high probability to a seeming certainty.

A case of Mr. Hutchinson's in which no distension of the retinal veins was produced, although the cavernous sinus was completely obliterated by the pressure of an aneurism, seems to go far towards destroying the theory of obstructed blood return from the eye by pressure on the sinus. The vaso-motor theory is rejected by Leber and a numerous following, on the ground that it involves a mechanism not known to exist and a complex relation of the optic nerve to all parts of the brain difficult to conceive.

I shall now give you condensed reports of a head case and one of spinal disease, with defective sight, under my care in the St. John General Hospital, and a head case with eye disease in the general wards:—

Fan. 31st, 1881.—P. G., æt. 43, says his sight began to fail after cutting his thumb and profuse bleeding ten years ago, and since then could see to read only very large type. Sight has been the same for past three years as at present.

Vis. Right Eye = $\frac{5}{8}$ = No. 15 Jæger 8";

Vis. Left Eye = $\frac{5}{8}$ = No. 18 Jæger 8"; not improved with glasses.

There is gray atrophy of both discs. Has smoked four to five pipes a day for past 23 years, and drank pretty hard for years up to four years ago, but scarcely any since. Is very nervous. Wakes in the morning with headache and sickness. Memory bad for two years past. Gait unsteady for two or three years. Walks as though he had taken a little too much. Diagnosis—Locomotor ataxy and atrophy of discs. Treatment—Stop smoking. R—Strych. sulph., gr. $\frac{1}{4}$; hypodermically and increase gradually.

March 4th.—Is getting gr. $\frac{1}{4}$ strychn. Vision,

right and left, increased to nearly normal. = $\frac{1}{4}$.
 R—Strych. sulph., gr. $\frac{1}{4}$. Strych. increased the staggering gait. R—Croton chloral, grs. v., and return to strychn. sulph., gr. $\frac{1}{4}$. 15th.—Discontinue strychn. sulph. R—Arg. nit., gr. $\frac{1}{8}$, and increase to gr. $\frac{1}{2}$, taken daily by stomach.

April 8th.—Vis. right eye = $\frac{1}{4}$. Discharged.

July 19th, 1878.—Mary Smith, æt. 20, single, lost the sight of right eye completely and suddenly three weeks ago. Pain came on in the brow the same day, before the sight failed, and has kept her awake most of the time since. Day before yesterday, lost the sight of left eye in the same way as the right. Has no perception of light. Pupils react very slowly to light. Has *white atrophy of both discs*. Patient very nervous, and has slight choreic movements. History—For two weeks last summer had constant pain in the top of the head, and vomited three or four times daily; denies syphilis. Family history—Lost three brothers and one sister in their first year. Treatment—Potass. iodid. grs. x., Tr. cinch. \mathfrak{z} j., t. d.

July 24th.—No pain in head since yesterday. Pupils widely dilated and immovable; no perception of light.

Aug. 1st.—Patient drew attention to two syphilitic ulcers on calf of leg. Diagnosis—Syphiloma at the base, implicating optic nerves. 8th.—Vis. left eye: seeing position of window. Vis. right eye, *nil*. Stop Pot. iodid. R—Hyd. perchl. gr. $\frac{1}{8}$; Am. mur. grs. v.; Tr. nucis vom. \mathfrak{m} x.; t. d. 20th.—R—Ung. hyd. \mathfrak{z} ss., rubbed into axilla and thigh on alternate days; Pil. hyd. grs. ii. twice daily.

Oct. 12th.—No ptyalism. R—Pot. iodid. grs. v.; Sp. am. ar. \mathfrak{z} j.; Tr. cinch. \mathfrak{z} j.; t. d. Stop other treatment. 22nd.—Mouth very sore and mercurial fetor. Discontinue Potass. iodid. R—Pot. chlor.

Nov. 7th.—Vis. right eye, *nil*; left eye, counting fingers. 13th.—Repeat Pot. iodid. grs. x., t. d. 25th.—Vis. right eye, motion of fingers; vis. left eye, fingers, two feet, and sees to get about well. Left eye diverges when right eye fixes for near point. When the eyes are at rest, both look to the left.

Dec. 21st, '78, to April 9th, '79.—Patient had Strychn. sulph., hypodermically, gr. $\frac{1}{4}$ to gr. $\frac{1}{8}$, when gait was made unsteady, then gradually reduced to gr. $\frac{1}{8}$. Had tenotomy of the right internal and left external recti muscles. The hands are now

quiet, and patient much less nervous. Vis. right eye, perception of light; vis. left eye, $\frac{1}{8}$. Direction of eyes much improved, but still look slightly to left. Discharged; to take Hyd. perchl. gr. $\frac{1}{8}$, Strychn. sulph. gr. $\frac{1}{8}$; t. d.

June 5th, 1881.—J. B. Hansell, æt. 53, admitted into the general ward a few days ago. He is a muscular looking man, 4 ft. 10 in. high, weight about 130 lbs. Says for the past year he has had a very dizzy head and will fall any day in the road, soon gets up and walks off. The fall was always preceded by giddiness. Six months ago began to vomit about every second day, and soon after vomited every morning if he laid in bed up to 7 o'clock. When he rose earlier the vomiting did not come on. This continued up to last week, since when he has not vomited. During the past month, has had a pretty severe pain from the forehead to the back of the head, lasting an hour or two every day and has not seen to read. Memory failing for past year. Pulse 68, small and rather weak; skin normal temp. to touch; appetite good; bowels costive; sleeps well; whistles feebly; grasp of hands weak; flexion of forearms and legs strong; gait very unsteady and seems in constant danger of falling; patellar reflex normal; no lightning pains; urine normal; right ear hears the watch only at $\frac{1}{2}$ in., ordinary loud voice at 10 ft.; left ear hears the watch only at contact, or ordinary voice at 4 ft.; speech, broken Dutch-English, probably normal; smell normal; pupils slightly dilated by atropine; vis. right eye, counting fingers, 2 ft.; vis. left eye, counting fingers, 12 ft.; ophthalmoscopic examination shows intense optic neuritis, with hæmorrhages and infiltration of retina disc.

June 25th.—Right pupil half the size of left, left pupil a little smaller than an average pupil; right pupil reacts very slowly to light, left pupil reacts more but imperfectly; percussion on the temples hurts a little, on the forehead less; head 24 in. in circumference.

July 15th.—Last evening and this morning refused to take his medicine, saying there was something in it to poison him. Diagnosis—Tumor of the cerebellum, involving the tubercula quadrigemina.

July 24th.—The patient was discharged at his own request.

Gentlemen, your patience must not be further

tried ; I shall only add, if on account of any words of mine the ophthalmoscope shall aid you in the diagnosis of so obscure a class of diseases as those of the central nervous system, I shall think your time not wasted and myself more than repaid for this paper.*

SULPHUROUS ACID IN THE TREATMENT OF DIPHTHERIA.

BY H. P. YEOMANS, M.D., MOUNT FOREST, ONT.

An epidemic of diphtheria commenced in Mount Forest and surrounding country about the 15th of November, 1878. During the first three or four weeks all the cases yielded to treatment, and recovery began on the third or fourth day. The following treatment was pursued. A mixture of sulphurous acid and glycerine, equal parts, was administered in doses of 10 or 20 drops every hour or half hour. Also a solution of tincture of iron and chlorate of potash (to which in some instances quinine was added) was given every three or four hours.

The temperature of the room was uniformly kept at 80°, and the air rendered moist by evaporating water continuously. December 15th, the character of the symptoms suddenly changed to those of diphtheritic croup ; at the same time there was a fall of snow and the atmosphere became colder. From the 15th to the 28th of December these croupy symptoms appeared in nearly every case. They were treated by inhalations of carbolic acid and iodine, with warm vapor. During these thirteen days eight very severe cases were treated, one of which died. In the case that ended fatally, the temperature of the room which the patient occupied was not equably maintained, the thermometer ranging by irregular variations from 60° to 85°, owing to great carelessness on the part of the attendants. In two cases emetics were administered, with apparent relief for a few hours ; one of these was a boy of 12 years of age, possessed of a weak nervous temperament and a constitutional predisposition to scrofulous affections. The croupy symptoms continued in this case from the morning of the 20th until the morning of the 23rd, after which they disappeared. The most scrupulous care was exercised by those having charge of this patient, in administering reme-

dies, nourishment and in maintaining a uniform temperature. The sanitary condition of the room occupied by the patient was also excellent in every respect. Convalescence was fairly commenced in ten days after the attack began.

In the case of a little girl 10 years of age, some peculiar symptoms presented themselves. The diphtheritic membrane covered the uvula, tonsils, fauces, and extended over the roof of the mouth into the nasal passages, and some patches also appeared on the lips. The tonsils were so swollen as to render deglutition impossible. This state of affairs continued four days. During this time the bowels were obstinately constipated and enemata acted very inefficiently. On the eighth day the membrane became loose on the roof of the mouth and gradually peeled off, leaving an ulcerated surface exposed. This ulcerated surface was extremely sensitive, and every effort made to take cold water or nourishment caused intense pain. The pain extended to the ears ; sometimes it commenced suddenly and assumed a neuralgic character, without any apparent exciting cause, lasting for an hour or two, after which it would suddenly cease entirely. This intense pain continued at irregular intervals for five days and then suddenly disappeared. In this case the patient determinedly resisted all attempts to administer any remedies, and resisted so successfully that very little could be done to check the disease.

The treatment pursued during this epidemic in 1878 has been strictly adhered to ever since, with the most gratifying results. Diphtheria is very prevalent here during the fall and winter months. The drainage of the town is imperfect, which may account for its prevalence. Unfortunately, the centre of the business portion is lower than the surrounding parts, and consequently all the water flows down the gutters to the central part. From this point it is conveyed by covered drains across two blocks and allowed to remain in a half stagnant condition, until evaporation and soakage into the loose soil disposes of it. This part of the town is now being built up with residences.

As diphtheria is very common here, we have had ample opportunities to test the value of the treatment I have mentioned. It has succeeded so well that I feel it my duty to unhesitatingly recommend it to all who feel disposed to give it a trial. The objection to using a brush in applying any

* This article has also been published in the Can. Med. and Surg. Jour.

remedy to the tonsils, is that the local application is unpleasant to children, difficult for the attendants to perform properly, and the brushing—even with a camel's hair pencil—irritates and sometimes causes an abrasion of the tender or partially ulcerated surface attacked by the diphtheritic membrane. These abrasions are well known to be the favorite soil on which these microscopical vegetable parasites delight to fasten, and on which they flourish. Therefore any remedy which can be applied efficiently without using a brush, is best. Glycerine is the best vehicle in which to administer sulphurous acid, because it is soothing and forms a protective covering over the tender diseased surface of the throat. When given in 10 or 20 drop doses, it retains the sulphurous acid in the fauces, so that its specific effects may be obtained. This mixture frequently repeated and given without any water, is constantly retained and acting remedially in the throat. As sulphurous acid is very volatile, it penetrates the nasal passages, operating there also quite as efficiently. I have only met with one case in which a child refused to take it, whose case I have reported with neuralgic symptoms. Numbers of cases have been treated here with no other remedy, and when any other has been used in my practice, it is the potassium chlorate and tincture of iron mixture, to which I alluded before.

PHENYLE AS A DISINFECTANT.

BY W. S. CHRISTOE, M.D., FLESHERTON, ONT.

About a year has transpired, since my attention was drawn to this substance, by R. Wightman, Esq., druggist, of Owen Sound, and who is one of the Canadian agents for it. It has undoubted qualities as a disinfectant, quite as good if not superior to carbolic acid for general purposes, requiring a smaller quantity to produce better results. Dr. C. Barnhart also testified to its undoubted properties as a therapeutic agent in malignant diseases, such as diphtheria and scarlatina maligna, using it as a gargle. I was induced to try it in extensive wounds and as a general disinfectant, and have not been disappointed. Here are a few cases in point:—

J. T., æt. about 50, who several years ago was badly frost-bitten in the foot, so much so, that from time to time the phalanges of the toes were dissected out, the other bones of the foot became

diseased—it was certainly in a very bad condition, causing him continuous pain, with large quantities of morbid looking pus escaping. Septicæmia was evidently doing its work, for he became constitutionally sick. The question of amputation had to be decided; the patient urged it at once, but I could see nothing but disaster unless I succeeded in rallying his system. I suggested delay and applied myself diligently to build him up; partial success was the result. At length the case became so urgent, the foot was amputated, and sufficiently above the ankle to secure a good flap from the anterior part of the leg. Everything appeared satisfactory, the shock was not so great as expected, and I began to flatter myself with the success achieved. But it didn't stay in that condition; for although I had taken the precaution to allow a proportionately long flap for the emaciated leg, I began to fear I would soon have none at all; it sloughed extensively and was exceedingly unhealthy. At this point, phenyle was used, one tablespoonful to the pint of cold water, forming a milky solution. This was applied unremittingly, and with constitutional treatment, in a brief period healthy pus manifested itself, so that after all the contretemps, a good stump was the result; my patient made a rapid and successful recovery.

Another case was a child with necrosed bone. Inflammation of the tibia took place two years ago, and what occurs sometimes, and is curious, occurred in this case: another bone, the clavicle, was inflamed at the same time. Operation was desired and was performed by myself and an assistant. After applying Esmarch's bandage, an incision was made the whole length of the shaft, and the new growth encasing the old bone was chipped out the whole length of the incision, sufficiently to allow the removal of the dead bone. In this case I also used phenyle and found it equally efficacious for a good recovery.

A few cases of minor operations, such as compound fracture of finger and amputation thereof, are the sum of my experiments with it. In all, however, I placed every confidence in it, and was not disappointed. It deserves an extensive trial.

“Those who in the study of the sciences do not consult nature, but authors, are not the children of nature; they are only her grandchildren.”—*Da Vinci*.

Reports of Societies.

HURON MEDICAL ASSOCIATION.

The regular quarterly meeting of the Huron Medical Association was held in Wingham on the 4th of October, Dr. Sloan, president, in the chair. The following members were present.—Drs. Sloan, Holmes, Worthington, Tamblyn, Bethune, Graham, McDonald, Gillies, Young, Duncan, Mackid, Hurlburt and Stewart.

Dr. Mackid showed a woman, æt. 65, who has an abdominal tumor, occupying a great portion of the right abdominal cavity. She first noticed it 4 months previously. Its true nature was not decided on.

Drs. Stewart and Hurlburt showed the following cases:—

1. A case of *Locomotor Ataxia*. The patient is a man, æt. 43. He was first seen on the 5th of September, when he complained of pains in his legs, thighs, arms and belly, and of an inability to walk in the dark. He had gonorrhœa 20 years ago, but he never had syphilis. The pains first troubled him 12 years ago, while he was working in the lumber woods of Wisconsin. His occupation was that of a driver, and he had to sit for hours on the cold logs, and it is to this cause that he attributes his trouble. The pains have been gradually getting severer. For nine months he has been unable to work. The first difficulty in walking was noticed five years ago.

Present state.—There is no loss of motion. The sensation of the lower extremities and that part of the left arm supplied by the median nerve is markedly delayed. He requires from six to eight seconds to appreciate a painful sensation in these parts. Simple brushing of the hair of the legs causes more pain than severe pinching. He is able to tell a hot from a cold application. When his eyes are shut, he is unable to touch his nose with either index finger. Neither can he point correctly to the position of his feet. There is complete absence of the knee reflex. There is no ankle clonus. He says that he is able to retain his urine for 48 hours, without causing him any inconvenience. When he attempts to empty his bladder, he is compelled to strain. Bowels move about once in three days regularly. The pupils contract to light slowly. The reaction to accommodation is normal. There

is no contraction of pupils, squinting, or loss of color vision. There is distinct atrophy of both discs. Vision is fair. He at times complains of severe pains in the stomach. He says that he has a feeling as if 100 lbs. weight was compressing his back. He is unable to stand or walk with his eyes closed.

A full clinical account of this case, with a detailed description of the effects of stretching the right sciatic, which operation was performed since the meeting of the Association, will be reserved for a future occasion.

2. A case of probable tumor of the left cerebral motor region.

The patient, a girl, æt. 14½ years, was first seen in January, 1880, when she complained of loss of vision in the left eye and headache. Family and personal history good. No syphilitic or tubercular history can be made out. Father and mother both in good health. She was quite well up to three years ago, when she was seized with headache—confined to the left parietal region—and vomiting. After these symptoms had been present for about three weeks, she noticed that she had lost completely the sight of the left eye. The headache and vomiting left shortly afterwards, but have recurred frequently since. The following was her condition in January, 1880:—She is medium sized, spare, and listless looking; cheeks flush frequently. The pulse is 90 and temp. normal. There is nothing abnormal to be discovered about the heart, lungs, liver, or spleen. Her appetite is poor, and the bowels are costive. Abdomen retracted. Marked tache cerebrale. *Left eye*—Slight upward and internal squint. The arteries of the fundus are small and have no white lines accompanying them. The disc is greyish white, small and cupped. *Right eye*—The disc is larger and of the normal color, but there is some cupping. Vessels small. Fundus otherwise normal. The media are normal in both eyes. The sight of the right eye is good. Left pupil is dilated, right is normal.

From this time (Jan. '80), for a period of about four months, she took pot. iodid. grs. xxx. daily. Shortly after commencing the iodide, the headache disappeared and has not returned. About five months ago, right hemiplegia set in, and at the present time, the right arm is completely useless. She is able to walk, but drags her right leg considerably in doing so. Both hemiplegic limbs are

atrophied. There is no rigidity. The right knee reflex is greatly exaggerated.

Drs. Stewart and Hurlburt also showed the fragments of a phosphatic stone, weighing two ounces, which they removed from the bladder of a girl, æt. 16. The stone had formed around a hairpin which had been introduced 18 months previously.

Dr. Graham, of Brussels, showed a man, 50 years of age, who has apparently recovered from both a psoas and lumbar abscess, depending on disease of the dorsal vertebræ. For several months this patient has been troubled with catarrh of the bladder and bacteruria. The fresh urinary deposit is composed principally of pus cells and bacteria termo. For this condition he has been taking, with great benefit, eucalyptus internally, and injections into the bladder of the disulphate of quinine.

MICHIGAN STATE BOARD OF HEALTH.

(Reported for the Lancet).

The regular quarterly meeting of this Board was held October 11, 1881. An interesting feature was a report by the Secretary relative to work of other State Boards of Health. The Secretary of the Michigan Board desires to continue to receive information from other Boards, by which these reports may be made quarterly.

A report relative to work of local boards of health showed increased activity on the part of local health authorities, in the way of isolating those infected with communicable diseases, and enforcing the law, requiring from householders and physicians notices of such diseases. In one city a physician had been fined \$100 for not reporting cases of diphtheria.

The revised document on the restriction and prevention of Scarlet Fever was adopted, and ordered to be published in English, Dutch, and German. The consideration of this document involved a discussion of the question of recommending health officers to verify diagnoses of reported cases of diseases dangerous to the public health.

A circular, giving general rules for the prevention of diphtheria, scarlet fever, and small-pox, was adopted. Forms were adopted for annual reports by health officers and clerks of local boards of health, and by regular correspondents of the Board.

Dr. Avery, of Greenville, was requested to visit the overflowed district along the Maple River, in Gratiot county, and report to the Board.

Dr. Lyster, of Detroit, read a paper on "Syphilis in its relations to the public health." It dealt with the facts of the frequent communication of the contagium of syphilis, by direct and by indirect means, to innocent persons; also with the serious effects on individuals, and on the offspring of marriages where one of the parents is thus blighted. He believed much might be done toward preventing this loathsome disease, by wise legislation which shall restrict syphilis, and especially by collecting and disseminating among young men and other people, facts relating to the nature and dangers of this disease.

Dr. Kellogg read a paper on the "Relations of Preventable Sickness to Taxation," showing by the reports of the board of correction and charities, the abstracts of reports of county superintendents of the poor, the abstracts of statistical information relating to the insane and the deaf, dumb, and blind, and the Vital Statistics reports, that more than 3,000 persons in Michigan are annually dependent on the State for support to a greater or less extent, in consequence of diseases preventable by the adoption of proper sanitary measures. The cost to the people of the State for the support of these persons is over \$40,000 annually, a portion of which is paid by every tax-payer. This is but a small part of the actual loss to the State. The number of deaths from preventable sickness in 1880 (*estimated* from returns by supervisors and assessors) was 4,585. Placing the value to the State of each human being at the low estimate of \$1,000, the aggregate loss by deaths from preventable sickness is over \$4,500,000. But to this must be added a further loss from sickness which did not terminate fatally. The statistics of the benefit societies of England show that, for every person who dies, two persons (on the average) are sick throughout the year. This indicates a total annual loss of time from preventable illness on the part of more than 9,000 persons, to which should be added the expense of living, etc., certainly more than \$1,000,000. This gives about \$5,666,000 as the total loss to this State from diseases generally conceded to be preventable. These figures are regarded as much too small, because of the few diseases included in this estimate as preventable (though it is generally conceded by sanitarians that at least nine-tenths of all ailments may readily be prevented), and because only sickness and

deaths directly traceable to preventable causes have been included, while a large amount of sickness and many deaths are indirectly due to these causes. It is probable that preventable sickness might justly be charged with an expense to the State of not less than ten million dollars. Estimating the loss in other States in the same ratio to the population, the aggregate loss to the whole United States is not less than three hundred million dollars annually, an amount which would pay the national debt in six years.

Mr. Parker, of Flint, presented a report of the Public Health Section of the American Social Science Association at Saratoga.

The committee on sanitary survey of the State was requested to prepare schedules for the sanitary survey of cities, villages, and townships.

Mr. Parker reported a proposed bill, authorizing all boards of education to exclude from school, persons infected with diphtheria, scarlet fever, or small-pox, or living at houses where any person is infected with one of these diseases.

The Secretary was directed to prepare and issue a weekly bulletin of sickness in Michigan, for such papers and medical journals as will publish it.

Dr. Baker was authorized to procure the services of an architect, in the preparation of a circular on hospitals for communicable diseases.

Dr. Kellogg reported on the subject of criminal abortion. He and Dr. Hazlewood were requested to prepare a circular, designed to collect facts on this subject.

TORONTO MEDICAL SOCIETY.

October 6th. The Society met at 8 o'clock, the president in the chair. The minutes of the last meeting were read and confirmed, and Dr. Robinson proposed as a member of the Society.

Dr. Oldright presented the foetus and placenta taken from a patient supposed to have miscarried about the fifth month. The foetus was of very small size, and the placenta had undergone fatty degeneration; the smallness of the foetus was thought to be due to the fatty condition of the placenta. The amnion was adherent to the body of the foetus. The same gentleman also showed a placenta taken from a case of premature birth, at the seventh month. There had been considerable hæmorrhage prior to the birth of the child, and the placenta presented

on its uterine surface two large clots, which appeared to have been formed at different times. The child was still-born and presented the condition of rigor-mortis; the cause of the separation of the placenta could not be accounted for.

Dr. Burns then related a case of "Pruritus Hæmalis," as described by Dühring. It is a neurosis and attacks principally the arms and thighs, and is a disease of cold weather, hence its name. The treatment is by glycerine, vaseline, and the Turkish bath.—The Society adjourned.

October 27th. The Society met at 8.15 p.m., the president in the chair. The minutes of the last meeting were read and confirmed, after which Dr. Robinson was elected a member of the Society.

Dr. J. S. King showed a pessary which had remained in the vagina for four years. It was bound down on the right side of the uterus by a fibrous band about three-quarters of an inch in width. The pessary was divided and removed.

Dr. Workman mentioned a case of acute mania, occurring in a patient who had an incrustrated pessary in her vagina.

Dr. Cameron exhibited a case of "Paralysis Agitans," affecting the right upper and lower extremities, in a patient æt. 67; the trembling was of three years' duration, and increased upon excitement or voluntary motion. In reply to a question, Dr. Cameron thought that there was no definite or constant pathological change in this disease, but that it was a functional disorder.

Dr. McPhedran then showed a case of albuminuria and dropsy in a boy æt. 18; the disease was of eight weeks' duration. The patient when examined at the Society, presented the following conditions: anæmic and generally œdematous; the abdomen enlarged, partly due to ascites and partly to tympanitis; apex beat of heart under left nipple; splenic enlargement, and slight enlargement of some of the lymphatic glands; urine contained granular and epithelial casts, and the voice was lost beyond a whisper.

Dr. Graham, after describing the hæmacytometer, examined the blood of the patient under consideration, which showed no increase in the white corpuscles, but a diminution in the red ones. Dr. Reeve examined the eyes, and found receding slight optic neuritis and a small hæmorrhage.

The Society adjourned.

Selected Articles.

CLINIC ON INTRA-THORACIC TUMOR, EMPHYEMA, AND BILIARY CALCULI.

FRANCIS DELAFIELD, M.D., N. Y.

GENTLEMEN,—You hear this young man's history—that he is 21 years old, and that for the past 13 or 14 months he has been complaining of pain in the head of a peculiar character. This pain comes on after exertion and after stooping, and he refers it to the frontal region; it is dull and throbbing in character, and is accompanied by a feeling of unnatural fulness in the head and face. It continues for about half an hour, after which time, if he keeps quiet, it disappears. He also complains occasionally of a pain in the left side which is excited by coughing, but which is not severe. He complains, too, of dyspnoea on exertion, and of difficulty in swallowing. He says his face is constantly fuller than it used to be, but he has not observed any particular change in it from month to month. His appetite is good; he seems to be well nourished; he has had no oedema of the feet or of the legs; he sleeps well at night. His main symptoms seem to be his cerebral condition.

You notice that even the little exertion he makes in taking off his shirt changes the color of his face; the color is more livid, the lips are darker, the whole face is suffused and a little swollen from that slight exercise, and as I stand near him I can see that he breathes with a little more difficulty than he did. There is, too, a fulness of the neck, and the veins of the neck are more prominent than they should be. The upper part of his chest and the arms are larger and out of proportion to the rest of the thorax.

You notice that there is a well marked difference between the percussion note on the right and left sides of the chest; there is on the right greater dulness than on the left side, and this dulness extends from the clavicle all the way down until it becomes continuous with the liver dulness. This dulness also exists behind the upper part of the sternum. On the left side the resonance remains fair. The breathing is peculiar over both lungs; it is not like the breathing of people in general; it is louder, and the quality is changed. It is that kind of breathing which exists when something presses upon the trachea or a bronchus—a hard, rude respiration. The voice is a little louder on the left side than on the right. Such are the physical signs in front. The heart sounds are normal. There is a little dulness over the upper part of the right lung behind, as compared with the left, but over the lower part the resonance is good enough. There are also creakings of pleural adhesions over the right lung behind, and to a less extent on the

left side. The voice sound is louder than it should be over both lungs, especially over the upper part, and it is changed in quality, being somewhat of a bronchial character.

Now, what is the matter with this man? "Aneurism." Well, aneurism, of course, would be capable of producing the interference with the venous circulation; it would be capable of causing the difficulty in swallowing; it would be capable of causing the dyspnoea; but it would have to be an aneurism of very large size to give us the diffuse dulness which we have over the whole of the right side of the chest in front, and over the sternum. It is not a circumscribed dulness, but it is a dulness involving the whole of the anterior portion of the right side. So that, although aneurism is quite a proper thing to think of in this case, I think we will have to look farther than that.

"Enlarged bronchial glands." That again would be possible, but when you say enlarged bronchial glands you would have to mean something more than that in order to cover the large sized tumor which is evidently there. There is a form of tumor which begins in the glands, and it may begin in the bronchial glands, which is called lymphadenoma or lymphoma, and which grows to considerable size; but, although it originates in the glands, it does not remain confined to the glands: it grows like a new growth, and infiltrates all the surrounding tissues, and thus forms a tumor of considerable size. In a person of this young man's age, without enlarged glands anywhere else in the body, we would hardly expect to find a simple enlargement of the bronchial glands to form a tumor of so great a size as evidently exists in his thorax. "Pleurisy with adhesions." No; pleurisy with adhesions would not give us the pressure signs which we have here—pressure upon the descending vena cava, upon the oesophagus, and upon the trachea. There can be no question, I think, that there is a tumor in the right side of his thorax; a tumor of considerable size, which began about the centre and then extended upward and downward. The tumor not only gives us dulness in this region, but it also presses upon the oesophagus, upon the trachea, and upon the vena cava, so that it is evidently a tumor beginning about the centre of the thorax to the right side, and the question simply is, what is the character of this tumor? I should think it pretty evident that it is one of two things: a tumor starting in the bronchial glands, or in the pleura. Most of the solid new growths which we find in the thoracic cavity seem to originate in either the lymphatic glands, or in the serous membranes, usually the pleura. The tumors which start in the bronchial glands are usually composed of a structure like that of the original gland; they are made up of a connective tissueroma, containing cells like the cells of the normal lymphatic gland. But they do not grow like a simple benign new growth; there is

first an enlargement of the glands, and then a diffuse infiltration, the new growth extending to, and infiltrating, all the surrounding soft parts, and in that way tumors of very considerable size are sometimes formed. The disease may begin in the thorax and extend to parts around the trachea, so that it may make its appearance in the neck as tumors of considerable size, and indeed the tumors sometimes begin in the neck at the same time that they make their appearance in the thorax, thus developing from the beginning in both the region of the neck and thorax.

The tumors that grow from the pleura have a much more difficult anatomy to analyze. They resemble in their anatomy a good deal the tumors which grow behind the peritoneum; they are difficult to classify. We hardly know, sometimes, whether to put them with the class of carcinoma or with the class of sarcoma. They also reach a considerable size; they may fill up nearly the whole of one side of the thorax. I think it probable, judging from the position of the tumor in this man's case, and from the earliness of the symptoms of pressure upon the vena cava, that the tumor probably did have its origin in the bronchial glands, and has been gradually extending from them ever since.

[Patient sent out]. The prognosis is such a case is altogether bad. The man will evidently die from the disease, but we cannot tell how soon death will take place. In some cases the tumor grows pretty rapidly, and the patient dies within a moderate length of time; in other cases the tumor grows very slowly; the adjacent viscera seem to accommodate themselves to the presence of the tumor to some extent, and it is astonishing how long such patients will continue to live. In the case of this young man it has gone 13 or 14 months, he tells us, and apparently he is not very much worse off now than he was several months ago, so that it is possible for him to continue to live for months, and even years. That will depend partly upon how rapidly the tumor grows, and partly upon how rapidly the pressure symptoms develop. Some of these patients die more especially from pressure upon the trachea; the dyspnoea becomes more and more intense; they have dyspnoea not only on exertion, but they begin to have spasmodic attacks of dyspnoea; an inflammatory process is set up in the trachea which extends to the bronchi, and to the lungs, and they get up a broncho-pneumonia from which they may die. In other cases they die apparently simply from the extreme dyspnoea. In other cases pressure upon the oesophagus may interfere with nutrition, and possibly finally lead to death by exhaustion or starvation. I remember of one such patient dying from strangulation by the lodgment, I think, of a piece of bread in the larynx. He could not swallow it, and died suddenly from that cause.

EMPHYEMA.

This boy, about four years old, was sent here, with an account of his case, by his physician. The physician states that in January, 1879, the child was attacked with pleuro-pneumonia, which went on to become chronic. His physician first saw him in June of that year, when he was still suffering from the physical and rational signs of pneumonia on the left side. It got better, the boy disappeared from his observation until May, 1880. During this time he had been cyanotic; had had dyspnoea; had had fever, sweating and chills. He was aspirated three or four times in June, 1880, and pus was drawn off. In July a free opening was made, but it was difficult to keep it open. In September a counter opening was made in front, and a soft rubber drainage tube was inserted in front and behind, and the pleural cavity freely washed out by the mother with a weak carbolic acid solution. By December, 1880, the child was apparently perfectly well.

We will see, then, what condition his chest is in now. The boy is a pretty stout little fellow now, you observe. The left side is a little smaller than the right, though not much; the chest is pretty nearly symmetrical. The resonance is not quite so good on the left side as on the right; still, there is a fair amount of the pulmonary quality. There is a little dulness; the breathing is also good over the left side, although it is not quite so loud as on the right side. The heart is in its natural position. That, then, is an exceedingly satisfactory termination of a case of empyema, and it shows us what we have occasion quite often to observe, how much less severe a disease empyema is in young children than in adults. Such a recovery from empyema in the adult is a thing we very seldom can hope for, and very seldom get; but in children the prognosis is altogether different. A child may be very sick from empyema, and yet after the pus is removed thoroughly the prognosis is quite good; not only will the fluid be removed from the pleural cavity, and the pleurisy cease, but the lung will expand, and there may, as in this child's case, be no deformity; there may be no retraction of the chest wall. I see no reason why the left side should not, as the child grows up, become as fully expanded as the right, and there remain no apparent deformity except the scars resulting from the operation, to indicate that the child ever had empyema.

BILIARY CALCULI.

This man, gentlemen, says that about two years ago he was taken with a colicky pain about the stomach; that it went away and returned again after six months; and that during the past eight months he has had some pain nearly all the time. The first attack lasted about an hour; the second attack perhaps a shorter time; and during the past eight months he has had pain from time to time, all the

NEW PRINCIPLE FOR THE FAT ASSIMILATION OF HYDROLEINE "HYDRATED OIL."

"HYDROLEINE" may be described as partially digested oil, which will nourish and produce increase in weight, in those cases where oils or fats, not so treated, are difficult or impossible to digest. In CONSUMPTION and other WASTING DISEASES, the most prominent symptom is emaciation, of which the first is the starvation of the fatty tissues of the body, including the brain and nerves. This tendency to emaciation and loss of weight is arrested by the regular use of HYDROLEINE. The ordinary so-called emulsions of Cod Liver Oil and other fats, *whether pancreaticised or not*, merely remain in the form of a coarse mechanical mixture for a short time after agitation. The digestion of oil, having in no sense been artificially produced, still devolves upon those functional powers, the deficiency of which is the most prominent symptoms in these cases.

"A great misconception as to the real characteristics of a true pancreatic emulsion has been entertained by many, and but few appear to have studied the different aspects presented by such an emulsion as is produced on fat by the energetic action of pure soluble pancreatin, as contrasted with the coarse mechanical mixtures of oil or fat and water, which are commonly supposed to represent this function of fermentative digestion.

Some seem to think that if a bottle of oil is shaken up with the compounds sold as the active principle of the pancreas, and a yellowish cloud is diffused for a time through the oil, an emulsion has been obtained. So it has, but not the true pancreatic emulsion, which forms an integral portion of the process by which fats are digested and assimilated. From the unvarying result of many hundred trials with the pure, active principles of healthy pancreatic fluid, taken at the time of digestion, I am perfectly convinced that no valuable result has been attained, unless the emulsion formed is as highly refractive of light as milk. The color may vary, according to the oil or fat used, from a far whiter fluid than the densest milk to the opacity and color of Devonshire cream, but unless at least the equivalent of the density of the best milk is produced in oil, when a third of water is held in suspension, no real pancreatic emulsion has been formed.

The mere mechanical mixture formed by common pancreatin is rarely better or more persistent than may be produced by rubbing up oil or fat with a solution of mucilage, or by a warm application of dissolved gelatin, shaken with oil until it becomes cold.

The first essential towards the digestion of fats or oils in the human body is that it shall assume the state of the very finest and most permanent emulsion, and this is only known to be attained when the oil and water is perfectly opaque, from the minuteness of the globules. This is the first function of the pancreatic emulsifying principle, and by this alone can we be certain that it possesses its proper fermentative activity."—*Prof. Bartlett's Treatise.*

(HYDRATED OIL)

HYDROLEINE

(WATER AND OIL.)

The efficacy of this Preparation is NOT CONFINED to cases of CONSUMPTION, as from its valuable tonic effect on the nervous system, in addition to its special stimulating action on the organs concerned in the production of Fat in the body, it causes marked increase in weight in persons of naturally thin habit, who do not present any evidence of disease.

The principles upon which this discovery is based have been described in a treatise on "THE DIGESTION AND ASSIMILATION OF FATS IN THE HUMAN BODY," by H. C. BARTLETT, PH. D., F.C.S., and the experiments which were made, together with cases illustrating the effect of Hydrated Oil in practice, are concisely stated in a treatise on "CONSUMPTION AND WASTING DISEASES," by G. OVEREND DREWRY, M.D., of London.

In these treatises, the Chemistry and Physiology of the Digestion of Fats and Oils is made clear, not only by the description of a large number of experiments scientifically conducted, but by cases in which the deductions are most fully borne out by the results.

Copies of these valuable works will be sent free on application.

FORMULA OF HYDROLEINE.

Each dose of two teaspoonsful, equal to 120 drops, contains:

Pure Oil.....	80 m (drops.)
Distilled Water.....	35 "
Soluble Pancreatin.....	5 grains.
Soda.....	$\frac{1}{2}$ "
Boric Acid.....	$\frac{1}{4}$ "
Hyocholic Acid.....	1-20 "

DOSE.—Two teaspoonsful alone, or mixed with twice the quality of soft water, to be taken thrice daily with meals.

Unlike the ordinary preparation of Cod-Liver Oil, it produces no unpleasant eructation or sense of nausea, and should be taken in such very much smaller doses, according to the directions, as will insure its complete assimilation: this, at the same time, renders its use economical in the highest degree.

To brain-workers of all classes, Hydrated Oil is invaluable, supplying, as it does, the true brain food. Economical in use—certain in result. Tonic—Digestive and Highly Nutritive. Full particulars sent on application to

HAZEN MORSE,

57 Front Street East, TORONTO

MALTOPEPSYN

(REGISTERED AT OTTAWA)

FORMULA

SACCHARATED PEPSINE (Porci).....	10 Grains
" PANCREATINE.....	5 "
ACID LACTOPHOSPHATE OF LIME.....	5 "
EXSICCATED EXTRACT OF MALT (Equal to one tea- spoonful of liquid extract of Malt.).....	10 "

The new Canadian remedy for Dyspepsia, Indigestion,
Cholera Infantum, Constipation and all Disease
arising from Imperfect Nutrition.

It is also exceedingly valuable as a relief for Vomiting in Pregnancy.

TO THE MEDICAL PROFESSION.

Having been employed in the manufacture of Pepsine, Pancreatine, etc., in the United States for the past seven years, and knowing that nine-tenths of the numerous brands of Pepsine and Combinations thereof, in the market to-day, are almost worthless and inert, and knowing further, that the few really good articles are absurdly high priced—one dollar per ounce and upwards—I have decided to offer to the profession, **Maltopepsyn**, an article unequalled in quality and reasonable in price (fifty cents per two ounce bottle, containing nearly one and one-half ounces of powder).

I will guarantee **Maltopepsyn** to be compounded exactly as per formula and each ingredient to be of the best quality possible to be made, and therefore I claim the following advantages over the ordinary preparations now dispensed, viz:—

First—The Saccharated Pepsine (Porci) is of a quality superior to any in the market, it is perfectly soluble, tasteless, odorless, very active, and, being saccharated, will preserve its qualities for years, while made in any different manner it will not. N.B. Pepsine is very difficult to procure free from Mucous Creatine and the other impurities of the stomach, and is usually sold containing all these hurtful substances, which not only kill its digestive properties but give it a dark brownish color, disagreeable odor and acrid taste. Pure Pepsine should be light colored, nearly odorless and tasteless.

Second—The Pancreatine is fully equal to that made in London, England, the only Pancreatine in the market at all reliable, and that is so high priced (\$3.00 per oz.) as to almost prohibit its use.

Third—The Exsiccated, or dry extract, is a more effective, palatable and convenient preparation of the nutritive article, Malt, than the liquid extracts usually dispensed.

Fourth—The Acid Lactophosphate of lime is carefully purified and of the best quality. Its therapeutic value is too well known to need further comment.

Upon application from any of the Medical Faculty, I will be pleased to forward samples, which will substantiate the claims made for **Maltopepsyn**, and I hope for your assistance in this my endeavour to introduce a good preparation at a low price.

HAZEN MORSE, 57 Front Street East, TORONTO.

MALTOPEPSYN

Combines all the digestive principles that act upon
food, with the nutritive qualities of Extract of Malt and
the brain food of the Acid Phosphates.

PRICE LIST.

Maltopepsyn, (2 oz. bottles, containing nearly 1½ ozs. powder), 50c. per bottle.	
“ “ “ “ “	\$5 00 per dozen.
“ in half pound bottles	\$5 00 per pound.

Less than half the price of any good preparation of Pepsine in the market, and guaranteed to excel the best in the results.

Nearly 2,000 bottles have been sold during the first five months of its introduction, entirely through physicians' prescriptions.

The following is a sample of the great number of testimonials I have received from medical men :-

BRUSSELS, JUNE 28th, 1880.

Hazen Morse, Esq.,

Dear Sir,—I believe Maltopepsyn to be equal, if not superior, to Lactopeptine or Pepsine, in the use of which I have had a very large experience.

Yours, etc.,

WILLIAM GRAHAM, M.D.

CASE ATTENDED BY DR. BURNS, TORONTO, APRIL, 1880.

Child of Mr. Edgell, Toronto, about two years old, suffering from Diarrhoea brought on by indigestion; passed undigested food, etc. Dr. B—— had tried many remedies without giving any relief; finally prescribed Maltopepsyn. After the child had taken six doses, there was marked improvement, and before one-half the bottle was used had entirely recovered.

I will make the same offer to medical men on Maltopepsyn as I do on Hydroleine, viz: I will forward upon application, to physicians only, a full sized bottle of Maltopepsyn upon receipt of twenty-five cents, (half price). This offer only applies to the first bottle.

HAZEN MORSE, 57 Front Street East, TORONTO.

the time, the intervals being sometimes a week or more, and more lately he has had some pain every day. He says he has a sort of premonition of it before it comes on; a dull, heavy feeling, which gradually grows worse, and extends around from the stomach to the back. When the attack of pain is unusually severe he cannot catch his breath, cannot breathe easily. He says that sometimes when these attacks come on he feels sick at the stomach, and vomits some bile, and is then relieved. When I asked him whether he lost flesh and strength, he replies that he dieted himself for a while, hoping thus to relieve himself of this pain, but it did not, and he went back to hearty meals again; and while dieting himself he lost some in flesh. Aside from that it has not seemed to affect his general condition particularly. His business is that of a book-seller, and he has been able to attend to it until the past three weeks. Neither he nor his friends it seems have noticed any yellowness of the skin or conjunctiva. His bowels are regular, and so far as he knows his stools present a natural appearance. He has no difficulty in passing his water, and it presents a normal appearance. The only difficulty, then, of which he complains, is this pain, which has existed for some time, and which seems to interfere a good deal with his comfort.

The contour of the abdomen, you will notice, is normal, and physical examination is negative. The only point which I do not feel sure about in his history is, whether he has or not really been jaundiced. It is very difficult, sometimes, to be sure on that point, for slight degrees of jaundice very often escape observation.

The question, then is, what is the cause of the pain which he has had? Pain of this kind, and occurring in this way, and without any more symptoms than this man has given, is usually to be referred to the biliary passages; we usually suppose that it is due to the passage of biliary calculi, it is not always easy to understand what is the relation between the passage of the biliary calculi and the pain. If each attack of pain were due to the passage of a calculus through the whole length of the bile duct into the duodenum, we should expect that it would be attended by obstructive jaundice, but in many of these cases we find that this is not so; that either there is no jaundice at all, or that the jaundice is very slight, and occurs only in some attacks and not in others. We have, therefore, to suppose either that the calculi are small or that they pass through the duct without any great difficulty into the duodenum, although they do produce pain. Another supposition which we can make is, that there are a number of calculi in the gall bladder, and that from time to time one of these calculi engages in the cystic duct, does not pass through into the common duct, but falls back again into the gall bladder. This of course would be capable

of producing pain without producing jaundice. It is quite common in these cases for the pain to be relieved by vomiting, as in this man's case. Many patients suffer much more severe pain than this man seems to suffer, or at any rate they make more fuss about it; and you can frequently relieve them of a given attack of pain by giving them some simple emetic which shall at once produce vomiting. It seems probable that the muscular effort which is made in vomiting causes the calculus to fall back from its lodgment in the duct into the gall bladder, and thus pain is relieved. We have to admit however, that our knowledge on this point is quite uncertain. It is very seldom that we have an opportunity to make an autopsy on persons troubled with this affection, for the rule is that they recover, and that they recover altogether after a longer or shorter time. Occasionally, however, a person suffering in this way dies from some other disease, and an autopsy is made. I have seen but two, and in both of these there was no change in the gall ducts, but there were a number of calculi of different sizes in the gall bladder. This would make it probable that the pain in these cases is caused by a calculus becoming engaged in the duct, and on falling back into the bladder relief is experienced.

In the treatment of these cases, two objects must be kept in view: in the first place, to stop the attacks of pain when they occur; to render their duration as short as possible; and, in the second place, to try to get rid of the attacks altogether. The induction of vomiting has always appeared to me to be the promptest and easiest way to get rid of a given attack of pain, especially if the patient, as is often the case, vomit easily, without great effort. The simpler the emetic that will produce the effect, the better. In some cases simply a tumblerful of hot water will do; in other cases vomiting can be excited simply by passing the finger down the pharynx; in others you can use mustard and warm water, and so on.

Then, with a view to getting rid of the attacks of pain, I do not know that we can do any better than to put the patients upon the persistent use of soda, or some alkali, which they should take in considerable quantities, and for a considerable length of time.—*Nashville Jour. of Med.*, Oct., '81.

CASES IN HOSPITAL PRACTICE.

A CLINIC BY AUSTIN FLINT, M.D.

Emphysema.

This patient's name is Thomas S., he is sixty-three years of age; pursues the business of peddling; was admitted on the eighth of this month. Please note this fact, gentlemen, that he has had more

or less cough since his childhood. About eighteen months ago he became much worse. Suffering for want of breath, and this difficulty has been increasing steadily, he is now unable to take any kind of active exercise without suffering from marked dyspnoea. The cough has been violent and paroxysmal. The paroxysms of coughing are accompanied with congestion of the face, and frothy sputa. The appetite is poor, and he has lost a good deal in weight. He complains, then, of cough, dyspnoea, loss of appetite, and impairment of strength.

Well, here, gentlemen, are good data for forming a presumptive opinion, but, if I ever lead you to do that, it is simply for a kind of discipline, for it is not a good plan to pursue in the examination of patients. We should try to avoid forming any definite opinion in diagnosis until we get all the facts. But here the history is quite a characteristic one, and the diagnosis will not be difficult.

This is a case I have been looking for for some time. It is the first we have had this session. I call your attention to the appearance of the chest. Writers are accustomed to speak of the barrel-shaped chest. It is not a bad simile. You see at once what you have here, a projection of the anterior wall of the chest, which is not natural. We do not find it unless we meet with a case where pulmonary emphysema began early in life and continued.

I call your attention next to the manner of breathing. In the first place, you see that, while lying perfectly quiet, as he is now, there is labor in breathing. He does not breathe easily, comfortably. Then observe that the upper part of the chest remains quiet while he breathes, that what movement does take place takes place at the lower part of the chest and at the epigastrium. During inspiration the lower part of the chest is drawn inward, just the reverse of what should occur. You see, when he takes a deep inspiration, the chest wall is lifted up like the shell of a tortoise, as it were one solid bony case, and the epigastrium is drawn in. These are characteristic visible signs of emphysema, with sufficient dilatation of the lungs to cause this deformity of the chest. Should he have a fit of coughing before leaving the amphitheatre, you will see that it is spasmodic, as stated in the history; one cough succeeding another too rapidly for full inspiration, so that the patient gets out of breath and suffers very much from dyspnoea, the face and neck becoming congested and swollen, and the proiabia not unfrequently becoming cyanosed. With the spasmodic paroxysms of coughing there is usually expectoration, which contains perhaps some mucus, but a good deal of serosity. This serosity contains air bubbles in abundance, so that it looks like soap-suds.

I will not dwell long on the signs obtained by percussion and auscultation, as we have considered them before. They can be obtained in cases where there is not as much deformity of the chest as exists here. You observe that his chest is dilated beyond the utmost limits of forced inspiration in health. That is an important fact as bearing on the mechanism of emphysema. It shows conclusively that in the production of emphysema, such as we have here, something more is required than the collapse of certain pulmonary lobules and the expansion of others to fill the space.

Pulmonary resonance is increased, vesiculo-tympanic and higher in pitch, especially as we ascend. The tympanic quality and pitch is a little more marked on the right, showing that here is an illustration of the rule that the upper lobe of the left lung becomes emphysematous to a greater degree than that of the right. A reason for this may be that in violent fits of coughing and strains upon the lungs from his labor, the left upper lobe is more compressed than the right in violent inspiratory acts, because the liver prevents so great force being exerted upon the right lobe by the inward movement at the lower part of the chest and at the epigastrium. There is feeble respiratory murmur on both sides, marked on the left side, because there is more emphysema. There is short inspiration and prolonged expiration, but this prolonged expiratory sound has the same quality and pitch as the expiratory sound of health. Please bear in mind, viz., that although there is prolonged expiration it does not differ in pitch and quality from that in health, and do not examine for bronchial or broncho-vesicular expiration, for where these exist there is a rise in pitch, and a tubular quality.

The heart is pushed below its normal position, on account of the increased volume of the lung at the left upper lobe.

Now, this patient has no oedema. When oedema occurs it is dependent upon the effect of the emphysema on the right side of the heart. Emphysema involves an obstacle in the pulmonary circulation; that obstacle leads to an over-filling of the right side of the heart; that leads to increased power of the right ventricle; that leads to hypertrophic enlargement of the right side; and that leads ultimately to dilatation. Then we have an obstacle affecting the systemic circulation, and the result of that is general dropsy, together with more or less cyanosis. Now, you see this patient's lips are of pretty good color, just a little dark, and he has no oedema. The history does not show that he has had asthma. It is a case of chronic bronchitis occurring early in life, persisting, and leading to emphysema which, in the great number of years that have expired, has reached the degree which you see here. If there were enough chronic bronchitis to lead to phthisis, in a case like

this, it is difficult to answer why we do not have it, and yet we know that this condition antagonizes the occurrence of phthisis.

What is to be done in a case like this? What is the objective point of treatment? It is to diminish, if we can, the bronchitis; to improve his condition as respects that, as far as we can. This distention of the chest will never disappear; but if we can relieve the bronchitis, it will not be likely to increase, and it may diminish somewhat, perhaps, even considerably. We should, therefore, aside from certain palliative measures, employ remedies which are found by experience to exert a sanitary effect upon chronic bronchitis, as the iodide of potassium, the chloride of ammonium, the chloride of potassium, the balsamic remedies. It is possible a good deal of good may be effected by their use in this case.

Typhoid Fever.

CASE 2.—The next case, gentlemen, is one of a good deal of interest. I hardly know how to manage it, because the record is so long. You will see why it is so, and why it is very desirable it should be so. The temperature has been taken hourly for several days, and it makes a great many details. But I will try to get the meat out of the nut. It is a case of typhoid fever which has been treated pretty vigorously with the wet sheet, and then with quinine.

The patient is a girl about fifteen years of age, and is now getting along very satisfactorily. She still presents some, but not so much as she did, of that dull, indifferent expression, which is strikingly marked in most cases of this fever.

Now, let us see what we can get out of the history, so far as regards the practical points. Bridget C., fifteen years of age, admitted on the fifth instant. A week before her admission she was taken ill. The first thing of which she complained was headache, and that was followed by a feeling of lassitude, loss of appetite, and vague pains.

On her admission, which was a week afterward, she complained of having pains all over, a general feeling of malaise, headache, weariness, loss of appetite, etc. She had no epistaxis or diarrhoea—an absence of two symptoms which are very frequently present, and which, therefore, possess diagnostic significance. But we have no difficulty in reaching the diagnosis in the absence of these. The face was flushed, the eyes suffused, the tongue coated white, red lips, sordes on the teeth, some pharyngitis. The patient's mother was admitted on the same day, in about the same condition.

On physical examination, there was right iliac tenderness and gurgling, but no tympanitis. Three rose colored lenticular spots were found on the

abdomen. Subsequently some more were found. The spleen was slightly enlarged.

Now we come to the temperature and treatment. On the fifth, which was the day of her admission, the temperature at 11 o'clock was 101.5°. She was ordered whisky, half an ounce every three hours, and a diet of milk and eggs. At 4 o'clock the temperature was 404.5°; at 4.45, 104.5°. Now she was placed in a wet sheet. By the wet sheet we mean enveloping the whole body in a sheet saturated with water at about a temperature of 80° F., first placing under the patient an India-rubber cloth, so as to protect the bed. Then the wet sheet, in which the patient is wrapped up, sprinkled about every fifteen minutes with water, of about the same temperature. Now, that is applied as a substitute for the cold bath, and I believe it to be such. You see at once it is more easily managed, and is much more convenient and comfortable for the patient. Taking him out of bed and putting him into a bath in the condition in which he is, is very apt to excite a good deal of mental and nervous disturbance. Moreover, it is attended with a good deal of trouble. In this way, however, the wet sheet can be continued as long as desirable without any trouble.

At 4.45 the temperature was 104.5°, and the patient was put in the wet sheet. At 5 the temperature was 104°; at 6, 104.25°; at 7, 103.75°; at 8, 104.75°; at 9, 101.75°; and then the sheet was removed. She was in it from 4.45 to 9, the temperature having been reduced from 104.5° to 101.75°. At 11 p.m. the temperature had risen to 105.5° in the axilla. The difference between the temperature of the mouth and the axilla is from a half to a whole degree. She was again placed in the wet sheet. At 12, midnight, the temperature was 104.5; at 1 a.m., 104.75; at 5, 104°; at 6, 104.75°; and so on until two o'clock, the wet sheet being continued steadily until that time of the afternoon of the next day, when the temperature had fallen to 103.5°. This mode of employing water can be continued much longer than the bath. At 3 o'clock the temperature again rose to 105.25°. It was then thought best to give her a full dose of quinine as an antipyretic. She was given twenty grains at 3. At 4 p.m. the temperature was 105.75°, and she was again placed in the wet sheet. The sheet was removed at midnight, the temperature having fallen only to 104°. So both measures, the quinine and the wet sheet, failed to reduce her temperature much. She was delirious, and this, you know, belongs to the disease. From 1 o'clock a.m. to 8, on the 7th, the temperature varied from 104° to 106°. The tongue was uniformly red and very dry, and she fretted a good deal about being placed in the wet sheet. She took nourishment well, and her general condition seemed to be good. During this entire day the wet sheet was not used, but at 1

p.m. she got ten grains of quinia. She had this day a loose yellow colored stool, such as belongs to the disease. The temperature kept up all day; at 6 p.m. it was 104.25° . The pulse was only 84, illustrating what we see often enough, that although not infrequently the temperature and pulse correspond, often there is a marked discrepancy. Here was a pulse of only 84 while the temperature was varying from 104.5° to 106° . Nothing was done except to give the dose of quinia, having been a little discouraged in not getting the effect hoped for from the wet sheet. One reason why it was not applied was, that the patient shrunk from it; was uncomfortable; fretted; cried. As a substitute for it, it was ordered at 6 o'clock in the evening that the body be sponged. Now, we can effect a good deal by sponging the body, if it only be continued and thoroughly carried out, either having the whole body exposed and sponged, or sponging a portion of the body at a time, doing so not for a few minutes only, but for many hours, perhaps. Well, this was commenced at six o'clock, sponging first one extremity, then the other, then the body, and so on, with tepid water. Twenty grains of quinia were ordered to be given every six hours, the first being given at 6 o'clock, the temperature then being 104° . At 9, it was 103.5° ; at 10, 103.25° ; and so it went until 2 a.m., of the 8th, when it rose to 104° , and continued so until 7 p.m. when it fell to 103.75° ; but at 12 m. she had received twenty grains of quinia, and the same amount at 6 p.m. At 8 p.m. the temperature was 103° ; at 9, 104° ; at 10, 101.75° . The patient was annoyed by the sponging. She had a slight cough, but no expectoration; the pulse was 96, and rather feeble; the carbonate of ammonia was now given, five grains every three hours. The sponging was continued pretty constantly for a couple of days now, although the temperature did not go up very high. On the 9th it went up as high as 104° , but only once, and continued so only an hour. The rest of the time it varied from 100° to 103° , being kept down, as we have reason to think, by the sponging. Now we come to the 11th. This day, at 1 a.m., the temperature was 100° ; at 9 a.m., 100.75° in the axilla; at 10, 100° ; at 11, 100° . Now, you see, she has almost a normal temperature. There is no diarrhoea, there is no tympanitis, the mental condition is improved, and she is apparently approaching convalescence.

She had epistaxis after coming into the hospital. Interesting points in the case are, the occurrence of the fever without epistaxis or diarrhoea during the forming stage, and with no marked diarrhoea during the progress of the disease; still, some of the stools have been liquid, and of the characteristic yellow color; then a higher temperature and not a proportionate increase in frequency of the pulse. Had we formed an idea of the height of

the fever in this case by the pulse we should have made a mistake. We will see yet whether she goes on to perfect convalescence and recovery.

(Later. The patient completely recovered.)

Bright's Disease.

CASE 3.—Our next patient's name is M., 19 years of age, a seamstress, admitted the 27th ult. She began to cough about five months ago. Two months subsequently, while walking along the street, she slipped and fell, striking on her left side, and immediately began to raise blood. The quantity was small. For two weeks after the fall her sputa was stained with blood. She did not experience any embarrassment of respiration after the fall, but had pain and soreness in the right side. Since the cough began she has had occasional night sweats. She has lost in weight, her appetite is impaired. She entered the hospital complaining of cough, diminished appetite and strength, and night sweats. The physical examination showed prolonged high-pitched expiration, the voice sounds more distinctly transmitted at the left apex, and, on physical examination yesterday, I found vocal resonance distinctly increased at the left summit, and râles present there occasionally, so that it appears to be clear enough that this patient has a small phthisical affection situated at the upper part of the left lobe.

But I have brought the patient before you for another reason. She was given cod liver oil and hydrocyanic acid. On the 30th ult. it was noted that she had night sweats, and that the hands and feet showed some œdema—not much. On the 3rd inst. the patient was seized with a chill, followed by pain in the left side near the nipple. She had cough and orthopnoea; was suddenly seized with such difficulty of breathing that she was obliged to sit up in bed. The next day she had orthopnoea and pain in the side, and a cough, with a pinkish watery expectoration. The temperature was 101° , the pulse 120, the respirations 24. Examination showed œdema of the hands and lower extremities, and over both lungs posteriorly diminished fremitus, dulness on percussion, diminished vocal murmur, subcrepitant râles—a group of signs which clearly evinced pulmonary œdema.

What pathological connection should we suspect under those circumstances? There was no disease of the heart. We should, therefore, at once direct our attention to the kidneys, and, on examining the urine, it was found to be pale, clear, acid, of a specific gravity of 1.017, to contain traces of albumen, and small hyaline, fatty, and granular casts.

You can see, gentlemen, no appreciable œdema under her eyes to-day, and there is none of the feet, and the œdema of the lung has completely passed away. Indeed, that more or less of it,

passed away the day after its appearance. You observe, she presents no particularly morbid aspect. The point is this, gentlemen: this patient has disease of the kidneys (she has phthisis too), and yet, although œdema of the lungs and a little of the limbs and face was noticed, there was nothing to suggest the idea that she was suffering from renal disease.

Now, let us see what further facts can be obtained with regard to the urine. On the 4th inst. the amount of urine passed in the twenty-four hours was seventy-eight ounces; on the 5th, seventy-nine; on the 6th, forty; on the 7th, thirty-eight; on the 8th, thirty-six; on the 9th, thirty-six; on the 10th, twelve ounces. Some perhaps was lost. The temperature has been normal several days. She complains of pain in the left side. She was placed upon a diuretic.

From this history what form of chronic disease of the kidney has she? I do not suppose any of you will hesitate much in answering that question. "The cirrhotic or contracted kidney." Yes, of the different forms of chronic disease of the kidneys, so far as we can judge from the symptoms, she has the contracted kidney. This is shown by the absence of œdema, except in a small degree, a very small quantity of albumen, the presence of casts, urine of rather low specific gravity and large in quantity, and the occurrence of pulmonary œdema.

The practical lesson that I would impress by this case is, examination of the urine whenever we investigate it with reference to renal disease. Suppose we had examined the urine in this case only with reference to albumen, we would have said, here is only a small trace of albumen, which perhaps is due to some transient cause. This shows the importance of a microscopical examination. And here we have pulmonary œdema, whether it depend upon uræmia or not, we are not prepared to say; but in a case like this it is important to form an idea as to the amount of urea being eliminated, and it should be examined with reference to that fact. I see patients in consultation, and often, on asking if the urine has been examined, I am told it has been, that it contains albumen, but that is about all they know about it; sometimes they don't even examine for the specific gravity. The specific gravity and the quantity are the points. These give us the data by which we can judge whether the urea is eliminated in sufficient quantity to relieve the patient from the danger of uræmia. I have not time to dwell upon this subject longer to-day, but you will recall the minor manifestation of uræmia as well as the graver. In this case the indications are to eliminate the urine in larger quantity than it is being passed at present, and to guard against another attack of pulmonary œdema, and further manifestations of renal disease.

Pneumonia.

CASE 4.—This patient's name is Alexandra M., forty-five years of age, a domestic, a native of Canada, admitted on the 8th ult., having been ill two weeks. Her illness began with pain in the left side, with cough, no chill. On admission, she complained of cough, of dyspnoea, of pain in the left side, and of debility. The temperature was 101 in the morning, and 100 in the evening. On physical examination, there was found increased vocal fremitus, dullness, bronchial breathing, bronchophony, sub-crepitant and crepitant rales over the lower lobe of the left lung. Well, of course, we could say it was a case of pneumonia. The general condition of the patient was very good, and we did not have a chill in the previous history, but still we have the signs of consolidation affecting the lower lobe, and some of the members of the clinical class will recollect that this is the patient who gave us a good illustration of bronchial respiration and bronchophony, bronchophonic whisper. Well, her general condition was good, and it remained good, and she felt well enough to sit up. She was allowed to sit up, but still there were those signs. She came in on the 8th ult. There being very little increase of temperature, and the signs mentioned continued two or three weeks, and I illustrated to different sections of the clinical class those physical signs by this patient. Well, we began to say then, this cannot be pneumonia; it must be fibrinous phthisis. And we rather settled down on that conclusion. Last Friday, a week ago to-day, I took a section around to illustrate those physical signs in this patient, and to my surprise they had disappeared. She had not been examined for several days, and the signs of consolidation had in the meantime disappeared.

Now, what is the lesson? 'It is this. That in some cases of pneumonia (for no doubt it was a case of pneumonia) the consolidation of the lung continues, and leads us to think there is phthisis, but finally resolution takes place. So you will meet with cases where you will think there is pneumonia, and you will find several weeks elapse before resolution takes place. But resolution will at length take place. I shall never forget a patient who came into the hospital some years ago with consolidation at the upper lobe of one lung, and who was supposed to have phthisis. He remained in the hospital for some time, lying in his bed, attracting little attention, as he was supposed to have phthisis, until one day I was struck with the fact that he was looking better—very much better than one could expect of a patient with phthisis confined to bed, and on examining him, I found that consolidation had greatly diminished, that resolution was taking place, and that the patient had not phthisis, but pneumonia. He re-

covered, and shortly after enlisted and went into the army.

Hepatic Colic.

CASE 5.—As we are lecturing on hepatic colic in the didactic course I will present you a patient with that affection, but we have not time to make extended remarks upon it. His name is Daniel, colored, a waiter, and he was admitted on the 8th inst. No previous history was obtained except that he had three attacks similar to the one from which he is now suffering. The conjunctivæ show a moderate amount of jaundice. In the three attacks previous to this the prominent symptoms were pain in the right hypochondrium, radiating to the chest and right shoulder, tenderness of the liver, vomiting, and icterus or jaundice. These are the salient points of the past attacks, and also of the one which he has had since he came into the hospital. The pain was paroxysmal, the paroxysms lasting an hour or more, as a rule, and occurring several times in the course of a week. The present attack began on the 8th inst., and was characterized by pain over the liver, which radiated into the thorax and into the right shoulder, tenderness in the right hypochondrium, icterus, constipation, anorexia, emesis, and some febrile movement. Several paroxysms have occurred since his admission into the hospital, and during the intervals the right hypochondrium has been the seat of continuous dull pain and tenderness.—*Med. and Surg. Reporter.*

INTRA-CAPSULAR FRACTURES.

Dr. Maxwell (Illinois State Md. Society) gives the following on the above subject, together with the history of two cases in which his method of treatment was successful:—

The treatment of intra-capsular fractures has enjoyed the attention of the best minds in this country. In this paper I intend to summarize the teachings of modern surgery and suggest some additions to the treatment. Intra-capsular fractures are those involving the neck of the femur, entirely inside of the capsule of the joint. They are peculiar to advanced age and to females. They are remarkable on account of the small amount of force necessary to produce them, and for the extreme difficulty in obtaining union by bone. As age advances, remarkable changes take place in the shape and size of the neck of the femur. It joins the shaft more nearly at a right angle, diminishes in size and becomes more fragile. The possibility of bony union in these fractures has been discussed with no little warmth. Astley Cooper's and Frank Hamilton's researches show that, though possible in some instances, it is so rare as not to invalidate the truth of the assertion that there generally is

non-union. Union does not take place for the reasons:

1. There is a deficient vascularity in the bones, due to their relative positions and deficiency of the artery passing through the ligamentum teres.
2. Whatever reparative material is developed has no local permanence, there being no support or nidus for it.
3. This material becomes so diluted with increased secretion of synovial fluid, as to be incapable of making any progress.
4. Imperfect coaptation and the impossibility of keeping the parts quiet.

These causes combined with the action of the powerful muscles at the site of fracture, constitute the chief reasons for non-union.

The treatment has been the subject of difference of opinion. Erichsen advocates a similar plan to Agnew's. The failure on the part of surgery to have means to coaptate the ends of the fractured bones is enough to account for the failure of many fractures to unite. If surgery proposed no better methods of treating fractures of long bones than those for intra-capsular fractures, there would be, no doubt, as much non-union in these, and it would be said that the bones are degenerated, etc. Is there not too great a tendency to saying such things instead of trying to put the bones in good coaptation? Extension must always be used in the direction opposite to the displacing force.

All the forces act on the lower fragment, and the tendencies to displacement are upward and inward. The muscles are strong and numerous and tend to draw the femur upward, shortening the limb and turning the thigh outward, and throw the trochanter behind the acetabulum. There is eversion of the foot, and crepitation can be distinguished when extension is made. The teachings of modern surgery, that extensions be used, is not sufficient.

The following plan, which I offer, is rational and has been successful in two cases in my practice.

Apply extension in two directions in opposition to two forces, longitudinally and laterally. Put adhesive strips along the leg and foot, to hold a cord passing over pulley and attached to weight. Lateral extension is made by a five inch muslin band around the body. A splint is applied to the inner aspect of the thigh. A pulley is placed opposite the crest of the ilium and four inches above it. Counter extension is made by the body; the bed is elevated at the foot, one foot on the fractured side and eight inches on the other. The head post on the injured side is elevated four and a quarter inches. By this method the fragments are brought as nearly correctly into apposition as is possible. The inner surface of the capsular ligament is rendered tense and applies itself to the sides of the neck and holds it.

SURGICAL TREATMENT OF EMPYEMA.

The subject was introduced by Dr. C. Gerhardt, (Würzburg), who first reviewed the opinions of the earlier writers on the subject. Passing to the practical side of the question he expressed the belief that a small empyema might be cured spontaneously by absorption; another favourable termination was by expectoration, after a spontaneous opening into the lung; after two or three weeks of purulent expectoration, such cases got well. As to operative interference, he found that a single aspiration sometimes resulted in a complete cure; a method which had been found useful consisted in replacing the pus withdrawn by some indifferent or antiseptic fluid, without the admission of air to the chest. He advocated the free opening of the chest under antiseptic precautions; and thought that to wash out the pleura was not free from danger. Very early childhood gave less favourable, the middle period of childhood more favourable, results than adult age.

Dr. Ranke (Munich) thought that in children an empyema comparatively seldom opened into the bronchi; this, he thought was the most favourable termination. He made use of incision, with antiseptic precautions, and under this system found that his patients generally remained about six months in hospital.

Dr. Jacobi, (New York), had seen three cases of empyema in infants, one containing as much as twelve or thirteen ounces, in which recovery had occurred after a single aspiration.

Mr. F. Richardson Cross (Bristol), thought that the early removal of pleuritic effusion was necessary to insure the re-expansion of the lung. He advised an incision in the eighth or ninth intercostal space, with antiseptic precautions, if aspiration failed after two trials. He had recently had three very successful cases treated on this method. One of them was a most unfavourable case, in a girl aged eight, but recovery ensued in seven weeks.

Mr. R. W. Parker (London), said that as the question of treatment must very much depend on the mechanical condition of the chest, it would be well to divide empyemata into two chief classes, viz: 1. As found in children; 2. As found in adults. Whatever method of treatment was adopted, no favourable result could be expected unless the conditions regulating chest-movement assisted. The cavity of the empyema could not be emptied unless the lung could re-expand, or the chest-wall fall in. In children these conditions were present more commonly than in adults; hence the disease in them was less serious. In old people, whose chest-walls were very rigid, empyema was always a serious, often an incurable, disease. He believed that aspiration, two or three times repeated if need be, was the best treatment in childhood, and

ought always to be adopted before other measures were tried. No doubt the next best mode of cure was the expectoration of pus through the lung; but it was hardly safe to postpone treatment until this took place spontaneously, and, unfortunately, there were no mechanical means by which it might be brought on. When aspirations had failed, a free incision into the lowest and most dependent part of the chest, with antiseptic precautions, was called for. In adults he also advocated aspiration; but if the cavity were large he also suggested that filtered and carbolized air should be injected into the pleura; this air helped to replace the fluid, lessened the dragging sensation often felt, and prevented reaccumulation.—*Brit. Med. Journal.*

DIFFERENTIAL DIAGNOSIS OF ABDOMINAL TUMORS.—Dr. Erich of Baltimore, contributes a very instructive paper to the Clinical Society of Maryland, wherein he points out how easy we may make very singular errors of diagnosis in abdominal tumors. He illustrates his views by the narration of several cases, hoping, apparently, to add to the "known sources of error" in arriving at a good diagnosis. In case 1, a first examination per vaginam "revealed an irregular, hard, nodular tumor in the left iliac region somewhat posteriorly," and a diagnosis of probable cancer was ventured. A year and a half after this examination the patient was examined jointly by Dr. Erich and Dr. Chadwick, of Boston, when the conditions noted, had entirely changed. The tumor then noted, had disappeared, "and a firm, round, movable tumor, about the size of an adult head, was found occupying the hypogastric region." Present diagnosis—a fibroid. It was decided to remove the supposed fibroid by laparotomy. Upon making an incision and bringing the tumor in view, an exploratory puncture was made which yielded pure pus. The patient died, and a *post mortem* revealed an abscess. This case teaches that fluctuation cannot always be made out, even when a large amount of fluid is present. "I was compelled to acknowledge an error of omission," says Dr. E., "in not making an exploratory puncture before resorting to laparotomy. I have since then determined never to pronounce an abdominal tumor solid until after aspiration."

Case 2 had been pronounced by an eminent surgeon a solid uterine fibroid. All the conditions so indicated; but true to his determination, an aspirator needle was introduced by Dr. Erich, and to the surprise of himself, as well as others, "a pint of pure pus was withdrawn."

In Case 3 the patient had been sent to Dr. E. by a friend who had made out a "probable diagnosis of ovarian tumor." The examination made by Dr. Erich appeared to exclude pelvic cellulitis

and abscess—the diagnosis of ovarian cyst was therefore provisionally endorsed, and preparations for an operation were made. Preparatory to this, a tonic treatment was set up, and a mercurial purge administered. The purgative produced diarrhoea with profuse and offensive discharges. Fever was established. The tumor was speedily reduced one-half. Aspiration now instituted, removed a quantity of offensive pus and gas. The tumor was evidently a pelvic abscess.

In his concluding observations Dr. Erich remarks: "In view of these difficulties, which have been acknowledged by the best men in the profession as liable to occur to them, I think it advisable to use the aspirator in cases of doubtful abdominal tumor before pronouncing definitely upon its nature.—*Obstetric Gazette*.

RECTAL EXPLORATION AND DIAGNOSIS.—Dr. Charles B. Kelsey, of New York, contributes an article to the *New York Medical Journal and Obstetrical Review* for October, 1881, which contains several valuable suggestions and the description of some methods which are original. After referring to the many errors which arise in this department of surgery from the lack of care and proper examination, he goes on to answer the question of how to make a rectal examination which shall be at the same time thorough and as free from pain as possible. In his own practice he uses an artificial light of his own arrangement and a forehead mirror, which enable him at all times to illuminate the rectum thoroughly, while by the side of the examining table stands an instrument-case fitted with all necessary appliances. In addition to these things he insists strongly on the necessity of having a water-closet communicating with the office, so that injections may be administered and the bowels moved at the time of the examination. In the matter of specula he confines himself almost exclusively to Sims's, finding this the best of all after the sphincter has been stretched, and not finding any that give a fair view of the parts until this has been done. He relies, however, much more upon the finger for a diagnosis than upon any artificial helps, and claims that with it, after the necessary skill has been acquired, the slightest pathological changes may be detected. In the matter of bougies he also has his own preference, and recommends a soft-rubber instrument, similar to that of Wales, only more flexible. For detecting strictures high up in the rectum or in the sigmoid flexure little confidence is to be placed in a bougie of any sort, and the writer relies almost entirely upon manual examination either through the abdominal wall or by passing the hand into the rectal pouch. The latter method he holds to be free from danger and certain in its conclusions.

DRAINAGE OF THE PERICARDIUM.—A case,

probably unique in the annals of paracentesis, has been recorded by Rosenstein, of Leyden. A child, aged ten years, suffering from pericardial effusion, presented such a degree of interference with circulation and respiration, that an aspirator needle was passed into the fourth intercostal space, near the sternum, and 620 cubic centimetres of liquid were withdrawn. Left-sided pleural effusion soon followed, and 1100 cubic centimetres of liquid were evacuated. The cardiac symptoms increased, and necessitated a second puncture of the pericardium; 120 cubic centimetres of purulent liquid were withdrawn. A relapse occurring, a larger opening was made (an inch and a half long; in the fourth intercostal space. The soft parts were divided layer by layer under strict antiseptic precautions. When the pericardial cavity was reached a large quantity of pus escaped. Two drainage tubes were inserted. The operation was followed by an immediate return of the circulation and respiration to normal conditions. An incision into the pleura, however, also became necessary. At the end of four months of treatment the patient left the hospital in good condition. There was no pyrexia or oedema of the skin in the præcordial region to indicate the purulent nature of the effusion.—*The Lancet*.

SULPHUR FOR PIMPLES ON THE FACE.—Dr. Gage Parsons believes that Mr. Erasmus Wilson was the first to propose sulphur lotion in acne punctata, according to the *Practitioner*. The usual lotion of the flowers of sulphur with glycerine water is a valuable remedy, but from the readiness with which the sulphur separates it is inelegant and inconvenient, while it is not quite satisfactory in its results. A far more efficacious mode of using sulphur is to dust the face with pure precipitated sulphur every night with an ordinary puff used for toilet purposes. Recently two severe cases of acne of two years' standing, which had resisted the ordinary methods of treatment, yielded at once to sulphur thus applied. If the sulphur be scented with oil of lemon or roses it will form an elegant cosmetic.

THE USE OF HOT WATER IN DISEASES OF THE EYE.—Dr. Leartus Connor, *Am. Jour. Medical Sciences*, speaks very highly of the frequent local application of hot water to the eye in cases of acute conjunctivitis and blepharitis, and also in chronic hyperemia, granular inflammations, iritis, and corneal affections, in which he has used it with great success. The water should be as hot as the patient can comfortably bear with his hand. The patient leans over the basin and applies the water to the eye for a few minutes, from three to twelve times a day, according to the urgency of the case.

THE CANADA LANCET.

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MEDICAL COLLEGE BANQUETS.

During the past month and within one week of each other, the two Medical Schools in this city held their usual annual dinners. The attendance in both instances was very large, numbering about 150 at each, and the events were, as the students would say, a "grand success." Many of the guests came a long distance to do honor to their respective schools, and to be present at such interesting entertainments. The Trinity Medical College dinner was held at the Rossin House, and the Toronto School of Medicine in the Queen's Hotel. Both were "officially" conducted on strictly temperance principles, that is to say, no intoxicating liquors were used at the table, and the toasts were drunk in cold water. The speeches at both entertainments were much above the average after dinner business. The Trinity Medical dinner was presided over with much ability by the following gentlemen: Mr. Nattress, chairman; Mr. Sawers, 1st. Vice; Mr. Johnston, of Jamaica, 2nd. Vice; while that of the Toronto School was presided over by Mr. Knill, Mr. Coulter, and Mr. J. S. Draper, respectively, all of whom discharged their duties in a most agreeable and satisfactory manner. One most pleasing feature of these entertainments was the cordial greetings and the display of most kindly feeling between the faculties and students of the two schools. Representatives and delegates from each school were present at the respective dinners. We are glad to be able to bear testimony to the increased and increasing good feeling, harmony and sympathy which exists between these

so-called rival schools, for their should be no rivalry but honest and honorable competition. The toasts at both entertainments were nearly alike, viz.: the usual standing toasts to which were added the "Mayor and Corporation," "Universities, Colleges, and Sister Institutions," "The Faculty, Students, &c., of the respective schools," "The College of Physicians and Surgeons of Ontario," The "Toronto General Hospital," The "Press."

At the Trinity College dinner an additional toast was given following that of the "Queen and Royal Family," viz.: "The President of the United States," which was responded to in an able and eloquent speech by Rev. H. M. Parsons, pastor of Knox Church, Toronto. He spoke in feeling terms of the sterling character of the late President Garfield and the national unification which resulted from what at first seemed a national calamity.

In responding to the "Dominion Parliament," Hon. Mr. Mackenzie opened with a few happy hits, and then pithily referred to the useful part the Dominion Parliament fills in our Constitution, the freest in America. In noticing the remarks of the gallant Colonels who had preceded him in speaking, he said that Kingston Military School was capable of giving as efficient a military training as either West Point or any military college in Europe; and he questioned whether England herself could have given a readier response to the call to arms than did the Canadian volunteers at the time of the Fenian raid.

Hon. Mr. Mowat confined his remarks chiefly to the dignity of the physician's calling, the excellence of the medical institutions of the Province, and the legislation affecting the profession. Mayor McMurrich replied in fitting terms to the toast of the "Mayor and Corporation."

The toast of the Colleges and Sister Institutions was responded to by Hon. G. W. Allan, for Trinity University, Vice-Chancellor Mulock for Toronto University; Principal Buchan for Upper Canada College; Drs. Graham and A. H. Wright for the Toronto School of Medicine, and Mr. Clelland for the class of this school.

Vice-Chancellor Mulock said among other things that he had it upon the authority of a distinguished Professor in a London Hospital, who visited Toronto recently, that the Canadian students who attend the London Hospitals are in regard to the-

oretical attainments, quite equal to English-trained students, but are somewhat deficient in the practical knowledge of the healing art. This was owing, he thought, to the limited population of our country and cities not affording that profusion of clinical material which was at the command of older and larger Hospitals. In referring to the question of affiliation, he said that whenever Trinity school desired the co-operation of Toronto University in aid of any step calculated to advance the cause of medical science, an earnest response would be given to the call.

Dr. Allison, of Bowmanville, and Dr. Burns, of Toronto, ably responded to the toast of the "Ontario Medical Council." "Trinity Medical School, its graduates and under-graduates," was responded to by Drs. Geikie and Spencer, on behalf of the Faculty and graduates, and Messrs. Camfield, Duncombe, and Cochrane for the class. Dr. O'Reilly and Mr. John Gillespie, replied to the toast of the "Toronto General Hospital." Dr. G. O. O'Reilly, of Fergus, acted as the champion of "The Ladies," and "The Press," was replied to by Dr. Fulton, of the LANCET, and Dr. Wright, of the *Canadian Journal of Medical Science*.

At the Toronto School dinner, the chairman, Mr. Knill, said that much good would come from these social meetings by affording the students an opportunity to express their opinions, or state their grievances. One of the grievances now felt by the students was a difference which existed between the latter and the Medical Council. It was notorious that for the last four or five years the students had acquired an unenviable reputation, and it would be well to consider whether they alone are entitled to all the odium heaped upon them. Every spring the public were treated to long dissertations upon the culpability of medical students, and those unseemly contentions which had occurred between the Council and the students were not compatible with the dignity of the profession. He was not defending improper conduct, if such existed, however, and hoped the unseemly squabbles would not again occur. He then pointed out what should be the aim and duty of the student, as well as his ambition after leaving college—that he should always try to tread in the highest paths of his profession.

Dr. F. W. Strange, M. P., replied to the

toast of the "Army and Navy." He pointed out the importance of the service, and the aid the medical fraternity could be to the military. The militia force, he said, was not aggressive, but only protective, but were ready for action in the moment of need. Mr. James Beaty M.P., responded for the "Dominion Legislature," and Mr. Badgerow, M.P.P., for the "Local." Mr. Beaty said, the medical body was not insignificant in any sense, even beyond their ordinary sphere. There were seven in the House of Commons, and one of these was the Speaker. If the rest of the House were disposed to ignore the rights of the profession, their force was strong enough to assert its own claims. He then dwelt on the merits of the Canadian Government, describing it as the freest on the earth and the best on the continent. It contained the best elements of the British Constitution, and none of the objectionable ones. The people didn't want annexation, he said, nor "independence" either; they did not want to support armies and navies of their own, for now, without feeling the burdens of connection with the Empire, we had the protection of British Imperial forces. Mayor McMurrich acknowledged the toast of the "Mayor and Corporation."

Honourable Edward Blake responded on behalf of the Toronto University. He said, there was no matter of greater importance connected with the cause of education than that the most liberal provision possible should be made for the higher education; for this was the great preparation to advancement in the range of avocations included under the liberal arts and sciences, as well as in the public positions many were called upon to fill. Thus the benefits of this education would be felt down through the pursuits of the people, redounding rewards back again upon the State which granted them. Some provision, he thought, for teaching the principles of jurisprudence in the higher institutions should be provided, and though he would not protest against the law "send for the doctor," something should be learnt outside the medical schools of the structure of the body and the laws of health.

Professor Rayner responded for Victoria College, and Rev. Principal Cavan for Knox College, both of whom were well received. Dr. Kennedy and Mr. Wallace responded for Trinity

Medical College, and students respectively. "Our Faculty" was responded to by Drs. Aikins, Barrett and Richardson. The Medical Council was ably represented by Dr. Burns. The Learned Professions was responded to by Rev. Dr. Wild and Dr. Tye, of Thamesville. The latter made a most excellent speech, but as the evening was now far advanced no report was made for the press. The "Toronto General Hospital," replied to by Dr. O'Reilly, and the "Ladies," by Mr. Patterson, brought the evening's entertainment to a close. At both dinners a number of songs were interspersed among the speeches, and an Italian string band discoursed appropriate music.

The annual dinner of the Royal College of Physicians and Surgeons of Kingston, was held on the 24th ult., and was a most successful gathering, a large number of the dignitaries of the limestone city being present.

SANITARY REFORM.

The subject of public health and sanitary reform is one which requires to be kept constantly before the profession and the public, until some efficient legislative measures are secured from the Government. It is a question of such vital interest to the welfare of the people and the prosperity of the nation, that it should take precedence of every other consideration. All merely political questions should be laid aside, in view of the great and inestimable importance of a question which has for its objects the life and health of the people. It is clearly one of the first duties of a Government to provide the means, wherever practicable, for the amelioration of the condition of the people, whether in the matter of sickness, distress by water or fire, or other public calamity. The members of the medical profession have been, we may say, so far, almost the only individuals who have interested themselves in the matter of public health. They have at no time, when a favorable opportunity presented itself, shown any indifference, inactivity, or want of appreciation in regard to measures having this object in view, but on the contrary have, from time to time, and in various ways, urged upon the Governments, Federal and Provincial, the importance of preventive measures. It is not a little singular, that in all countries physicians have been

foremost in urging upon the people and the authorities, the necessity for general systematic means for the prevention of sickness and the preservation of life. It is indeed almost entirely owing to the indefatigable efforts of the profession, that means to this end have been carried out in any country. But from whatever cause, whether or not the members of the profession in this country have been less importunate in this behalf, than those in Great Britain, Europe, or the United States, we are very far behind these countries in the efforts employed for promoting public health. We do not believe it would be in the least degree inimical to the interest of the profession in this country, if there were established upon a proper basis, a well organized sanitary system for the Dominion; on the contrary, such a system would add materially to the value of professional services, and place the profession itself on a higher level in public estimation than it occupies at present. It would be infinitely better in more respects than one, for municipalities and governments to employ medical men to give a portion of their time to the prevention of disease, than for the public to employ them for the cure of diseases which have for the most part been caused by the neglect of the most simple laws of health. Besides, the lessening of preventable sickness, is a much more worthy and dignified employment than the curing of it. We trust that the profession will lose no opportunity of urging upon the various Governments of the day, the very great necessity of thoroughly organized Sanitary Boards,—a Federal Board or Department for the Dominion, and a Provincial Board in each of the Provinces. The expenses of these Boards need not be very large at first. For the Province of Ontario, the annual expenditure need not exceed the sum of \$4,000 or \$5,000. In New York State the annual appropriation for this purpose is \$20,000. In Michigan, \$6,000. In Vermont and New Hampshire, the amount is somewhat less, but quite sufficient for the purpose of initiating the work. With the view of bringing this matter again under the notice of the Ontario Government, we have been solicited to enclose blank petitions to all our subscribers, with a request that they will not only sign the petitions themselves, but obtain as many signatures as they conveniently can, of prominent public men and others who may sympathize with the movement. The petitions when filled up should be returned to

this office at the earliest possible moment, on account of the near approach of the session, the estimates being even now, in all probability, under the consideration of the Government. When the petitions are all returned, it is proposed to appoint a large and influential deputation to present them, and to wait upon the members of the Government and press upon them the necessity for immediate legislative action.

THE HALIFAX MEDICAL COLLEGE.

The opening of the fifteenth annual session of this College took place on the 27th of October. Dr. R. S. Black, the President, delivered the opening address. After extending a sincere and cordial welcome to the students present, he pointed out the aims of the College, which were to give a sound, solid education, and to supply to the Maritime Provinces medical men able at first to identify and then to treat properly the various diseases that may be brought to their notice. He also referred to the high standing of their alumni in the schools of London and Edinburgh. Not being a member of the Faculty he spoke with freedom regarding the laborious and painstaking corps of Professors in the College. The lecturer said the profession they had chosen was a noble one, its grand aim being the preservation of the health and the cure of disease. No other science includes within its scope so many and varied departments of knowledge, yet they could not hope to master all, but must content themselves with a clear view of the principles, and a limited acquaintance with the facts of such as were pertinent to their pursuits. Many branches of science were of great value as feeders of our medical reservoirs, and the physician's office was to draw the healing waters. He concluded an able and eloquent address by saying that they were not to feel dismayed by the contemplation of the work before them, but to take courage and set themselves hopefully to the work, and order and system would soon be evolved from what now to them, appeared confusion and chaos. The Dean of the College, Dr. A. P. Reid, then addressed the students. He spoke of the changes in the method of practice, and the great advances made in medical science. He also gave sound practical advice to those about entering the

profession. It is expected that there will be a large attendance of students this session.

THE USE OF MALTINE.—Dr. J. Milner Fothergill (*London Practitioner*) says in regard to the use of Maltine, that in order to aid the defective action upon starch by the natural diastase being deficient in quantity or impaired in power, we add the artificial diastase "maltine." But, as Dr. Roberts points out, in order to make this ferment operative it must not be taken after a meal is over. Rather it should be added to the various forms of milk porridge or puddings before they are taken into the mouth. About this there exists no difficulty. Maltine is a molasses-like matter and mixes readily with the milk, gruel, &c., without interfering either with its attractiveness in appearance, or its tooth-someness; indeed its sweet taste renders the gruel, &c., more palatable. A minute or two before the milky mess is placed before the child, or invalid, the maltine should be added. If a certain portion of baked flour, no matter in what concrete form, were added to plain milk, and some maltine mixed with it, before it is placed on the nursery table, we should hear much less of infantile indigestion and mal-nutrition.

O TEMPORA! O MORES!—We regret to see so many of our confrères rushing into print with every little accident that comes in their way. An on-looker must come to one of two conclusions, viz.: either that the medical man has had such a limited number of cases in surgery, that he is overjoyed by the occurrence of one or two trifling cases, and in the simplicity of his soul must needs publish them, to let the public know that he has had something to do; or that he is endeavoring to attract public attention by playing the role of the advertising quack. We regret to see an old and much respected confrère, occupying half a column in the *Port Hope Times* of the 18th ult., with a report by the Dr. himself, so it is stated, of four or five simple accidents in surgery to which he was called. When those who have grown grey in the service of the profession adopt such means of bringing their names into public prominence, what is to be expected from the younger members of the profession, who have at least some excuse for endeavoring to attract public attention?

A LITTLE MORE ESPRIT DE CORPS.—The case of the Queen vs. Dr. Washington of Orangeville, which has been before the Courts since April last, has recently been decided in the Drs. favor. The case was one of alleged assault, in which the magistrate (Mayor Henry, M.D.) fined both parties \$5 and costs. Dr. Washington feeling that he had sufficient evidence to prove that he only acted in self-defence, appealed from Dr. Henry's decision, and the case was tried before the County Judge, but the Mayor's ruling was confirmed by this Court. It was then appealed to the Court of Queen's Bench, Toronto, before Judge Osler, and ended in the acquittal of Dr. Washington as above stated. It is much to be regretted that there is not a greater degree of *esprit de corps* among the members of the medical profession, for if the proper feelings had existed here, this action would never have gone beyond the Mayor's office.

PORRO'S OPERATION IN ENGLAND.—In October last Mr. Spencer Wells, as stated in the *British Medical Journal*, performed Porro's operation for the first time in England. The patient, aged 37, between five and six months advanced in pregnancy, was suffering from epithelioma of the cervix uteri. The operation is a supra vaginal amputation of the uterus in addition to the Cæsarian section. The uterus was brought out through an incision in the abdomen, the broad ligaments transfixed by silk ligatures external to the ovaries, the bladder dissected from the uterus, and the vagina divided all around close to the uterine wall. The opening from the peritoneal cavity into the vagina was closed by silk sutures. Very little blood was lost, and on October 27th, seven days after the operation, the patient was doing well.

TESTIMONIAL TO VIRCHOW.—A movement was recently set on foot in London, England, to obtain subscriptions towards the testimonial to be presented to Prof. Virchow, by his brethren in Germany, on the occasion of the completion of the 25th year of his professorship in the University of Berlin, and of his 60th birthday. Many of the leading physicians and surgeons in London subscribed to the fund. The presentation took place in Berlin on the 19th ult. The learned professor has again been elected to the Reichstag.

REVOLVING BOOK-CASES.—We desire to call the attention of our numerous readers to Johnston's Revolving Book-cases, manufactured by Baker, Pratt & Co., 19 Bond Street, New York. They are wholly constructed of iron, with adjustable shelves, highly finished in black and gilt ornamentation, and are exceedingly useful and convenient, as well as ornamental. We have one in use in our office, and prize it most highly. With a simple touch of the hand while seated at the desk, one can bring before him any book required for consultation. Their low price brings them within the reach of all. They are of different sizes, but the larger, three or four shelved cases, are the best, and are capable of holding from 60 to 100 volumes. Send for circular to above-mentioned address.

"FETCHING THE DOCTOR."—This is one of the latest and most exquisite of Rogers' famous "groups of statuary." It represents a lad, with a youth in front of him, on horseback, in hot haste to fetch the doctor to some fortunate or unfortunate sufferer. The lads seem fully to realize the importance of their mission, and are losing no time by the way. They evidently enjoy the excitement and the ride, and are urging the poor animal to the utmost speed consistent with safety to themselves. It is finished in Rogers' best style of art, and is suitable either for a parlor or library ornament, or for a doctor's office. It would make a most agreeable and appropriate Christmas-box. The price is only \$10. Send for catalogue of groups, to 23 Union Square, New York.

ANTIVIVISECTION PROSECUTION.—We learn from the *British Med. Journal*, Nov. 12th, that the Antivivisection Society of London has entered a criminal prosecution against Prof. Ferrier in the Bow Street Police Court. It is not at all creditable to the boasted intelligence of the British nation, that an eminent physician and man of science, whose valuable labors and important researches in reference to the diagnosis and treatment of brain diseases are recognized the world over, should be assailed in such a manner. It surely cannot be regarded in any other light, than as an abuse of the recent legislative enactments in reference to experiments upon animals.

TRINITY COLLEGE CONVOCATION.—The annual convocation of the University of Trinity College, for conferring degrees, was held in Convocation Hall on the 10th ult. The installation of the new Provost, Rev. Mr. Body, also took place, and a very pleasant reception was given him by the friends of the University, in the evening, which was largely attended.

The following gentlemen received the degree of M.D., C.M.:—W. A. Allen, G. W. Baker, J. Baugh, G. S. Beck, L. Bentley, T. G. Brereton, W. B. Duck, H. K. Kerr, T. A. Kidd, N. McPhatter, W. F. Peters, A. E. Stutt, T. Sullivan, A. McC. Sloan, and E. A. Spilsbury.

REMOVAL OF THE KIDNEY.—Dr. Barwell, of Charing-Cross Hospital, has again performed the operation of nephrectomy. The operation was undertaken for the relief of stone in the kidney, which had caused the formation of a large lumbar abscess. The patient, aged 18, recovered. This operation has also quite recently been performed by Mr. Whithead, F. R. C. S. E., of Manchester, but the patient died on the fifth day after the operation. The total number of operations on record is 56; of these there were 27 recoveries and 29 deaths. The lumbar incisions show better results than those in the linea alba.

HYDROLEINE.—This preparation of Cod-Liver Oil has been before the profession of Canada nearly two years, and is gradually growing in favour. We have used it in our practice with most excellent results, and feel it our duty to bring it again under the notice of our readers. The members of the profession in this city also, who have given it an extended trial, speak in terms of the highest praise in regard to its efficacy. It is as agreeable to the taste as Cod-liver Oil can be made, and is readily assimilated by most patients.

BRITISH QUALIFICATIONS.—James Ross, M.D., McGill College, has been admitted Licentiate of the Royal College of Physicians, London. Dr. J. L. Foley, (Bishop's College), also received the L.R.C.P., London, on the 22nd Oct.

The following gentlemen have passed the primary examination of the Royal College of Surgeons, England. Dr. J. H. Betts, Kingston, and Dr. W. A. D. Montgomery, Toronto.

APPOINTMENTS.—Dr. J. W. Rosebrugh, of Hamilton, has been appointed by the Senate of Victoria College, Cobourg, as the representative of that body in the Ontario Medical Council, in the room of Hon. Dr. Brouse, deceased.

Dr. F. E. Woolverton, has been appointed Medical Superintendent of the Hamilton General Hospital.

Dr. N. McPhatter, of Fergus, has received the appointment of a surgency on the Pacific Railway.

Dr. Alfred Bray, formerly of Thorold, has been appointed Prof. of Toxicology in the Minneapolis Hospital Medical College.

Dr. J. L. Foley has been appointed Assistant Demonstrator of Anatomy in Bishop's Medical College, Montreal.

W. H. McDonald, student of Trinity Medical College, has been appointed medical assistant, Toronto General Hospital. The other assistants are Drs. Stark, Charlton and Sweetnam.

PRACTICES FOR SALE.—In our advertising pages will be found three country practices for sale, averaging annually \$2,000, \$4,000, and \$6,000 each, respectively. The parties are personally known to us, and we have every reason to believe that the respective values of these practices are not over-estimated.

LITERARY SHEAVES.—Dr. P. Bender, of Quebec, has entered the list of authorship, in the production of a book entitled "Literary Sheaves," or "*La Littérature au Canada Française*," drama, history, poetry, romance, etc. It is published by Dawson Bros., Montreal. Price, \$1.

We regret to learn that Dr. Bell, Medical Superintendent of the Montreal General Hospital, has been prostrated with typhoid fever. We trust that the attack is not a serious one, and that he will soon be able to be about again.

NEW MEDICAL TARIFF, QUEBEC.—The new Medical Tariff for the Province of Quebec, has recently been issued. Copies may be obtained by addressing Dr. Belleau, Quebec, or Dr. F. W. Campbell, Montreal,

CORONER.—Dr. R. W. Bell, of Peterboro', has been appointed associate coroner for the county of Peterboro'.

CHEAP AND VALUABLE READING.—Back numbers of "London Lancet," (Am. reprint), for four years; London "Medical Times and Gazette," (weekly)—not second to "Lancet,"—four years; "New York Med. Journal," five years; and "Scientific American" for three years, may be had—the lot very low—as the owner has no use for them. Cost \$75 originally. Apply to Messrs. Dudley & Burns, 11 Colborne Street, Toronto.

The death of Dr. Foulis, of Glasgow, of diphtheria, is noticed in our foreign exchanges. His name is best known in connection with his successful cases of extirpation of the larynx.

Books and Pamphlets.

DISEASES OF OLD AGE. By J. M. Charcot, M.D., Professor in the Faculty of Medicine of Paris, etc. Translated by Leigh H. Hunt, B.Sc., New York; with additional Lectures by Alfred L. Loomis, M.D., etc. Published as the June, '81, number of "Wood's Library of Standard Medical Authors."

This book contains 31 lectures; the first 21 of which, we are informed, are by Charcot, and the remaining 10 by Dr. Loomis. We mention this fact merely for the benefit of those who might fail to detect the boundary line between the production of the eminent French Professor, and his trans-atlantic admirer, who has had the business tact of availing of the favorable opportunity of presenting his contributions to medical literature, in company with those of one of the most brilliant scientific writers of the present age. It is, however, our impression, that to a very respectable minority of readers no premonition will be requisite. The transition from Charcot to Loomis must, to every observant student, be as obvious as that of a stratiform break to the eye of a working geologist: not indeed that we would be understood as implying that Dr. Loomis' part of the volume is undeserving of careful perusal. His observations on "Senile Pneumonia, Senile Bronchial Catarrh, Asthma, and Hypertrophy of the Prostate Gland," are well deserving of attention, and had they been presented in a separate and comprehensive work, we think the author would have evinced more delicate discretion. If the object of the Messrs. William Wood & Co. has been mainly to swell

their June number up to a predetermined bulk, so as to give to subscribers a fixed normal quantity, it would be wrong to censure their honesty of purpose; still we think they might have selected from their abundant supply, as an addendum to Charcot's lectures, some little monograph in closer affiliation.

Of the 21 lectures by Charcot, it would be impossible to speak in terms too highly commendatory. If, however, we should signalize any as deserving of special attention, those on Clinical Thermometry seem to us to have high claim. The following passage, as bearing upon a very important criminal case recently tried in Montreal, we regard as not uninteresting:

"It is undoubtedly on account of inanition that a more or less enduring fall in temperature has been quite frequently (Wolff) observed in subacute and chronic mania, with symptoms of depression, chiefly melancholia, attended with stupor. But the interpretation we offer cannot be applied to all cases of this kind. Quite recently, indeed, Dr. Löwenhardt, of Sachsenberg, has reported two cases of insanity where the rectal temperature reached the almost incredible points of 31°, 32°, and 32.5° C. (87.8°, 89.6°, and 90.5° Fahr.), persisting several weeks, while nutrition did not appear to be affected in any noteworthy degree. One of these patients was excitable, the other erotic, and both took sufficient nourishment."

In the case above alluded to, that of *Hayvern*, who is now under sentence of death in Montreal gaol, Dr. J. Howard testified that he had found the temperature (only axillary, most probably) 92.5° Fahr., but three (we believe) distinguished physicians testified that they had never met with so low a degree unless in moribund persons, and the Judge characterized Dr. Howard as a blind enthusiast! The old adage, "*ne sutor ultra crepidam*," is an admonition that might profitably not be ignored either by learned judges, or by medical witnesses; "there are more things in heaven and earth than their philosophy may have dreamt of." A few years ago two conceited surgeons, of London, swore that a lunatic could not have two or three ribs broken, without giving indications of subsequent pain. Every asylum physician in Europe and America laughed at their stilt-walking ignorance. Dr. Howard may now very excusably turn the tables on his poorly-read confrères. With

the corroboration of Charcot, Wolff and Löwenhardt, Dr. Howard may well afford to disregard the pedantic criticism of his medical opponents, and the opprobrium cast on him by a judicial cobbler, who, overlooking his last, sticks his awl into his own thigh.

GENERAL INDEX TO ZIEMSEN'S CYCLOPÆDIA. New York: Wm. Wood & Co. Toronto: Willing & Williamson.

The profession are much indebted to Messrs. Wood & Co. for the admirable manner in which they have issued this most elaborate and comprehensive work. The 18th and 19th volumes we presume have been judged more suited for a German stand-point of State Medicine and Hygiene, therefore Dr. Buck's two volumes on Public Health have been furnished the subscribers in lieu. On reference to the index, all the articles in the 18th and 19th volumes—which we have not received, consequently conclude have not been translated for this edition—we find to be on subjects directly or indirectly bearing on hygiene. The index is numbered volume xx. and contains no less than 499 pages. Comment is needless on the exhaustive nature of a work that requires for index 499 closely printed pages.

A MANUAL ON DISEASES OF THE EYE AND EAR. For the use of Students and Practitioners. By W. F. Mittendorf, M.D. New York: G. P. Putnam's Sons.

The Author has managed to compress into one volume of moderate size a pretty full account of the diseases of both the eye and ear—a combination which will be appreciated by many. The work embodies the recent advances on these subjects, and will prove an excellent text-book for advanced students, as well as a reliable guide for general practitioners. The value of the book is enhanced by ophthalmoscopic plates from the works of Liebreich and Wells', and coloured illustrations from Sichel's Atlas; and also by a plate shewing various appearances of the drum-head after Politzer.

CHAMPIONNIERE'S ANTISEPTIC SURGERY. The Principles, Modes of Application and Results of the Lister dressing. Translated from the French by Frederic Henry Gerrish, A.M., M.D., Bowdoin College, Maine. Portland: Loring, Short and Harmon. Toronto: Willing and Williamson. Price \$2.25.

This is the first work on Antiseptic Surgery published in America, and should be in the hands of every practitioner who desires to treat wounds by the Listerian Method. It contains all the information necessary to enable any medical practitioner to apply this dressing without difficulty, and in full consonance with the Listerian theory. While all may not agree as to the necessity and utility of this method of treating wounds, none should be ignorant of the details and the theory upon which the practice is based. All this is fully taught in the volume before us.

THE PHYSICIANS HAND BOOK FOR 1882, by W. and A. D. Elmer, M.D. New York: W. A. Townsend, Publisher.

This work has been published for nearly a quarter of a century, and is no doubt well known to the profession in Canada and the United States. It contains features entirely different from other visiting lists. It is not only a visiting list, but also a ready reference book on diseases and their appropriate remedies, and contains a long list of remedial agents and their doses. The United States Government has adopted it for the use of the medical officers of the army and navy.

THE MEDICAL RECORD VISITING LIST FOR 1882. Published by Wm. Wood & Co., New York.

This list is arranged for 30 or 60 patients, and is very neatly gotten up, of convenient size, and handsomely bound and finished. In this latter respect it is superior to many in the market. It has one drawback however, especially for city practitioners, viz.: there is no column for the street or number of the residence of the patient. We hope to see this defect remedied in future editions.

Births, Marriages and Deaths.

On the 27th of September, J. H. Morrison, M.A., M.D., F.A.Sc., of St. John, N. B., to Ida, youngest daughter of Thomas W. Kierstead, Esq., of Rothsay, N. B.

On the 16th of November, J. L. H. Neilson, M.D., Surgeon-Major "B." Battery, to Wilmot, eldest daughter of Major J. B. Ridout, Kingston, Ont.

In Detroit, Mich., on the 22nd October, Dr. N. Munro, formerly of Brucefield, Ont.

At Stella, Amherst Island, on the 24th of Oct., William G. Middleton, M.D.

On the 17th of November, Dr. A. McMichael, of Gorrie, aged 41 years.

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FERRI, (Quevenne's) 1 gr.	1 gr. }	Tonic.	1 to 3	50
"	2 grs. }	Tonic.	1 to 2	75
"	CARB. (Vallet's) U. S. P. 3 grs.	Tonic.	1 to 4	40
"	CITRAT. 2 grs.	Tonic.	1 to 3	50
"	COMP. U. S. P.	Tonic, Emmenagogue.	2 to 3	40
"	IODID. 1 gr.	Tonic, Alternative.	1 to 2	65
"	LACTAT. 1 gr.	Tonic.	1 to 2	50
"	PYROPHOS. 1 gr.	Tonic.	1 to 2	40
"	VALER. 1 gr.	Tonic, Antispasmodic.	1 to 2	1 00
"	ET QUAS. ET NUC. VOM. { Fer. per Hydrogen, 1 1/2 gr. } { Ext. Quassia, 1 gr. } { Nuc. Vom. 1/2 gr. } { Pulv. Saponis, 1/2 gr. }	Tonic, Nerve Stimulant.	1 to 2	75
"	ET QUIN. Cit. 1 gr.	Tonic, Antiperiodic.	1 to 2	75
"	ET STRYCHNINÆ, 1 three times a day.	Tonic, Antiperiodic.	1 to 2	1 40
"	{ Strychnia, 1-60 gr. } { Ferrum per Hydrog. (Quevenne's) 2 grs. }	Tonic, Nerve Stimulant.	1 to 2	75
"	ET STRYCHNINÆ CIT. { Strych. Cit. 1-50 gr. } { Ferri Cit. 1 gr. }	Tonic, Nerve Stimulant.	1 to 2	75
GAMBOGLE COMP. { Pulv. Gambogiae } { Aloes Socot. } { Zingib. Jam Saponis, }		Active Purgative.	2 to 5	40
GENT. COMP. { Ext. Gentian, 1/2 gr. } { Fv. Aloes Soc. 1/2 gr. }		Tonic, Purgative.	2 to 4	40
"	{ Ol. Carui, 1-5 gr. }			
GONORRHOEA, { Pulv. Cubebe, 2 grs. } { Bals. Copalb. Solid, 1 gr. } { Ferri Sulph. 1/2 gr. Vener. Terebinth 1 1/2 gr. }		Tonic, Alternative to Mucous Membrane.	1 to 3	60
HEPATIC, { Pil. Hydrarg. 3 grs. } { Ext. Coloc. Comp. 1 gr. } { Hyoscyam. 1 gr. }		Cholagogue Cathartic.	1 to 2	80
HOOPEE (Female Pills) 2 1/2 grs. { Aloes Socot. } { Ferri Sulph. Exsic. } { Ext. Hellebore, } { Pulv. Myrrh, } { Saponis, } { Canella, } { Zing. Jamaica, }		Emmenagogue.	1 to 3	40
HYDRARGYRI, U. S. P., 3 grs.		Mercurial Purgative.	2 to 3	40
"	5 grs.	Mercurial Purgative.	1 to 2	50
"	Comp. { Mass. Hydrarg. 1 gr. } { Pulv. Opii, 1/2 gr. } { Ipecac. 1/2 gr. }	Mercurial Alternative.	1 to 2	75
"	Iod. et Opii, { Hyd. Iodid. 1 gr. } { Pulv. Opii, 1/2 gr. }	Mercurial Alternative.	1 to 2	75
IODIFORMI ET FERRI { Ferrum per Hydrog., 1 1/2 gr. } { Iodoform, 1 gr. }		Tonic Alternative.	1 to 2	2
IODIFORM. 1 gr.		Tonic, Alternative.	1 to 2	1 00
IPECAC ET OPII, 3 1/2 grs. (Pulv. Doveri, U. S. P.)		Anodyne, Soporific.	1 to 3	50
"	5 grs.		1 to 2	85
IRISIN COMP. { Irisin, 1/2 gr. } { Podophyllin, 1-10 gr. } { Strychnia, 1-40 gr. }		Cathartic, Nerve Stimulant.	1 to 3	50
LEPTAND. COMP. { Leptandrin, 1 gr. } { Podophyllin, 1/2 gr. }		Laxative, Diuretic.	1 to 2	1 00
LEPTANDRIN, 1 gr.		Cathartic.	2	1 75
LUPULIN, 3 grs.		Anodyne.	2 to 4	40
MORPHIA COMP. { Morph. Sulph. 1/2 gr. } { Tart. Emetic, 1/2 gr. } { Calomel, 1/2 gr. }		Anodyne, Febrifuge.	1	1 50
NEURALGIC, { Quinia Sulph. 2 grs. } { Morphia Sulph. 1-20 gr. } { Strychnia, 1-30 gr. } { Acid Arsenious, 1-20 gr. } { Ext. Aconiti, 1/2 gr. }		Tonic, Alternative, Anodyne.	1 to 3	3 00
NEURALGIC. (Brown-Sequard.) { Ext. Hyoscyam, 1/2 gr. } { Conii, 1/2 gr. } { Ignat. Am. 1/2 gr. } { Opii, 1/2 gr. } { Aconiti, 1/2 gr. } { Cannab. L. 1/2 gr. } { Stramon. 1-5 gr. } { Bellad., 1/2 gr. }		Anodyne.	1	2 00
OPII, U. S. P., 1 gr.		Anodyne	1	60
"	ET CAMPHORÆ, { Pulv. Opii, 1 gr. } { Camphoræ, 2 grs. }	Anodyne, Nerve Sedative.	1	80
"	ET CAMPHORÆ, ET TANNIN. { Pulv. Opii, 1/2 gr. } { Camphoræ, 1 gr. } { Acid Tannic, 2 grs. }	Anodyne, Astringent.	1 to 3	80
"	ET PLUMBI ACET. { Pulv. Opii, 1/2 gr. } { Plumbi Acetas, 1 1/2 grs. }	Anodyne, Sedative.	1 to 2	60
PHOSPHORUS COMP. { Phosphorus, 1-100 gr. } { Ext. Nuc. Vomica, 1/2 gr. }		Nerve Tonic.	1 to 4	1 50
PHOSPHORUS, 1-50 gr., 1-25 gr.		Nervine Stimulant.	1 to 2	1 00
PHOSPHORUS, 1-100 gr.		Nervous Stimulant.	1 to 4	1 00
PHOSPHORUS, IRON AND NUX VOM. { Phosphorus, 1-100 gr. } { Ferri Carb. (Vallet's) 1 gr. } { Ext. Nuc. Vom. 1/2 gr. }		Nervous Stimulant, Tonic.	1 to 3	1 50
POTASS. BROMID. 1 gr.		Nervous Sedative.	2 to 5	75
"	5 grs.	Alternative.	1 to 2	1 25
"	2 grs.		1 to 3	85
PODOPHYLLIN COMP. (Eclectica.) { Podophyllin, 1/2 gr. } { Leptandrin, 1-10 gr. } { Juglandin, 1-10 gr. } { Macrocin, 1-32 gr. } { Ol. Capsici, }		Purgative.	2 to 4	75
PODOPHYLLIN ET BELLAD. { Podophyllin, 1/2 gr. } { Ext. Bellad., 1/2 gr. } { Ol. Res. Capsici, 1/2 gr. } { Saccharum Lact. }		Stimulating Laxative. Mild	1 to 3	75

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QUININE SULPH. ½ gr.	Cathartic.	1	75
" " 1 gr.	Tonic, Antiperiodic.	1 to 4	90
" " 2 grs.	Tonic, Antiperiodic.	1 to 3	1 40
" " 3 grs.	Tonic, Antiperiodic.	1 to 3	2 75
" " 4 grs.	Tonic, Antiperiodic.	1 to 2	4 00
" COMP. { Quin. Sulph. 1 gr. } immediately { Ferri Carb. 2 grs. } after { Aci. Arsenious, 1-60 gr. } each meal.	Tonic, Antiperiodic.	1 to 2	1 75
ET EXT. BELLADON. { Quinine Sulph. 1 gr. } { Ext. Belladon, ¼ gr. }	Nerve Tonic, Antiperiodic.	1 to 2	1 75
ET FERRI, { Quin. Sulph. 1 gr. } { Ferrum per Hydros. (Quevennes) 1 gr. }	Tonic, Antiperiodic.	1 to 2	1 75
QUININE ET FERRI ET STRYCHNINE, { Quin. Sulph. 1 gr. } { Ferri Carb. (Vallet's) 2 grs. }	Tonic, Antiperiodic.	1 to 2	1 75
" { Strych. Sulph. 1-60 gr. }			
QUININE ET FERRI ET STRYCH. PHOS. { Phos. Quinia, 1 gr. } { " Iron, 1 gr. } { " Strychnia, 1-60 gr. }	Tonic, Antiperiodic.	1 to 2	1 75
" ET FERRI, Valer, 2 grs.	Tonic, Nerve Sedative.	1 to 2	3 50
QUININE ET FERRI CARB. { Quinia, 1 gr. } { Ferri Carb. (Vallet's) 2 grs. }	Tonic, Antiperiodic.	1 to 2	1 75
" ET HYDRARG. { Quin. Sulph. 1 gr. } { Mass. Hydrarg. 2 grs. } { Oleo-resin. Piper. Nig. ¼ gr. }	Tonic, Antiperiodic.	1 to 2	1 75
QUINIA, IODOFORM AND IRON { Iodoform. 1 gr. } { Ferri Carb. (Vallet's) 2 grs. } { Quinia Sul. ¼ gr. }	Tonic, Alternative.	1 to 2	3 00
QUININE ET STRYCHNINE { Quinia Sul. 1 gr. } { Strychnia, 1-60 gr. }	Tonic, Nerve Stimulant.	1 to 2	1 75
QUINIA, Valerianate, ¼ gr.	Tonic, Nervine.	1 to 2	2 00
RHEI ET HYDRAEG { Pulv. Rhei, 3 grs. } { Mass. Hydrarg. 2 grs. } { Soda Carb. Exs. 1 gr. }	Cholagogue Cathartic.	2 to 6	80
RHEI, U. S. P. { Pulv. Rhei, 3 grs. } { Saponis, 1 gr. }	Gentle Laxative.	1 to 5	75
RHEI COMP. U. S. P. { Pulv. Rhei, 2 grs. } { Aloes Socot, 1½ grs. } { Myrrh, 1 gr. } { Ol. Menth. Pip. 1 gr. }	Purgative.	2 to 4	75
RHEUMATIC, { Ext. Coloc. C. 1½ grs. } { " Colchid. Acet. 1 gr. } { " Hyoscyam. ¼ gr. } { Hyd. Chlor. Mit. ¼ gr. }	Anti-Rheumatic, Purgative.	1 to 3	90
SANTONIN, 1 gr.	Anthelmintic.	1 to 3	1 00
SCILLÆ COMP. U. S. P. { Pulv. Scillæ, ½ gr. } { Zingib. Jamaica, 1 gr. } { Gum Ammoniac, 1 gr. } { Pulv. Saponis, 1½ gr. }	Expectorant, Diuretic.	1 to 3	50
STOMACHICA, (Lady Webster's Dinner Pills, 3 grs.) { Aloes Soc. } { Gum Mastich, } { Flor. Rosæ. }	Stimulating Purgative.	1 to 2	50
SYPHILITIC, { Potass. Iod. 2½ grs. } { Hyd. Chlor. Corros. 1-40 gr. }	Specific Alternative.	1 to 2	1 00
TRIPLEX, { Aloes Socot, 2 grs. } { Mass. Hydrarg. 1 gr. } { Podophyllin, ¼ gr. }	Purgative.	2 to 4	75
ZINCI VALERIAN. 1 gr.	Antispasmodic.	1 to 3	1 00

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ACID, Arsenious, 1-20, 1-30 and 1-50 grs.	Antiperiodic, Alternative.	1 to 2	40
ACONITIA, 1-60 gr.	Nerve Sedative.	1 to 2	75
ATROPIA, 1-60 gr.	Anodyne.	1 to 2	75
CORROSIVE SUBLIMATE, 1-12, 1-20 and 1-40 grs.	Mercurial Alternative.	1 to 2	40
CAULOPHYLLIN, 1-10 gr.	Emmenagogue.	1 to 4	40
CIMICIFUGIN, 1-10 gr.	Tonic, Nerve Stimulant.	1 to 4	40
DIGITALIN, 1-60 gr.	Arterial Sedative.	1 to 2	75
ELATERIUM, (Clutterbuck's) 1-10 gr.	Diuretic Hydragogue, Cathartic.	1 to 2	95
EXTRACT Belladonna, (Eng.) ¼ gr.	Anodyne.	1 to 3	40
" Ignatia Amara, ¼ gr.	Nerve Sedative.	1 to 2	50
" Cannabis Indica, ¼ gr.	Anodyne.	1 to 4	60
" Hyoscyamus, (Eng.) ¼ gr.	Nerve Stimulant.	1 to 3	40
" Nuc. Vomica, ¼ and ½ gr.	Nerve Sedative.	1 to 3	40
GELSEMIN ¼ gr.	Arterial Sedative.	1 to 2	75
HYDRASTIN, ½ gr.	Emetic, Diuretic, Cathartic.	1 to 2	95
HELONIN, 1-10 gr.	Cathartic.	1 to 2	50
LEPTANDRIN, ¼ gr.	Cathartic.	1 to 4	40
" ½ gr.	Cathartic.	1 to 4	50
MERCURY, Iodide, ¼ gr.	Alternative.	1 to 4	40
" Red, 1-16 gr.	Alternative.	1 to 4	40
MORPHIA, Acet. ¼ gr.	Anodyne.	1 to 2	70
" Sulphate, 1-10 gr.	Anodyne.	1 to 2	60
" " ¼ gr.	Anodyne.	1 to 2	70
" " 1-6 "	Anodyne.	1 to 2	80
" " ¼ "	Anodyne.	1 to 2	1 00
" Valerianate, ¼ "	Anodyne.	1 to 2	1 00
PODOPHYLLIN, 1-10 gr.	Cathartic.	1 to 4	40
" ¼ gr.	Cathartic.	1 to 4	40
" ½ gr.	Cathartic.	1 to 2	50
" COMP. { Podophyllin, ½ gr. } { Ext. Hyoscyam, ¼ gr. } { " Nuc. Vomica, 1-16 gr. }	Cathartic and Tonic.	1 to 2	75
SILVER, Nitrate, ¼ gr.	Alternative, to Mucous Memb'ne.	1 to 4	75
" Iodide, ¼ gr.	Alternative, to Mucous Memb'ne.	1 to 4	75
STRYCHNIA, 1-16, 1-20, 1-30, 1-32, 1-40 and 1-60 gr.	Nerve Stimulant, Tonic.	1 to 3	40

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PERFECT, PERMANENT, PALATABLE.

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FORMULA.—50 per cent. of pure Cod Liver Oil, 6 grs. of the Hypophosphite of Lime, and 3 grs. of the Hypophosphite of Soda to a fluid ounce.

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Messrs. SCOTT & BOWNE: I have prescribed your emulsion of Cod Liver Oil with Hypophosphites for the past two years, and found it more agreeable to the stomach, and have better results from its use than from any other preparation of the kind I have tried. Halifax, N.S., Nov. 19, 1880.

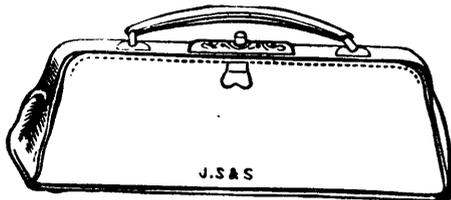
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T. J. O. EARLE, M.D.

St. John, N.B. I have used for some time, and prescribed Scott's Emulsion of Cod Liver Oil, and find it an excellent fixed preparation, agreeing well with the stomach, easily taken, and its continued use adding greatly to the strength and comfort of the patient. A. H. PECK, M.D., Penn. Med. Co lege.

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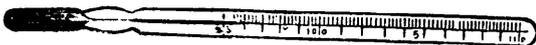
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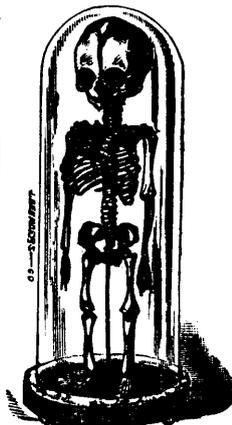
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THE COLLEGIATE YEAR in this Institution embraces the Regular Winter Session and a Spring Session.

THE REGULAR SESSION will begin on Wednesday, September 21, 1881, and end about the middle of March, 1882. During this Session, in addition to four didactic lectures on every weekday except Saturday, two or three hours are daily allotted to clinical instruction. Attendance upon two courses of lectures is required for graduation.

THE SPRING SESSION consists chiefly of recitations from Text-Books. This Session begins about the middle of March and continues until the middle of June. During this Session, daily recitations in all the departments are held by a corps of Examiners appointed by the Faculty. Short courses of lectures are given on special subjects, and regular clinics are held in the Hospital and in the College building.

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PROF. AUSTIN FLINT, JR.,
SECRETARY BELLEVUE HOSPITAL MEDICAL COLLEGE.

COPY OF A LETTER

KINDLY WRITTEN TO MR. FELLOWS

By LENNOX BROWNE, F.R.C.S.,

Senior Surgeon to the Central London Throat and Ear Hospital,
Surg. and Aural Surg. Roy. Soc. of Musicians.

Author of "*The Throat and its Diseases*," "*Medical Hints on the Production and Management of the Singing Voice*," "*The Mechanism of Voice, with Atlas*," "*The Mechanism of Hearing, with Atlas*," and others.

36 Weymouth Street, Portland Place,
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To JAMES I. FELLOWS.

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Taking it for granted that Hypophosphites are now recognized as most valuable medicinal agents, in the treatment of diseases threatening or assuming a tubercular character, there can be no doubt in my mind that your preparation possesses very many advantages over others of a similar character, as also that its combinations are most skilfully proportioned and therapeutically most useful.

The cases in which I have found "**Fellows' Hypophosphites**" to be of service have been principally as follows :

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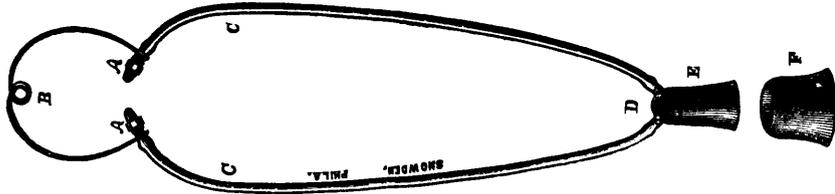
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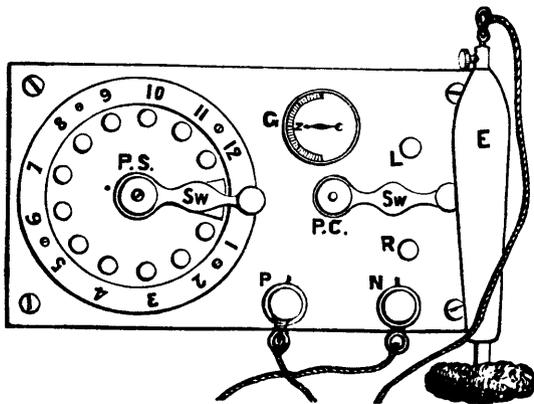
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<p>PUT UP —IN— 1 lb. Cans 5 “ 10 “ 25 “ 50 “ 100 “</p>	<p>REGISTERED</p>  <p>TRADE MARK.</p> <p>Unguentum Petrolei</p> <p>Prepared by E.F. Houghton & Co. Philadelphia, U.S.A.</p>	<p>SAMPLES furnished on application. — THE POST OFFICE LAWS FORBID anything of an oleaginous nature being sent through the mail.</p>
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In chemical composition, Cosmoline [Unguentum Petrolei] is an oleaginous hydrocarbon, corresponding to the heavy petroleum oils, and containing a large amount of the paraffines and olefines of formula C₁₆H₃₄ & C₁₆H₃₂. It contains but a small percentage of the paraffines and olefines, corresponding to the formula C₇H₁₆ and C₇H₁₄, respectively, or other chemicals are employed, and no injurious additions of any kind are made to the natural product. The result is a semi-solid, translucent substance, with a faint odor, an unctuous feel and a slightly tarry taste.

Cosmoline [Unguentum Petrolei] melts at about 100° Fah. (38° Cent.); and boils at about 625° Fah. (329° Cent.); its specific gravity is about 0.875 at 60° Fah.

As it contains no oxidizable or organic matter capable of change by putrefaction or fermentation, and is absolutely without affinity for moisture, it offers to the profession an admirable unguent, which can never decompose, ferment, or become rancid in any climate or temperature.

291 MADISON AVENUE, NEW YORK, February 26th, 1878.

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ALFRED C. POST, M.D., LL.D.,

Emeritus Professor of Clinical Surgery in the University of New York, Visiting Surgeon to Presbyterian Hospital, etc.

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Very respectfully, yours,

FRANK WOODBURY, M.D.;
Physician to German Hospital.

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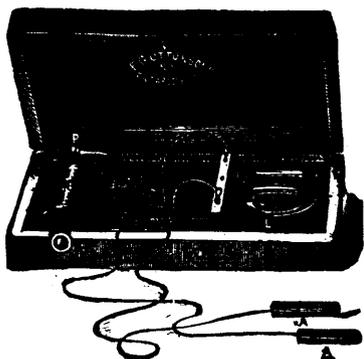
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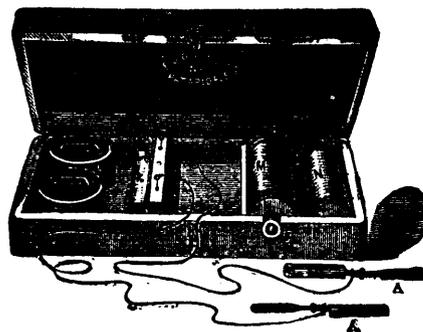
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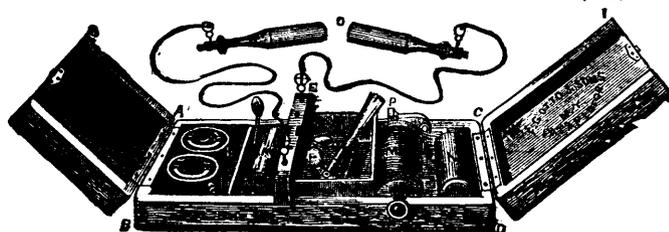
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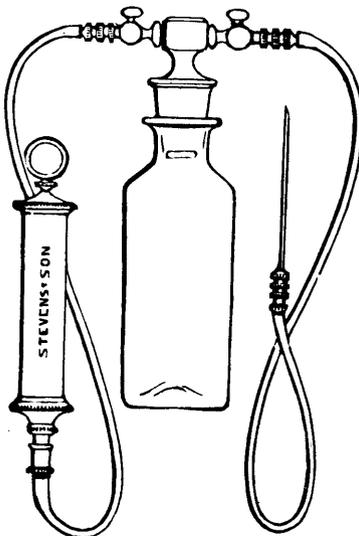
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