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

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No. 2. }

TORONTO, OCTOBER 1, 1881.

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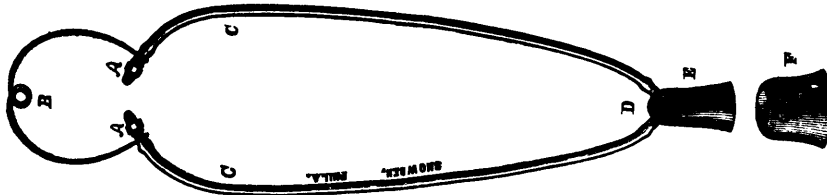
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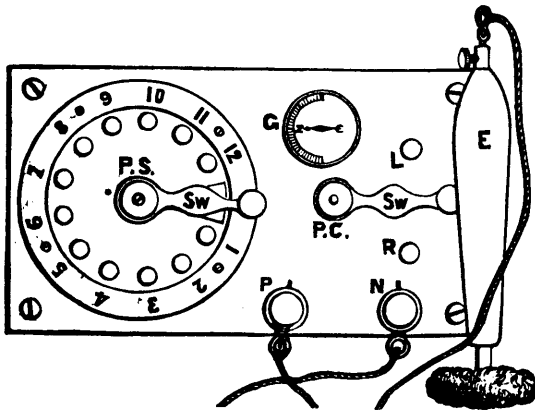
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MATRICULATION.—Students are advised, before commencing their medical studies, to pass the Matriculation Examination of the Medical Council of Ontario or Quebec, either of which will be accepted by the University of Trinity College. Students from the Maritime Provinces, Ontario, or the United States, who do not desire to pass the Council examination, will be admitted to attendance on lectures, but must present themselves for the matriculation examination of Trinity University, on the 2nd Saturday of October or March, or the matriculation in Toronto University at the usual time. The matriculation of the Universities may be passed at any time before graduation.

REQUIREMENTS FOR DEGREE.—The candidate must be 21 years of age; and (1) must have studied medicine four years, and during that time attended *four winter sessions*; or (2) present a certificate of one year's study with a medical practitioner, and tickets of attendance upon *three winter sessions*.

HOSPITALS.—The Toronto General Hospital has a very large number of patients in the wards, who are visited daily by the medical officers in attendance. The attendance of out-door patients daily is also very large, and thus abundant opportunities are enjoyed by students, for acquiring a familiar knowledge of Practical Medicine and Surgery, including not merely major operations, but minor Surgery of every kind, ordinary Medical Practice, the treatment of Venereal Diseases, and the Diseases of Women and Children. The Burnside Lying-in Hospital, amalgamated with the Toronto General Hospital, has recently had its staff largely increased, and will afford special and valuable facilities for the study of Practical Midwifery. The large new building, close to the Hospital and School, will be very convenient for students attending its practice.

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CLINICAL TEACHING.—Daily clinical instruction in the spacious wards and theatre of the Hospital, will be given by members of the Hospital Staff on all interesting cases, Medical and Surgical. Arrangements have also been recently made for the delivery of *daily clinics*, in the forenoon, at the Hospital, by the respective professors in medicine and surgery of both schools, in addition to the usual clinics from 1 to 3 p.m.

PRACTICAL ANATOMY.—The dissecting room is large, well lighted and ventilated, and abundantly provided with excellent material. The demonstrator and his assistants will be in attendance daily from 10 to 12 a.m.

FEES FOR THE COURSE.—The Fee for Anatomy, Surgery, Practice of Medicine, Obstetrics, Materia Medica, Physiology, and General Chemistry, \$12 each. Practical Anatomy, Practical Chemistry, Medical Jurisprudence, and Microscopy, \$3 each; Clinical Medicine and Clinical Surgery, \$6 each; Botany and Sanitary Science, \$5 each; Registration Fee (payable once only), \$5. Students are free in all the regular Branches after having attended the School during two full courses.

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Fig 43.—No. 2.

These cuts (two-thirds the actual size) represent a New Hypodermic Syringe of our Manufacture. With the exception of the needles, it is of German Silver, a material chosen as possessing, next to steel, the greatest rigidity and durability, while free from liability to oxidation. The barrel is formed by a process peculiar to ourselves, securing uniformity of calibre without soldered joint or seam. It is plated inside and outside with nickel. The piston is packed in the double parachute form, with leather prepared expressly for the purpose. It will be found to retain its elasticity, to operate smoothly, to resist all tendency of fluid to pass above, as of air below it. A nicely-engraved scale upon the piston-rod indicates minims, thirty being the capacity of the Syringe.

Syringes Nos. 2, 3 and 4 have also a screw thread upon the piston-rod, and a traverse nut, thereby favoring the utmost nicety in the graduation of doses.

No. 3, Compact, has hollow piston-rod to receive one needle, also a protecting cover and fluid retainer; it may be carried in the Pocket Instrument or Vial Case, or without any case.

No. 4, Compact, is like No. 3, with the addition of a second needle, carried upon the Syringe in the usual place, protected by a metal shield. Nos. 1 and 2 are put up in neat morocco-covered case, with vial.

Two sizes of needles are furnished with each instrument, Nos. 1, 2 and 4; one only with No. 3. They are of refined steel, carefully tempered, and thoroughly plated with gold; they are of small diameter and large relative calibre, sharpened to such an angle as will offer least resistance to penetration, and therefore cause least pain. At the point of union with the socket they are reinforced with an outer covering of German silver, thereby overcoming the tendency to become broken at this place. They are connected with the barrels by a screw thread.

Prices: No. 1, \$3.50. No. 2, \$4.00. Postage, .03.
 " No. 3, \$2.50. No. 4, \$3.50. " .02.

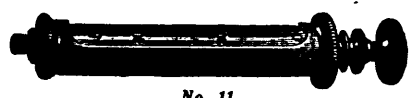
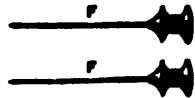


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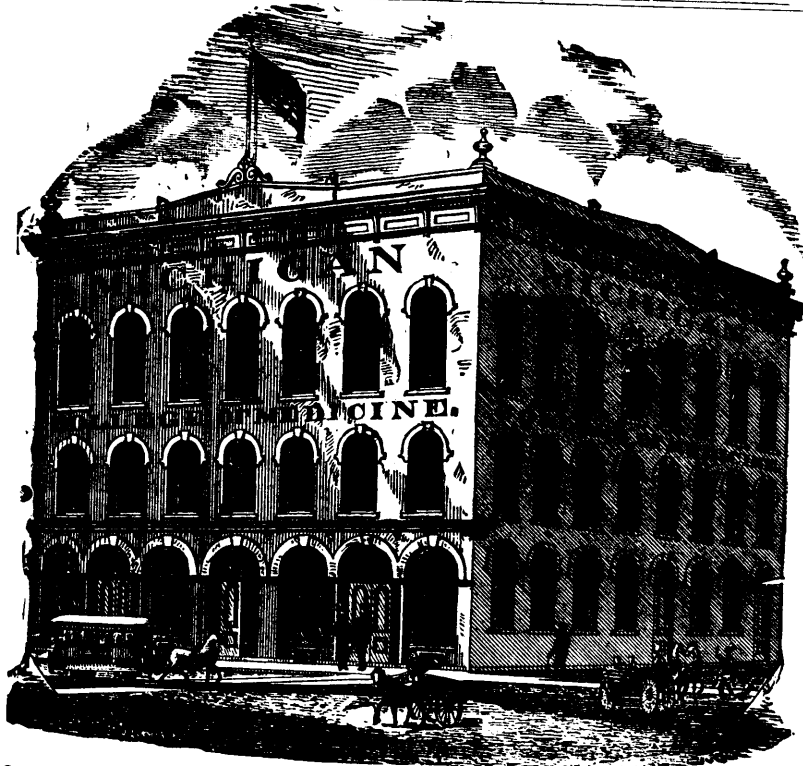
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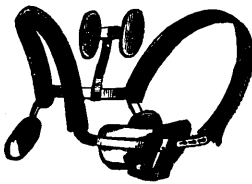
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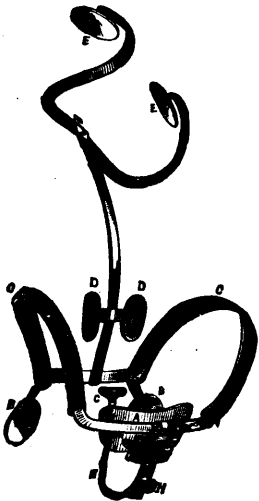
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Fig. No. 3 a comfortable support to the abdomen, but is not so effective as No. 8 in supporting the bowels, spine or chest.

THE IMPROVED BODY BRACE.
FIG. 3.



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



No. 8 is a general and grateful support to the hips, abdomen, chest, and spine, simultaneously and by itself alone, is ordinarily successful; but when not so particularly in spinal and uterine affections, the corresponding attachments are required.

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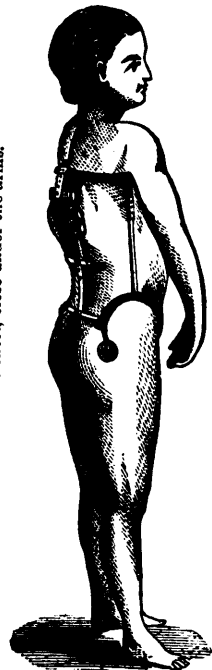
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FIG. 19.



HOW TO MEASURE FOR ANY OF THESE APPLIANCES:
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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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* * * * * Sugar-coated Pills are more soluble than gelatine-coated or compressed pills.—Prof. Remington's paper read before American Pharmaceutical Association, Boston, 1875.

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FORMULÆ AND THERAPEUTICS.		MEDICAL PROPERTIES. Doses. Each.	
			PER 100
AGUE,	{ Chinoidin, 2 grs. } { Ext. Col. Co. $\frac{1}{2}$ " } { Ol. Pip. Nig. 1-8 " } { Ferr. Sul. $\frac{1}{2}$ " }	Antiperiodic.	2 to 4 75
ALOES, U. S. P.	{ Pulv. Aloes Socot, 2 grs. } { Saponis, 2 grs. }	Stimulating Purgative. Directed to lower portion Alimen'y Canal	1 to 3 40
"	COMP. (Pil. Gent Comp.)	Tonic, Purgative.	2 to 4 40
"	ET ASSAFETID. { Pulv. Aloes Socot, 1½ grs. } { Assafetida, 1½ grs. } { Pulv. Saponis, 1½ grs. }	Purgative, Antispasmodic.	2 to 5 40
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"	ET NUC. VOMICA. { Pulv. Aloes Soc: 1½ grs. } { Ext. Nuc. Vomica, ½ gr. }	Tonic, Purgative.	1 to 2
ALTERNATIVE,	{ Mass. Hydrag. 1 gr. } { Pulv. Ophi. ½ gr. } { Pulv. Ipecac., ¼ gr. }	Alternative, with tendency to Mercurial Impression.	1 to 2 50
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A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

VOL. XIV. TORONTO, OCT. 1ST, 1881. No. 2.

Original Communications.

TREATMENT OF SCARLATINA MALIGNA BY THE USE OF COLD WATER AND ICE.

BY A. WORTHINGTON, M.D., IROQUOIS, ONT.

(Read before the Canada Medical Association at Halifax,
N.S., August 3rd, 1881.)

MR. PRESIDENT AND GENTLEMEN,—The purpose of this paper is to place before you my brief experience in the treatment of Scarlatina Maligna by the use of cold water and ice, which I was induced to adopt in 1855, and since then have continued and still continue to use. Should the interests of the profession be benefited by my experience my object will be attained.

Scarlet fever is a disease always to be dreaded by the physician, as no calculation can be made when he may not meet a malignant case, even in the milder forms of the epidemic. It exhibits some striking peculiarities. The onset may be sudden and violent, destroying life in as short a time as does cerebro-spinal meningitis; or a case may run a violent course without the slightest appearance of the characteristic eruption; or a very mild attack, without the eruption, may be followed during desquamation by acute disease of the kidneys. The throat may be attacked in the most violent manner without eruption and the patient continue conscious throughout the attack. Patches of fibrinous exudation may appear upon the fauces, and rapid suppuration of the submucous tissue of the pharynx may occur, not unlike the sudden formation of pus in the severer forms of erysipelas; or the brain may first become involved, the poison rapidly assuming control, the normal cerebral functions ceases to be performed, and the patient lies in a muttering delirium, gradually deepening into coma, and if the malady remains

unchecked, death speedily puts an end to the scene. The peculiar features mentioned fell under my observation during the extensive and terrible epidemic of 1855-6, which prevailed in the County of Dundas, Ont. My first case occurred in the summer of 1852, the patient being a bright girl of three years. She was apparently asleep when I arrived. Her pulse was rapid; skin hot and breathing hurried. Her head seemed to be very hot. (No thermometers in use then.) In a few minutes she went into a violent convulsion, became comatose, and died that evening. A purplish rash was seen under the cuticle. The attack in this case was so overwhelming that I could do nothing. A few milder cases occurred, and I made use of the remedies recommended in our text-books, and succeeded in losing about one in three cases, or 33 per cent. The disastrous results of my efforts made such an impression upon me, that I decided not to attend scarlet fever patients, if I could avoid it, unless I could find some successful mode of treatment. During the following year, when looking up the literature of scarlatina, I came upon a small work on children, by J. F. Meigs, of Philadelphia, in which I found a letter to the author giving the history of a number of cases treated by cold sponging, ice to the throat, externally and internally, and ice-water poured over the head and body, nearly all of which recovered. This letter was written at the request of the author by Dr. Hiram Corsen, of Pennsylvania, in which he credits the origin of the cold water treatment to Dr. Samuel Jackson, whose articles on the subject appeared in the *American Journal of Medical Sciences* for May and August, 1847. The perusal of this letter fully decided me to make a fair trial of the cold treatment as soon as occasion should offer, or, in case of decided objection to cold, not to treat the case. I had but a short time to wait, as in the spring of 1855 the epidemic mentioned broke out and proved to be very malignant and extensive. It visited most of the families within my circle, and became a perfect terror to parents. I was called first to a family in the village of Iroquois, in which there were five children down with scarlet fever. I at once told the parents my convictions as to treatment, and obtained liberty to do as I pleased. The cases were severe, but not malignant. I had cloths wrung out of cold water and kept constantly about their necks, and cold water

poured over their heads, and their bodies and limbs sponged with cool water as often as needed to control the intense heat and prevent too much swelling of the neck. They all recovered, without any of the usual consequences, in about eight to ten days. The results noted in these cases were that the acute stage lasted about five days, and convalescence was very rapid after that. For nearly a year I was constantly in attendance on scarlet fever patients. Some amusing instances of prejudice to the use of cold water occurred. I was called about seven miles to a family, and found the mother with her face buried in her hands and resting on the table, sobbing bitterly. I asked her what the great trouble was, to which she replied that all the children had scarlet fever and were going to die. I replied that I thought they could be saved. She said you will not use any cold water, of course. I replied that if she did not wish any cold water used I did not wish to attend, as I could not ensure a favorable result. She gave a very reluctant consent, and, on looking around, I found all the children (nine) down with scarlet fever, three of whom (boys) were delirious, and had been for several hours. I directed large dishes to be placed at the bed of each, and a pail of cold water to be brought in. I filled a small pitcher and began pouring water on the head of one of the boys, but the mother, who had been watching my movements, placed her hand on his head to intercept the stream, moving her hand as I moved the pitcher. She soon grew tired and I had my own way. After about two hours of constant work, going from one to the other and using the water freely, both on their heads and necks, I succeeded in restoring reason. I had now the full confidence of the parents. Two faithful attendants were procured, and I gave them strict orders not to leave them under any circumstances, and to pour water on their heads, as needed to prevent delirium, and to put thick cloths wrung out of cold water around their necks, and to change them every few minutes to control the swelling, and, if necessary, to pour the water on their necks for a few minutes at a time, should the swelling appear to increase. I may say here that in many instances the glands of the neck gave the first indication of the attack, and, if not interfered with, would in a few hours become so much swollen as to impede and finally to prevent deglutition and seriously interfere with

respiration. The pharynx, soft palate and tonsils, became intensely congested, and in the severest cases the color was quite purple. Patches of a dirty white color appeared on the soft palate and tonsils, and were not removable, and when the throat was first attacked it was decidedly the worst feature of the case, and, if permitted to run for 36 to 48 hours without check, could rarely be controlled, and was usually followed by delirium, coma and death. I returned the next morning to find that my instructions had been fully carried out, and my patients not only no worse, but were holding well up against the influence of the poison.

I gave only some compound jalap powder to move the bowels. My nine patients all recovered without any bad sequelæ. A peculiar feature in the oldest boy's case, and which I never saw in any other was, that desquamation of the entire mucous surface of the tongue took place in the form of blisters of the size of a five cent piece. He was in great misery for a week, but, with the use of cold and emollient applications, he was soon better. I may here remark that the few cases which took an adynamic form and in which the rash was seen of a dark red or purple color, always improved on reducing the temperature; the rash changing to a bright red and coming out fully to the surface. The application of cold to the entire surface caused the rash to disappear, if long continued; but it always returned with increasing temperature and improved in appearance, nor, as I at first apprehended, was there any danger from metastasis. Very soon after, I was called to see an only son, aged 17, who had been brought down so suddenly and violently that his mother was in great distress when I arrived. The rapidity and violence of the attack alarmed me, as I had not seen any recover with a similar attack under the usual form of treatment. His mother at once asked me what the disease was and if I could save him. I told her that it was probably a very bad attack of scarlet fever, but that I thought I could get him through. She said, "You won't use cold water, will you?" I replied as in the other cases, that I would rather not take charge of the case, and prepared to leave, when she decided to place him under my control. The attack commenced early in the afternoon of this day, and his condition was (9 p.m.) as follows: Pulse 120, very hot; respiration hurried; was delirious and restless, and

could not be roused. I had a pail of the coldest water that could be brought in, and while two assistants held his head clear of the bed, I poured the water gently all over it for nearly an hour, when he could be roused, and with a little further application he became quite himself. I directed the nurse, in anticipation of the throat difficulty, to apply thick cloths wrung out of the coldest water and frequently changed; but, after all the precautions, I had to remove the cloths and pour the water over his neck for some time and repeat the process from time to time to keep the swelling under control. The rash appeared during the night. I found on remitting the applications for even a short time the rash became abundant, the skin intensely hot, and the delirium returned. (He had no medicine, except to move his bowels as needed.) The constant application of cold water, more especially to the neck and head, was continued through the first four days and nights of the attack, the crisis usually taking place on the fifth day, which proved true in this case. He was able to be up on the seventh day and required but little more attendance. Several cases came under my care where I could not inspire confidence in the cold treatment, and in every such case the disease either ran a lengthened course and the patient finally succumbed, or convalesced slowly with the loss or impairment of hearing, smell, or the destruction of a portion of the soft palate and nasal mucous lining. During the prevalence of this epidemic two rather remarkable cases occurred. A. H., aged 19, requested me to examine her throat, in which there was a heightened color of the tonsils, but no swelling. I told her she was threatened with quinsy, gave a diaphoretic and desired her to leave school for a few days, and when home to apply a cold wet cloth to her throat. I was sent for in the afternoon and found her complaining of her throat very much, but could see only increased redness and a fulness of the soft palate. Pulse 100 and some fever, but nothing serious indicated. Sent for again about 9 p.m. same evening, and found all the parts within much congested, having a purplish-red appearance and considerably swollen. Externally, the neck, especially in the region of the parotid and sub-maxillary glands, was becoming enlarged. Pulse 130; skin very hot, and breathing hurried with great restless-

ness. Her mind remained clear throughout. I told the parents that there could be no doubt but it was malignant scarlatina, and that there was but one way to save her, and that was to apply cold in the most constant and energetic manner. Cloths were wrung out of the coldest water and put around the neck and changed every few minutes, and the water poured on occasionally to ensure a constant degree of cold. Her mouth and throat were frequently gargled with cold water, as ice could not be had. This gave great relief. No medicines or nourishment could be given, as she could swallow nothing. Second day—I had little hopes of my patient, but directed them not to intermit the treatment in the least. No fibrinous patches were to be seen, nor was there any appearance of rash throughout. Pulse same as yesterday and temperature very high. She was still conscious, but inclined to drowsiness and stupor. Third day—Patient much the same as yesterday; but there is a feeling of great fulness in the throat and sense of suffocation. Pulse 134; very compressible and temperature very high; extremities inclined to be cool. She is greatly prostrated,—cannot swallow the least thing. Between my visits this day an abscess in the throat broke and discharged several ounces of pus and blood, nearly suffocating the patient. I found my patient in the evening more calm and breathing more easily. Pulse 120 and throat looking better. The tongue, as in every case, was intensely red. I directed a continuance of the treatment sufficient to control the fever, and to give milk as soon as she could take it. Fourth day—Much improved this morning—took some milk during the night—ordered chicken broth, and to keep the cold still to the throat. Fifth day—Patient rapidly convalescing. I had no further trouble, and at the end of three weeks she was again teaching. Case 2.—On the fifth day of the first case, her sister suffered an attack of the same character, and, if possible, more severe. It ran the same course and terminated in recovery in about the same time. The treatment was carried out with the same energy and perseverance as in case 1, and being earlier commenced, there was no suppuration—no appearance of rash, and desquamation followed in each case. Convalescence was equally rapid as in the first case. Was the disease communicated from 1st to 2nd

case? Was it scarlatina maligna? Two mild cases came under my notice with no appearance of rash, one of which was followed by dropsy. W. B., aged 40, sent for me during the night. I found him very uneasy and considerably alarmed about the swelling of his feet, legs and face, which had suddenly appeared. I declined doing anything, and said he should at once send for his regular medical attendant. He said he could not do so till morning, and he must have something to relieve his distress, and asked what his disease was. I replied that he had had scarlet fever, and dropsy had followed from exposure. Most of his family were sick with scarlet fever at this time. He said he had not been sick, but the doctor had given him some medicine for his appetite, but he knew he had not had scarlet fever. I gave him a strong purgative and left. The next day I received a note from his doctor, saying he could not attend and asking me to take charge of the case. He recovered under treatment for dropsy. The second case was my sister, who was attacked with all the usual symptoms of scarlet fever, which terminated in the usual manner, followed by desquamation, but there was never the slightest appearance of the characteristic eruption.

An epidemic of scarlatina occurred in 1863 in the northern part of Huron County, which proved fatal in a number of cases, where my former experience had led me to think they ought to have been saved by the cold water treatment, and I confess to considerable disappointment at my want of success, though on the whole the cold treatment was successful. There was a difference in a remarkable way in the character of the epidemics of 1855 and 1863. That of 1855, in most of the malignant cases, attacked the brain, and through it the nervous system, producing a tendency to death by coma, and indicating such a form of treatment as would relieve the brain from the overwhelming effects of the poison. This was most effectually found in the cold water treatment, very little support being needed; while in the epidemic of 1863 the heart seemed to be the point of attack, causing great debility and prostration, producing a tendency to death by asthenia, indicating the necessity of tonics and stimulants from the first, as also strong nutrition and moderate application of cold, more especially to the throat. The mind in the last mentioned epidemic usually remained clear,

and I have reason to think that if I had commenced the use of tonics and stimulants earlier I would have saved several patients who ultimately succumbed.

ON WATER ANALYSIS.

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I am frequently asked by both medical men and laymen to give some ready methods by which the fitness or unfitness of water for domestic purposes can be ascertained. In answering the question several difficulties present themselves. The cost of apparatus for a complete examination of water is a serious matter; few persons have the time or the inclination to carry out detailed chemical analyses, and, lastly, a conclusion as to the purity or impurity of water must be based upon a collation of all the evidence that can be obtained, rather than from the results of one or two tests. The vital importance of the subject, and the lively interest which is being awakened in regard to it, have led me to attempt the description of water analysis which will be sufficient for ordinary purposes, and at the same time fall within the means and the opportunities of every medical practitioner. Two years ago I imported from Savory & Moore, of London, one of Parke's Cabinets for water analysis. It cost me, inclusive of duty, about one hundred and fifty dollars, and nearly one-half of the contents was destroyed by breakage. As few would feel disposed to go to that expense, I have endeavored to meet the difficulty by preparing a small, cheap, and at the same time efficient case of chemicals and apparatus, which should not cost more than \$12 or \$14. The case is 18 inches long, 5 inches wide, and 9 inches high. It contains the following chemicals in three-ounce bottles:

Standard solution of nitrate of silver, solution of yellow chromate of potash, solution of soap, solution of nitrate of barium, two shaking bottles for soap test, Nessler's solution, dilute sulphuric acid, sol. of iodide of potassium and starch, oxalate of ammonium, standard sol. of ammonium chloride,

standard sol. of permanganate of potassium. The apparatus consists of 1 flask with ring for boiling, 2 india-rubber caps with two necks, 1 retort stand, 1 burette with clamp, india-rubber tubing, spirit lamp, 5 test tubes, glass rod, glass measure 50 C.C.

In the examination of water the coarser physical characters, such as color, smell, taste and transparency should first be noted. The *color* is best observed by pouring the water into a tall glass vessel and looking down upon it. Perfectly pure water has a bluish tint, and the bottom of the vessel is clearly seen through several feet of water, while some waters are so turbid as to obscure the bottom when only a few inches are looked through. A green color as a rule indicates vegetable impurity, a yellow or brown color (excepting in peat water), animal impurity. *Smell* is best observed by warming, boiling, or distilling the water, when characteristic odors are frequently given off. The evidence derived from an examination of the physical characters is very unreliable. We must, therefore, proceed to an examination of the dissolved solids which gives us the most valuable evidence. The examination is divided into the qualitative and quantitative :

I. *Qualitative*.—The most useful tests are the following :—

SUBSTANCES SOUGHT FOR.	RE-AGENTS TO BE USED, AND EFFECTS.
Reaction	Litmus and turmeric papers—usual red or brown reactions.
Lime	Oxalate of ammonium—white precipitate.
Chlorine	Nit. of silver and dilute nitric acid—white precipitate becoming lead color.
Nitrous acid	Iodide of potassium and starch in solution—a blue color.
Ammonia	Nessler's solution—a yellow color, or yellow-brown precipitate.
Nitric acid	Sol. of sulphate of iron and pure sulphuric acid—olive-colored zone.
Oxidizable matter, including organic matter	Permanganate of potassium—red color disappears.

II. *Quantitative*.

1. *Determination of Chlorine*.—Prepare a solution of nitrate of silver by dissolving 17 grammes in one litre of water. Take 100 C.C. of the water to be examined, place it in a white porcelain dish, add enough solution of yellow chromate of potash to make it just yellow. Then add the nitrate of

silver solution from a burette, and stir. A red color is produced which disappears as long as any chlorine is present. Stop when the least red tint is permanent, then read off the number of C.C. of silver nitrate used ; each of these represents 3.55 milligrammes of chlorine. Multiply by 10 to give the amount per litre, and this again by .07 for grains per gallon. Chlorine in water is very suspicious of the presence of the liquid excreta of men or animals. If, in addition, we find nitric and nitrous acids, ammonia and phosphoric acid, the evidence is very strong. Chlorine, however, may be due to strata containing chloride of sodium or calcium. In this case the water is alkaline from sodium carbonate. In some cases the chlorine is due to impregnation from sea water. It is then large in quantity, there is also magnesia and little evidence of organic matter.

2. *Hardness*.—This is estimated by Clarke's soap test, and by it we determine—

1. Total hardness, representing the aggregate earthy salts and free carbonic acid.
2. The removable hardness, or that which disappears on boiling.
3. The permanent hardness which is unaffected by boiling.

By the soap test can also be determined the amount of certain constituents, such as lime, magnesia, sulphuric acid, and free carbonic acid.

Apparatus required for the soap test.—Measure of 50 or 100 C.C. Burette divided into tenths of a cubic centimetre ; two or more stoppered bottles to hold about four ounces. We also require to have the following solutions :

1. *Standard Solution of Barium Nitrate*.—Dissolve .26 grammes of pure barium nitrate in one litre of water, or 18.2 grains to 1 gallon. A concentrated solution of ten times this strength may be made and diluted with 9 parts of water when used.

2. *Solution of Soap*.—Dissolve a piece of soft potash soap of the British Pharmacopœia in equal parts of water and alcohol ; filter and then graduate as follows :

Put 50 C.C. of the standard solution of barium nitrate into the shaking bottle, and add to it slowly the soap solution from the finely graduated burette. After each addition shake vigorously and place the bottle on its side. Continue this until you have a thin beady lather over the whole surface

permanent for five minutes. Read off the amount of soap solution used ; if exactly 2.2 C.C. have been taken the solution is correct. If less the soap solution must be diluted with spirit and water. The amount of dilution can be ascertained by a simple rule. Suppose 1.8 C.C. have been used and the whole of the unused soap solution measures 200 C.C., then

$$\text{As } 1.8 : 2.2 :: 200 : x \\ x = 244.4 \text{ C.C.}$$

The 200 C.C. must then be diluted with equal parts of spirit and water to 244.4 C.C.

With these solutions, and having all glasses, burette, etc., perfectly clean, for the least quantity of acid would destroy the accuracy of the process, we can proceed as follows :

1. To determine the total hardness of the water : Take 50 C.C. of the water in a stoppered bottle, and add the soap solution from the burette, shaking strongly after each addition until a lather permanent for five minutes spreads over the whole surface without any break. Then read off the number of tenths of soap solution used. From this number subtract 2, as that quantity is necessary to give a lather with 50 C.C. of the purest water. The soap solution which has been used indicates the hardness due to all the ingredients which can act upon it, as a rule, they are lime, magnesian salts, iron, and free carbonic acid. It is usual to express this hardness by degrees of Clark's scale. Though dependant upon various causes it is considered as so much calcium carbonate per gallon, one grain of calcium carbonate being one degree of Clark's scale.

The calculation is as follows : Each tenth of the soap solution corresponds to .25 milligrammes of calcium carbonate. Multiply this co-efficiently by the number of tenths of soap solution used, and the result is the hardness of 50 C.C. Multiply by 20 for the amount per litre, and by .07 for grains per gallon, or degrees of Clark's scale.

To obtain the permanent hardness.—Boil a known quantity briskly for half an hour, replacing the loss with distilled water from time to time, cork the vessel and allow it to cool. Then determine the hardness in 50 C.C. as before.

Removable hardness.—This is very easily calculated, for we have only to take the difference between the total hardness and the permanent hardness and express the result as removable

hardness. The permanent hardness is the most important, for it represents the most objectionable earthy salts, viz. : calcium sulphate and chloride, and the magnesian salts. The permanent hardness of good water should not exceed 3° or 4° of Clark's scale.

The next step in our investigation is the

Determination of free or saline ammonia and of nitrogenous organic matter.—Ammonia in water is chiefly derived from organic substances, either vegetable or animal. In the detection and estimation of ammonia the very delicate test known as Nessler's solution is of the greatest value.

Nessler's Solution is thus prepared : Dissolve 50 grammes of iodide of potassium in 250 C.C. of distilled water ; reserve a small quantity, warm the larger portion, and add a strong aqueous solution of corrosive sublimate until the precipitate ceases to disappear, then add the reserved solution of iodide so as to just dissolve the red precipitate ; filter and add to the filtrate 200 grammes of solid potash dissolved in boiled water. Dilute to 1 litre and add 5 C.C. of a saturated aqueous solution of mercury bichloride. Allow to subside, decant the clear liquid, and keep in a dark place.

In addition to this solution we require

Standard Solution of Ammonium Chloride, which is of the strength of .0315 grammes to 1 litre of water, each C.C. represents .01 milligrammes of ammonia. The mode of procedure is as follows : Place in a flask 250 C.C. of the water to be examined, distill off about 120 C.C. ; measure this distillate carefully, test a little with Nessler's solution in a test tube and observe the color ; if not too dark take 100 C.C. of the distillate and put it into a cylindrical glass vessel, and place it upon a piece of white paper. Add to it 1½ C.C. of Nessler. Put into another similar cylinder as many C.C. of ammonium chloride as may be thought necessary and fill up to 100 C.C. of pure distilled water, which has previously been proved to be free from ammonia ; drop in 1½ C.C. of Nessler. If the colors correspond the process is finished, and the amount of ammonium chloride used is read off. If the colors are not the same add a little more ammonium chloride so long as no haze shows itself ; if it does, then a fresh glass must be taken and another test made. When the colors correspond, read off the C.C. of ammonium used, allow for the portion of distillate not used,

multiply by .01 and we have the number of milligrammes of free ammonia in the 250 C.C. acted upon; multiply this amount by 4 and we have the number of milligrammes per litre. Example—From 250 C.C. of water, 123 were distilled, 100 C.C. were taken for the experiment, 4.5 C.C. of ammonium chloride were required to give the proper color; then $4.5 \times \frac{123}{100} \times .01 \times 4 = 0.2214$ milligrammes of free ammonia per litre. The free ammonia or saline ammonia is the ammonia combined with carbonic, nitric or other acid, and also what may be derived from any easily decomposable substance such as used. The quantity should not exceed .02 milligrammes per litre in good water.

Having calculated the free ammonia, the residue of the water in the retort is used to determine the nitrogenous organic matter as measured by albuminoid ammonia. The nitrogen is converted into ammonia by means of potassium permanganate in presence of an alkali, the ammonia is then distilled off and estimated as above.

Dissolve 8 grammes of permanganate of potassium and 200 grammes of solid caustic potash in 1 litre of water, boil thoroughly to drive off any ammonia and any nitrogenous matter. This is known as Wanklyn's solution. Add to the residue in the retort 25 C.C. of this solution, distil over 110 to 120. Calculate the ammonia as before, and state the results in this case as *albuminoid ammonia*. The standard limit of albuminoid ammonia in good water is stated by Wanklyn to be .05 milligrammes per litre, some other authorities place it at .08. Much albuminoid ammonia, little free ammonia, and almost entire absence of chlorides, is, according to Wanklyn, indicative of vegetable contamination.

OXIDIZABLE MATTER.

The chief sources of oxidizable matter in water are oxidizable organic matter, and nitrous acid as nitrates. The estimation of these affords valuable evidence of the character of water, and they are conveniently determined by means of permanganate of potassium. We calculate 1. *Total oxidizable matter* in terms of oxygen required for its *oxidization*. Make a solution of permanganate by dissolving .395 grammes of the crystallized salt in 1 litre of water. Each C.C. of this solution yields 0.1 milligrammes of oxygen in presence of an acid. Test its accuracy by a solution of crystal-

lized oxalic acid of the strength of .7875 grammes to the litre of water. This solution acidulated with dilute sulphuric acid should exactly decolorize an equal quantity of the solution of permanganate. The process, as recommended by Woods, is as follows:

"Take a convenient quantity of the water to be examined, say 250 C.C., add 5 C.C. of dilute sulphuric acid (1 to 10); drop in the permanganate solution from a burette until a pink color is established; warm the water up to 140°F., dropping in more permanganate if the color disappears; when the temperature reaches 140 remove the lamp, continue to drop in the permanganate till the color is permanent for about ten minutes. Then read off the number of C.C. used, multiply by 0.1 to get the milligrammes of oxygen, and by 4 to get the amount per litre." The amount of oxygen obtained by this process includes that from organic matter and nitrous acid. To separate these we must drive off the nitrous acid by boiling with sulphuric acid as follows:

Take 250 C.C. of the water under examination; add 5 C.C. of dilute sulphuric acid as before; boil briskly for 20 minutes, then allow it to cool down to 140°F., add the permanganate solution until a pink color remains for ten minutes; then calculate as before. The result in this case must be stated as milligrammes per litre of oxidizable organic matter, or organic oxygen.

Nitrous acid is now easily determined, for it is represented by the difference between the two preceding processes. Each milligramme of oxygen is equivalent to 2.875 milligrammes of nitrous acid; the difference must, therefore, be multiplied by this factor, and the result is nitrous acid in milligrammes per litre. From the foregoing tests we can gain sufficient evidence to form an opinion of the character of a given sample of water. The inference from this evidence can be drawn as follows:

A large quantity of nitric and nitrous acids, much oxidizable and nitrogenous organic matter with much chlorine, indicates recent sewage impregnation. With little oxidizable organic matter and nitric acid in large amount, we assume that more or less complete conversion of organic matter has taken place. Albuminoid ammonia and nitric acid in abundance and free ammonia and chlorine in small amount, is indicative of vegetable con-

tamination. Little chlorine with much albuminoid and free ammonia, nitrous and nitric acids, show contamination from gaseous emanations.

To those who have not the inclination or the opportunity to carry out an analysis such as I have described, a few ready tests may be useful. Any druggist can prepare from the formulæ already given the following solutions: Nitrate of silver, Nessler's solution, solution of permanganate of potassium, and solution of iodide of potassium and starch. Provided with these they can proceed as follows:

1. Observe the color.
2. Observe the smell, particularly when the water is boiling.
3. The taste.
4. Add to a small quantity of the water in a test tube or wine-glass, a little of the solution of nitrate of silver. If it gives a white color it contains chlorides. This is a very suspicious sign.
5. To another portion of the water add a small quantity of Nessler's solution. A yellow color or yellowish-brown precipitate shows the presence of *ammonia*.
6. Add a few drops of the solution of permanganate of potassium. The pink color remains if the water is pure, it disappears if the water contains organic matter.

These simple tests would, in most cases, settle the question of the purity or impurity of a suspected water. The amount of disease and suffering caused by the use of impure water, is in this country assuming terrible proportions. Epidemics of typhoid and other zymotics are constantly occurring, which could be easily prevented by a little care in examining the waters and discontinuing the use of impure wells. This is one of the evils arising from the want of Public Health legislation. Surely the day is near at hand when the Government will protect the lives of our people from this, as it does from other forms of poisoning, and furnish us with the means whereby we can control the causes of preventable diseases. Then shall we gain a happy victory over those dread enemies which year by year destroy the lives and desolate the homes of so many of the brave sons and daughters of this prosperous Dominion.

NOTE.—For the processes in the qualitative and quantitative analyses, I have drawn freely from the works of Parkes and Wanklyn, to which I refer the reader who wishes to gain familiarity with this very necessary branch of medical study.

CASE OF ADDISON'S DISEASE.

BY E. GOODMAN, M.D., ST. CATHARINES, ONT.

Having recently had an opportunity of witnessing the closing scenes in the life of a patient who has just died from the rare and obscure disease named after Dr. Addison, it has occurred to me that a brief report of the history, symptoms, and *post mortem* appearances might prove interesting to the members of the profession. I have, therefore, decided to communicate to you the salient points of the case for publication:

Robert L—, the victim of the disease, was about 26 years old at the time of his death, which occurred on the 27th of July ult. He was a tinsmith "by trade," of regular habits, sober and industrious. He was neither very robust nor very delicate in appearance; rather thin than otherwise, but not unhealthy looking. For many years before the development of the fatal symptoms he had suffered from obstinate constipation, a condition which very generally accompanies irritation of the sympathetic from disease involving any of the abdominal or pelvic viscera. To relieve this trouble he was in the habit of taking heroic doses of *sulphate of magnesia* and other purgatives. Some four or five years ago he purchased from an itinerant vendor of drugs a quack preparation, which he took, and which nearly killed him. It was a drastic "purgative," and produced an attack of enteritis. Under the usual treatment, leeches, opium, fomentations, &c., he recovered, and, so far as I know, did not suffer from any unpleasant sequence in consequence of his indiscretion after the subsidence of the inflammation; unless, indeed, it might have been the cause which ultimately led to the disorganization of the *suprarenal capsules*, by exciting disease in them through disturbance of the circulation, owing to the profound irritation of the sympathetic nerves which constitute so large a portion of the medullary part of the capsules. I lost sight of him after this until the 26th of July, 1881, when I was requested to see him in consultation with the physician in attendance upon him at that time. That gentleman informed me that the case was a very obscure one, and exceedingly difficult to diagnose, and that treatment had very little effect. The patient for the last six months had been failing in strength, and complained of dreadful feelings of prostration, and sinking at the

epigastrium. He said he felt as if he "was going down, down, down." His appetite was craving, almost amounting to bulimia, and yet when he sat down to eat the smell of the viands would so overcome him, that he would frequently faint away and have to be carried out into the open air. For the last six months the skin of his face, neck, and the backs of his hands had a dingy, smoky, lustreless bronze color, more marked at some times than at others, and fading away almost entirely during the last week or two of his illness. At the time of his death the only evidence of the discoloration remaining was on the backs of his hands, and, possibly, in the intestinal walls.

Strange to say, just six months ago, and before the symptoms of the disease which led to his death had become sufficiently developed to attract attention, he had his life insured, being examined and pronounced sound, and an eligible risk. The attending physician informed me that the patient had consulted him some weeks ago in consequence of passing large quantities of urine. The doctor examined the urine and found it perfectly normal as to its constituents, and specific gravity, and he considered it as being merely a case of *diabetes insipidus* depending upon some nervous or digestive functional disturbance. No doubt the increased flow of urine was due to the increase of blood pressure in the renal glomeruli from irritation of the sympathetic vaso-motor ganglia controlling the renal circulation. The patient shortly after the examination of his urine left St. Catharines to undertake certain duties in connection with the "Grimsby Camp Ground," and while there consulted a local practitioner, who suspected from the disturbance of the stomach, and the unaccountable weakness and faintness of which the patient complained, that he was suffering from tape-worm, *tenia solium*. As no proper remedies were obtainable at the Camp Ground to eject the supposed intestinal incumbent, Dr. Leitch of this city was written to, and forwarded a mixture containing *extract of malefern and castor oil*. *Ex nihilo, nihil fit*; therefore no tape-worm made its appearance "*per vias rectas*," but, unfortunately, terrible prostration supervened, rendering the patient entirely unfit for duty, and compelling him to return home to his father's house in this city. On his arrival he was seen by two of our local physicians. They did all in their power to relieve the patient, who

appeared to be suffering from some anomalous affection, the symptoms of which were prostration, præcordial distress, nausea, anorexia, and hiccough. There was no pain, no fever, no indication of hepatic, cardiac, renal, cerebral, or intestinal disease, in fact it was impossible to locate the disease in any organ, tissue, or viscus of the body. The extremities were cold,—from contraction of the arterioles owing to vaso-motor irritation (?)—the temperature was normal, the pulse feeble and slow, from stimulation of the inhibitory centres owing to the condition of the mucous lining of the stomach influencing the terminal branches of the Vagi (?), and yet there was nothing definite or demonstrable to account for the great and increasing prostration which was rapidly passing into fatal collapse. The attending physicians, baffled by the extraordinary nature of the affection, inferred from the condition of the stomach, the nausea, hiccough, &c., that the disease *might* be localized in the liver or alimentary canal, and so medication was directed to those quarters; but all without avail, the patient continued to sink lower, and lower still. On the evening of the day before the patient succumbed I was called to see him in consultation. After hearing from the attending physician and the parents the history of the case, it occurred to me that possibly the patient might be suffering from disease of the supra-renal capsules, although up to that time I had not been aware of the existence of any discoloration of the skin. Upon asking the patient's mother if she had at any time observed any peculiar color of the skin on any part of the body, she said, "Yes, for the last six months his face, neck, and the backs of his hands had a dark, smoky look; that she used to think his skin was stained with dirt, and asked him why he did not wash it off?" He replied that he "could not wash it off." The patient himself also told me that he noticed the peculiar color of his skin, but that he could not account for it. He never spoke of it to his medical attendant, as he did not associate it in any way with his failing health and strength. On examining the backs of his hands I noticed the lustreless bronze color, but, strange to say, during the preceding week the natural color seemed to have returned to his face and neck as the symptoms of collapse became more marked; so that seeing him in the evening, by lamp-light, I should not have noticed anything abnormal in the appearance

of the skin if I had not closely examined his hands. His mother told me that during the last six months his face at times was as dark as an Indian's. Since his death a number of his acquaintances have spoken to me concerning his peculiar color. The patient died at 6 o'clock p.m., July the 27th, 1881. He was pulseless for some time prior to his death, and retained his consciousness to the last. His muscular weakness was so great that he could not move hand or foot, and constantly begged to be shifted from side to side, and to have his hands and arms pulled and stretched. His restlessness was distressing in the extreme, and was relieved in a measure by nutritive enemata containing cream, brandy, and McMunn's Elixir Opii. Ingesta by the mouth seemed to increase the præcordial anxiety, and produce hiccough. Strange to say he could always check the hiccough by holding his breath, and when so doing the pulse would vanish at the wrist until he resumed respiration. Twenty hours after death my friend Dr. Leitch, the attending physician and I made a *post mortem* examination of the remains. The body was rather emaciated, but not excessively so. There was no appearance of the bronzing remaining, except upon the backs of the hands. The lungs were healthy. There was slight adhesion between the pulmonary and costal pleuræ near the base of the right lung. The heart was small, but otherwise normal, both as to its walls and valves. There was an *ante-mortem* clot, white, but not very tenacious, filling the cavity of the right ventricle and extending into the pulmonary artery. The formation of this heart-clot was no doubt due to the slowness of the circulation for some time prior to death, and probably accounted for the disappearance of the pulse at the wrists. The liver was normal in size, but rather congested, and exuded dark blood when sliced. The kidneys were normal, but slightly congested; so were the small intestines, with the exception of several *maculae*, like purpuric spots, which seemed to stain the walls of the *jejunum* and *ileum*, and were probably due to the same cause which produced the bronzing of the skin. The large intestines were healthy. There was a small fatty tumor on the upper surface of the liver, not larger than a pea, which could not have produced any symptoms during life. The brain and spinal cord were not examined. *Both supra-renal capsules were extensively diseased.* That on the right side was

converted into a dense fibroid mass, as tough as cartilage, and was much enlarged. The capsule of the left side was still more hypertrophied, and consisted of a caseous substance, rather friable, and studded with calcareous particles in its cortical portion. The medullary portion of the left capsule contained a cyst, lined with a smooth membrane, which had a small quantity of milky-looking, puriform fluid in its interior. A warty excrescence was imbedded in the floor of the cyst about the shape and size of a small-pox pustule. This morbid growth was hard and fibrous, and was pitted on its rounded apex with a depression like a rudimentary nipple. Although up to the present time *morbus Addisonii* has been looked upon as absolutely incurable, if the nature of the malady had been suspected earlier something might possibly have been done to mitigate the sufferings of the patient. As the malady seems mainly to exert its injurious influence on the system through the medium of the solar plexus, splanchnics, and great sympathetic, opium, belladonna, chloroform, nitrite of amyl, or alcohol, or indeed any remedy which would counteract its tendency to morbid contraction of the arterioles might be looked upon as indicated on physiological grounds. The irritation of the nerves of organic life is no doubt due to the morbid process going on in the capsules, and whilst unfortunately no means exist of detecting the disease in its very earliest stages, or of arresting the morbid process, the administration of remedies of the nature indicated, either by the mouth, or by hypodermic injection, would doubtless ameliorate the patient's condition, if they did not cure. If the disease should primarily depend upon affection of the sympathetic ganglia themselves, then, possibly, the *neurasthenia* having been overcome, the organic changes produced by the nervous disease might also be put an end to *pari passu*. Doubtless the feeble action of the heart, the *bulimia*, from which at one time the patient suffered, the polyuria, the præcordial distress, and the profound depression, were all due to the persistent irritation set up in the sympathetic ganglia by the capsular disease. The great vascularity of the capsules, and their very abundant innervation from the sympathetic (the cells of the medullary portion of the capsules seeming to be identical with the ganglionic nerve cells), are quite sufficient to account for the fatal results attending their disor-

ganization, without the need of associating as a cause of death a supposed function of removing some element from the blood, the non-removal of which would occasion death by blood-poisoning. Brown-Séguard found that removal of the capsules in the inferior animals occasioned death more rapidly than removal of the kidneys. It would scarcely seem possible that the function of the capsules as blood-glands could be so important as that of the kidneys, and, therefore, if death occurs so rapidly after their removal it must be due to the fatal shock produced by the injury to the great sympathetic through the solar plexus and splanchnics, as the capsules appear to have more intimate vital relations with the nerves of organic life than any other viscus of the body. I have dwelt upon this remarkable association of the ganglionic system of nerves with the capsules, not only on account of its great physiological interest *per se*, but because I conceive that it furnishes a key to the many anomalous symptoms which arise during the existence of the disturbance of the functions of any or all of the abdominal, thoracic, or pelvic viscera, in consequence of the irritation of the sympathetic ganglia, which preside over their organic functions, occasioned thereby. Disease of the supra-renal capsules seems to possess symptoms common to cardiac, hepatic, renal, gastric, intestinal, cerebro-spinal, and ovarian disease, simply because it affects the sympathetic as powerfully as all these disorders combined, and it is only by *excluding* the above-named affections, *in the absence of the bronzing of the skin*, that a differential diagnosis can be arrived at. The absence of jaundice, and the "pearly" conjunctiva excluded hepatic disease; the normal urine, renal disease; auscultation, cardiac and pulmonary disease; absence of affections of sensation or motion, cerebro-spinal disease; palpation, ovarian disease. In conclusion, a thoughtful consideration of the case of Robert L—, points out the necessity of familiarizing ourselves with the latest teachings of physiology and pharmacology, if we would successfully combat the protæan forms of nervous disease, manifesting itself in aberrations of motion, sensation, secretion, circulation, and nutrition, and in perversions of the moral and intellectual faculties of the brain.

Correspondence.

INTUSSUSCEPTION—RECOVERY.

To the Editor of the CANADA LANCET.

SIR,—On Saturday, September, 4th, I was called to see a case which appeared to puzzle the attending physician beyond measure. I found upon my arrival a young man aet. 19 in dorsal decubitus, with knees drawn up and complaining of nausea and pain over the abdomen, which was most severe in the ileo-cæcal region. On questioning I learned that no movement of the bowels had taken place for two days previous, although there had been a discharge of blood and mucus. There was great tympanites present, but pressure did not intensify the pain as I expected it would. The pulse was 110, and the temperature nearly normal, and spontaneous vomiting of a brown fluid, having a slightly fæcal odor now occurred. The thirst was intense, but when fluids were swallowed, they were immediately ejected. I ordered ice with better effect, as the vomiting did not occur again. I diagnosed the case to be intussusception; the attending physician coinciding with my opinion. From the symptoms present I resolved to try injections of warm water and turpentine every two hours, and this failing obtain competent surgical aid and perform laparotomy. Next day I again visited the case and was pleasantly surprised to find a marked improvement, the tympanites reduced and gases with an offensive odor escaping although no movement of the bowels had taken place, but he as had not eaten solids for three days this did not cause any fresh alarm. I left the house with directions to continue the injections as before and report to me next day the progress made during the night, when I was still further surprised to hear of marked improvement in every particular, and food was retained. I have not seen him since but keep myself informed each day, and the movement of the bowels is normal. No abdominal tumor could be discovered owing to the excessive tympanites that existed when I first saw the case. My object in reporting this case is simply to shew that surgical interference is not always necessary or justifiable, but had my experience as a surgeon I been such that I could have operated myself, I would undoubtedly have done so, and distance from competent aid led me to try the above alter-

native. Hoping that you may consider this worthy a place in your valuable journal.

I remain yours respectfully,

T. R. HOSSIE, M.D.

Gouverneur, N. Y. Sept. 10th 1881.

SPRUCE SHAVING SPLINTS.

To the Editor of the CANADA LANCET.

SIR,—In these progressive times when comfort is the order of the day, I have much pleasure in bringing under the notice of the Association, the application of the "Spruce Shaving Splint" in cases of fractured arm and humerus. In January 1881, I had occasion to use this Splint at a time when no other material could be obtained, and the result was of the most satisfactory character. Such shavings are now used by Mr. Eddy, for the manufacture of ordinary match boxes, and to prevent painted wooden ware, from adhering together, thus I came in contact with the material. By placing 5 or 6 of these shavings together, a splint is at once formed, of great practical utility. In the first place, it possessed lightness; secondly pliability, and thirdly when well padded, it actually hugs the arm, in a manner, superior to any splint, I have had occasion to use, either in hospital, or private practice. Again should the case be one of compound fracture, in which the secretions, rendered it necessary to change the support of the arm, the whole splint, would not require removal, as an outside or inside shaving could at any time, be taken away, without necessarily disturbing the whole arm. In a recent case of dislocation and fracture, at the elbow joint, I was much pleased with the use of this splint, particularly, as to the manner in which it flexed round the posterior part of the joint, the splint in the posterior aspect of the arm, being extended in that direction. Thus the elbow joint was retained in its normal position, with ease and comfort. Of the various forms of timber, spruce, is the only fibre known, which possesses, the requisite pliability and flexibility, to undergo the fine shaving process of manufacture. This has been tested most thoroughly, in the construction of match bones. From the foregoing facts, it appears, that in the "Spruce Shaving Splint," we have an inexpensive, light, pliable and

practical appliance, which will be found of great service either in civil or military practice.

Yours respectfully,

J. A. GRANT.

Ottawa, July, 2nd 1881.

Reports of Societies.

TORONTO MEDICAL SOCIETY.

April 21st, 1881.—The meeting was called to order at 8 p. m. the President Dr. Covernton in the chair. The minutes were read and confirmed.

Dr. Oldright exhibited a placenta with a peculiar attachment of the membranes. Dr. Sheard exhibited a stricture of the sigmoid flexure and rupture of the colon at the junction of the descending and transverse portions. Dr. Riddel exhibited a triangular plate of fish bone, extracted by means of a piece of bellwire from the œsophagus of a lady by whom it had been swallowed. Dr. Ross Jr. related a case of skin disease. Dr. Sheard then read a paper upon the pathology of tubercle. The first portion of his paper dealt with the nature of tubercle, and in it he gave the chief histological characteristics. In the second portion of his paper he discussed the etiology of the disease, describing the results of experiments upon animals, made with a view of artificially producing tubercle. He advanced the view of a preliminary inflammatory action before the deposit of tubercle, exhibiting a human lung, in support of this view, in which the upper part was distinctly tuberculous and the lower part as distinctly in a condition of red hepatization. An interesting discussion followed the reading of the paper.

The nomination of officers for the ensuing year then took place and the meeting adjourned.

May 5th.—After routine Dr. Covernton, the retiring President read his valedictory address in which he reviewed the status of medical men, and said that the public did not always appreciate their efforts; he also touched upon the benefits of Medical Societies, reviewed the work done in the past year, and congratulated the Society upon its flourishing condition.

The election of officers for the ensuing year was then proceeded with, which resulted as follows: Dr. Daniel Clark, President, Dr. Graham 1st Vice-President, Dr. Oldright, 2nd Vice-President, Dr. Macdonald, Treasurer, Dr. Alex. Davidson, Record-

ing Secretary, Dr. Sheard Corresponding Secretary, Drs. A. H. Wright, Lett and Spencer, Councillors, Dr. Temple exhibited an acephalous monster, and the meeting then adjourned.

May 19th.—The Society met at 8 p.m., the newly elected President in the chair. After the reading of the minutes, and other preliminary business, Dr. Oldright exhibited a bullet, which after passing through several partitions of wood and lath and plaster, had inflicted a cleanly incised wound on a child's head.

Dr. Cameron, related a case of a cherry stone being extruded from an aged person's nose, he could not say how it had got there or how long it had been there, but the patient affirmed that she had not eaten cherries since last November.

Dr. Riddel related a case of confinement in which when he was about to relieve retention of the urine by the catheter he discovered two large chancres on the labia pudendi.

Dr. Oldright made reference to the painful interest the Society would take in hearing of the illness of Dr. DeGrassi and Dr. McPhedrain; the same gentleman also referred to the case of a little girl two and half years old, in which there existed an abdominal tumor principally occupying the right side, it was rapid in its growth, elastic to the touch, but when aspirated it gave no evidence of its being a fluid tumor, a small quantity of fluid withdrawn in the aspirator needle and examined microscopically did not give any evidence of malignancy. Dr. Workman mentioned a similar case which proved to be malignant.

Dr. Riddel read an article upon the career of Dr. Tumblety, "The Indian herb Doctor," which dilated upon his wonderful cures and his wholesale quackery, after which the Society then adjourned.

June 30th.—The Society met at 8 o'clock, the President in the chair, the minutes of the previous meeting were read and adopted. Dr. King was then proposed a member of the Society.

Dr. Sheard exhibited the lungs, liver and kidneys taken from a person the subject of syphilis; the liver contained abscess cavities. The lungs were tuberculous and the kidneys showed, desquamation of the uriniferous tubes.

Dr. Cameron exhibited a thrombus of the longitudinal sinus taken from a child seven months old,

he also exhibited the cerebral vessels taken from the same case, with masses attached to them which he took to be syphilitic gummata; the same gentleman also exhibited a portion of a tibia which had been spontaneously amputated at the seat of a malignant ulcer.

Dr. Riddel then related a case of miscarriage at the seventh month, followed by septicæmia, the fœtus being a monstrosity.

Dr. Graham, then read a very excellent and exhaustive paper upon leucocythæmia, in which he related the histories of two cases which he had recently had under his observation, at the Toronto General Hospital, the first case being that of the lymphatic variety, and the second case being that of the splenic variety, he also referred to the myelogenous form, a very rare variety of leucocythæmia. The disease seemed to baffle all treatment, and progressed slowly and surely to a fatal termination, the only treatment thought to be beneficial would be prophylaxis, could the cause of the disease be once arrived at; chaulmoogra oil was tried but with no benefit. The reader while he drew a difference between leucocythæmia, and Hodgkin's disease, thought that the disease under consideration and the so-called malignant, growths were related to one another. In concluding his paper Dr. Graham ventured the following opinion.

1st. That the essential features of leucocythæmia are lymphoid deposits, and leucocytes derived from them.

2nd. Similar growths are the features of Hodgkin's disease, but the cells do not enter the circulation.

3rd. That in both diseases the presence of these deposits interferes with the manufacture of the red blood corpuscle, producing anæmia.

4th. That these growths bear a strong relation to malignant growths, especially sarcomata.

5th. That Progressive Pernicious anæmia may arise as a consequence of leucocythæmia or Hodgkin's disease, in the same way that it may follow pregnancy or any other disease which interferes with the proper elaboration of the blood.

The discussion on Dr. Graham's paper was deferred to the next meeting of the Society owing to the lateness of the hour.

The Treasurer, Dr. Macdonald, then read his report for the bye-gone year which showed the Society to be in a very flourishing condition.

Selected Articles.

INTERNATIONAL MEDICAL CONGRESS.

ADDRESS BY THE PRESIDENT, SIR JAMES
PAGET, BART.

We are indebted to the N. Y. Med. Record for the following Reports:—

After referring to the composition of the Congress, the diverse characters of its members, and the various methods of study which had gained eminence for each, he dwelt upon the necessity of utilizing the apparent diversity of thought into a concentrated and harmonious whole. In works done by dissimilar and independent minds, dispersed in different fields of study, or only gathered into self-assorted groups, there was apt to be discord and great waste of power. There was, therefore, need that the workers should from time to time be brought to some consent and unity of purpose; that they should have opportunity for conference and mutual criticism, for mutual help and the tests of free discussion. This it was which, on the largest scale and most effectually, the Congress might achieve; not, indeed, by striving after a useless and happily impossible uniformity of mind or method, but by diminishing the lesser evil of waste and discord which was attached to the far greater good of diversity and independence. Now, as in numbers and variety the Congress might represent the whole multitude of workers everywhere dispersed, so in its gathering and concord it might represent a common consent that, though apart and different, yet the work was and should be essentially one; in all its parts mutually dependent, mutually helpful—in no part complete or self-sufficient. It might seem to be a denial of the declaration of unity that, after this general meeting the Congress should separate into sections more numerous than on any former occasion. He would speak of these sections to defend them; for some had maintained that, in such a division of studies, there was a mischievous dispersion of forces. He observed that the sections which we have instituted are only some of those which are already recognized, in many countries, in separate societies, each of which has its own place and rules of self-government, and its own literature. And the division had taken place naturally, in the course of events which could not be hindered. For the partial separation of medicine, first from the other natural sciences, and now into sections of its own, had been due to the increase of knowledge being far greater than the increase of individual mental power. He did not doubt that the average mental power constantly increased in the successive generations of all well-trained peoples; but it did not increase so fast as knowledge does, and thus, in

every science, a small portion of the whole sum of knowledge had become as much as even a large mind can hold and duly cultivate. Many of us might, for practical life, have a fair acquaintance with many parts of our science, but none can hold it all; and for complete knowledge, or for research, or for safely thinking out beyond what was known, no one could hope for success unless by limiting himself within the few divisions of the science for which, by nature or by education, he was best fitted. Thus, the division into sections was only an instance of that division of labor which, in every prosperous nation, we see in every field of active life, and which was always justified by more work better done. Moreover, it could not be said that in any of our sections there was not enough for a full strong mind to do. If any one doubted this, he might try his own strength in the discussions of several of them. In truth, the fault of specialism was not in narrowness, but in the shallowness and the belief in self-sufficiency with which it was apt to be associated. If the field of any speciality in science was narrow, it could be dug deeply. In science, as in mining, a very narrow shaft, if only it be carried deep enough, might reach the richest stores of wealth and find use for all the appliances of scientific art. Not in medicine alone, but in every department of knowledge some of the grandest results of research and of learning, broad and deep, were to be found in monographs on subjects that, to the common mind, seemed small and trivial.

Study in such a Congress might be a useful remedy for self-sufficiency. Here every group might find a rare occasion, not only for an opportune assertion of the supreme excellence of its own range and mode of study, but for the observation of the work of every other. Each section might show that its own facts must be deemed sure, and that by them every suggestion from without must be tested; but each might learn to doubt every inference of its own which was not consistent with the facts or reasonable beliefs of others; each might observe how much there was in the knowledge of others which should be mingled with its own; and the sum of all might be the wholesome conviction of all, that we cannot justly estimate the value of a doctrine in one part of our science till it has been tried in many or in all. The test of truth in every part should be in the patient and impartial trial of its adjustment with what was true in every other. For every fact in science, wherever gathered, had not only a present value, which we might be able to estimate, but a living and germinal power of which none could guess the issue. It would be difficult to think of anything that seemed less likely to acquire practical utility than those researches of the few naturalists who, from Leeuwenhoek to Ehrenberg, had studied the most minute of living things, the vibrionidæ. Men boasting themselves

as practical might ask, "What good can come of it?" Time and scientific industry had answered, "This good: those researches had given a truer form to one of the most important practical doctrines of organic chemistry; they had introduced a great beneficial change in the most practical part of surgery; they were leading to one as great in the practice of medicine; they concerned the highest interests of agriculture, and their power is not yet exhausted." And as practical men were, in this instance, incompetent judges of the value of scientific facts, so were men of science at fault when they missed the discovery of anæsthetics. Year after year the influences of laughing-gas and of ether were shown: the one fell to the level of the wonders displayed by itinerant lecturers, students made fun with the other; they were the merest practical men, men looking for nothing but what might be straightway useful, who made the great discovery which had borne fruit not only in the mitigation of suffering, but in a wide range of physiological science.

The history of science had many similar facts, and they might teach that any man would be both wise and dutiful if he would patiently and thoughtfully do the best he could in the field of work in which, whether by choice or chance, his lot had been cast.

The best work of the International Congress was in the clearing and strengthening of the knowledge of realities; in bringing, year after year, all its force of numbers and varieties of minds to press forward the completion as might from year to year be possible. Thus, chiefly, the Congress might maintain and invigorate the life of our science. And the progress of science must be as that of life. It sounded well to speak of the temple of science and of building and crowning the edifice. But the body of science was not as any dead thing of human work, however beautiful; it was as something living, capable of development and a better growth in every part. For as in all life the attainment of the highest condition was only possible through the timely passing-by of the less good, that it might be replaced by the better, so was it in science. As time passed, that which seemed true and was very good became relatively imperfect truth, and the truth more nearly perfect took its place. In the certainty of this progress, the great question was, What should we contribute to it? It would not be easy to match the recent past. The advance of medical knowledge within one's memory was amazing, whether reckoned in the wonders of the science not yet applied, or in practical results in the general lengthening of life, or, which was still better, in the prevention and decrease of pain and misery, and in the increase of working power. He could not count or recount all that in this time had been done; and he supposed there were very few, if any, who could justly tell whether the progress

of medicine had been equal to that of any other great branch of knowledge during the same time. He believed it had been; he knew that the same rate of progress could not be maintained without the constant and wise work of thousands of good intellects; and the mere maintenance of the same rate was not enough, for the rate of the progress of science should constantly increase. That in the last fifty years was at least twice as great as that in the previous fifty. What would it be in the next, or, for a more useful question, What should we contribute to it?

"In the number and intensity of the questions brought before us," said he, "we may see something of our responsibility. If we could gather into thought the amounts of misery or happiness, of helplessness or of power for work, which may depend on the answers to all the questions that will come before us, this might be a measure of our responsibility. But we cannot count it; let us imagine it; we cannot even in imagination exaggerate it. Let us bear it always in our mind, and remind ourselves that our responsibility will constantly increase. For, as men became in the best sense better educated, and the influence of scientific knowledge on their moral and social state increases, so, among all sciences there is none of which the influence and, therefore, the responsibility will increase more than ours; because none more intimately concerns man's happiness and working power.

"But, more clearly in the recollections of the Congress, we may be reminded that in our science there may be, or, rather, there really is, a complete community of interest among men of all nations. On all the questions before us we can differ, discuss, dispute, and stand in earnest rivalry; but all consistently with friendship, all with readiness to wait patiently till more knowledge shall decide which is in the right. Let us resolutely hold to this when we are apart; let our internationality be a clear, abiding sentiment, to be, as now, declared and celebrated at appointed times, but never to be forgotten; we may, perhaps, help to gain a new honor for science if we thus suggest that in many more things, if they were as deeply and dispassionately studied, there might be found the same complete identity of international interests as in ours.

"And then, let us always remind ourselves of the nobility of our calling. I dare to claim for it, that among all the sciences, ours, in the pursuit and use of truth, offers the most complete and constant union of those three qualities which have the greatest charm for pure and active minds—novelty, utility, and charity. These three, which are sometimes in so lamentable disunion, as in the attractions of novelty without either utility or charity, are in our researches so combined that, unless by force or wilful wrong, they can hardly be put asunder. And each of them is admirable in

its kind. For in every search for truth we can not only exercise curiosity, and have the delight—the really elemental happiness—of watching the unveiling of a mystery, but, on the way to truth, if we look well round us, we shall see that we are passing among wonders more than the eye or mind can fully apprehend. And as one of the perfections of nature is that, in all her works, wonder is harmonized with utility, so is it with our science. In every truth attained there is utility either at hand or among the certainties of the future. And this utility is not selfish: it is not in any degree correlative with money-making; it may generally be estimated in the welfare of others better than in our own. Some of us may, indeed, make money and grow rich; but many of those that minister even to the follies and vices of mankind can make much more money than we. In all things costly and vainglorious they would far surpass us if we would compete with them. We had better not compete where wealth is the highest evidence of success; we can compete with the world in the nobler ambition of being counted among the learned and the good who strive to make the future better and happier than the past. And to this we shall attain if we will remind ourselves that, as in every pursuit of knowledge there is the charm of novelty, and in every attainment of truth utility, so in every use of it there may be charity. I do not mean only the charity which is in hospitals or in the service of the poor, great as is the privilege of our calling in that we may be its chief ministers; but that wider charity which is practised in a constant sympathy and gentleness, in patience and self-devotion. And it is surely fair to hold that, as in every search for knowledge we may strengthen our intellectual power, so in every practical employment of it we may, if we will, improve our moral nature; we may obey the whole law of Christian love, we may illustrate the highest induction of scientific philanthropy.

“Let us, then, resolve to devote ourselves to the promotion of the whole science, art, and charity of medicine. Let this resolve be to us as a vow of brotherhood; and may God help us in our work.”

ADDRESS BY PROFESSOR VIRCHOW.

Professor Virchow, of Berlin, delivered an address, in German, on the value of experimental pathology. He commenced by referring to the great activity of the anti-vivisectionists, and the harm they had done to experimental physiology and pathology. The latter, as well as the former, had its claims for defence from all scientific men. In connection with the general subject, he proceeded to examine the decline of the science of symptoms, and of the falling off of an interest in the study of their relations to pathology. Were symptoms no longer to possess any significance for the medical man?

He would say certainly not. At the same time, for the scientific medical man, symptoms were only the expression of a hidden force, it was his business to follow up this hidden force to its seat in the human system, and there learn its nature and causes. The first question of the pathologist, as of the biologist, was, Where? Consequently, whether they probed the seat of disease with the anatomical knife, or whether they merely confined themselves to observation, the mode of proceeding was essentially anatomical. It was the recognition of this principle which, in a few decades, had changed the whole face of science. Especially was this change observable in the treatment of ophthalmic diseases. Every practitioner now studied the seat of the evil itself, and not merely its symptoms. Even the anti-vivisectionists recognized the value of this method, forgetting, however, that every organ of the body was not so favorably situated for observation as the eye. The principle of modern medicine, in a word, was that of localization. Vivisection dated really from the time of Harvey. Now, Harvey's services the strongest opponents of vivisection themselves recognized; but, said they, since Harvey's time vivisection has revealed nothing important. They were not aware that that very element in the phenomena of Harvey's circulation of the blood, which most affected the vital attributes of the organs of circulation, remained untouched. Whence was derived the activity of the heart? What part in the motion and the distribution of the blood did the organs of the body play? What share devolved upon the arteries, the veins, and the capillary vessels? All those questions were of the highest practical importance, and none of them could be solved otherwise than by experiments upon living animals. Those questions Harvey could not settle, because, in his time, higher anatomy had not been developed. Who then knew anything of the heart or of the nerves? Not till these latter days did men understand the peculiarities of the circulation of the blood. The pulse, that highly-prized object of the old symptomatology, was now intelligible. It was no longer regarded as presenting the symptom of this or that disease, but as the sign of the existence or non-existence of certain principles of activity, of the strength or the weakness, the irritation or the relaxation of certain tissues. The development of physiology and pathology paved the way for the later experimenters, and accounted for the long interval which had elapsed since Harvey's time. Our modern science, indeed, had been but of slow growth, but as it grew, one thing became clearer and clearer—namely, the principle of inherent vitality—the *vita propria* of each section of the body (*das Eigenleben der Theile*). Every step showed more conclusively that the supposed existence of life, as a large and separate entity, was a fiction. Life existed everywhere in the body; and disease

FOR CONSUMPTION AND WASTING DISEASES
HYDROLEINE.
 ("HYDRATED OIL.")

FOR DYSPEPSIA, INDIGESTION, ETC.
MALTOPEPSYN.

I desire to express to the Medical Profession my thanks and deep sense of obligation to them for their generous support and kind interest, shown by the almost universal use of Hydroleine and Maltopepsyn in their practice, and the great number of laudatory letters received from them.

I wish also to assure them that I shall continue to give my personal attention to all preparations either imported or manufactured by me and I shall endeavor to produce such remedies *only* as will merit the continued support of the Profession in all parts of the world.

The demand for Maltopepsyn has increased so rapidly, through this decided support of the medical profession, that it has made it absolutely necessary to increase my facilities. I have now leased the entire premises No. 57 Front Street East, erected a new engine, mills, choppers, presses and other machinery of the latest and most approved patterns. I shall be most happy to see any physician and show to him my methods for manufacturing Pepsine, Pancreatine, Exsiccated Extract of Malt, and the other ingredients of Maltopepsyn (as per formula.) I, with perfect security, guarantee to keep the quality to its present high standard, as I devote my entire time to that end.

I add enough testimony from distinguished medical men, the medical press, and leading chemists in the Dominion of Canada, from the mass of letters received, to show conclusively the high reputation these two remedies have gained, leaving out the much greater amount of testimony received from England and the United States.

Very respectfully,

HAZEN MORSE.

57 Front Street East, Toronto.

IMPORTANT NOTICE.

I publish below exact formulas for Hydroleine and Maltopepsyn. Testimonials follow on next 3 pages.

FORMULA OF HYDROLEINE.

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

Pure Oil..... 80 m. (drops.)	Soda..... 1-3 grains.
Distilled Water... 35 "	Boric Acid..... 1-4 "
Soluble Pancreatin 5 grains.	Hyochohic Acid..... 1-20 "

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

MALTOPEPSYN.

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

FORMULA.

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

HYDROLEINE.

LA GAUCHETERE STREET, MONTREAL, Nov. 24, 1880.

"I consider Hydroleine a valuable preparation, and I have shown my estimation of it by prescribing it to some thirty or more of my patients instead of ordinary Cod Liver Oil. Many of them continue to take it and have been greatly benefitted by its use."

J. J. DUGDALE, M. D.

32 BEAVER HALL, MONTREAL, May 15, 1880.

"My experience with Hydroleine has been more than satisfactory, and I know no remedy like it in cases of a scrofulous or tubercular diatheses. In some of my cases the effects of this remedy have been really marvellous. Now, I wish you to send through Lewis & Co., a half dozen for my own personal use, as I wish to continue taking the Hydroleine-myself."

E. H. TRENHOLME, M. D.

HASTINGS, ONT., 15th Sept., 1880.

"We are so well satisfied with the trial bottle of Hydroleine, having put it to a severe test in an extreme case where we really did not expect the girl to live a week (she is now able to walk about the house), that we would like a dozen bottles."

DRS. CLARK & O'GORMAN.

RICHMOND, ONT., Nov. 25, 1880.

"I have to-day made arrangements with Mr. McElroy (the merchant of our village), to keep in stock a quantity of Hydroleine. It is the best thing I have ever used in all wasting diseases."

D. BEATTY, M. D.

MONTREAL, Aug. 12, 1880.

"I have prescribed your preparation, Hydroleine, very largely with the greatest satisfaction to myself and benefit to my patients. One delicate lady (Mrs. McC.) gained 16 pounds by taking four bottles of the medicine. In many other cases the increase in flesh and weight has been very remarkable."

E. H. TRENHOLME, M. D.

FREELTON, Dec. 17, 1880.

"After taking three bottles of Hydroleine her weight increased 9 pounds. She discontinued the remedy, and again fell back on commencing the Hydroleine again, as before, she immediately improved, and is continuing to do so under its use."

GEO. METHERELL, M. D.

HASTINGS, Dec. 6, 1880.

"We give it (Hydroleine) our unqualified approval, notably of late in convalescence from Typhoid, especially where bronchial trouble has been present. Your Maltopepsyn is an excellent remedy."

DRS. CLARK & O'GORMAN.

PORT ELGIN, ONT., Dec. 16, 1880.

"I have been prescribing Hydroleine in all wasting diseases for some months, and can heartily recommend it to the notice of the profession as a remedy of real merit."

LEWIS E. SHEPHERD, M. D.

LONDON, ONT., Dec. 7, 1880.

"I have used Hydroleine since August in tubercular diatheses with entire satisfaction, and consider it an estimable and highly efficient preparation."

H. W. LLOYD, M. D.

CANNINGTON, Dec. 22, 1880.

"I have used the Hydroleine in a number of cases, and with very satisfactory results. I am very much pleased with its action in pulmonary and other diseases attended with emaciation."

J. M. HART, M. D.

NEUSTADT, Dec. 21, 1880.

"I have found it (Hydroleine), to be a sovereign remedy. In one case of Gastrodynia, in which I had employed all known remedies which were likely to be beneficial, with little effect, since taking Hydroleine the patient has had complete relief, the appetite increased, also marked increase of flesh."

T. C. SPENCE, M. D.

GRIMSBY, Dec. 27, 1880.

"I beg to testify to the excellent effects derived from the use of Hydroleine."

R. A. ALEXANDER M. D.

CREDIT ONT
A delicate young lady took four bottles of Hydroleine, and gained 3½ pounds with each bottle making a total gain of 14 pounds."

DR. DIXIE.

DUNDALK, Jan. 13, 1881.

"I refer to a case of incipient phthisis. The patient gained in weight while taking the first bottle of Hydroleine five pounds, and when last seen was taking second bottle, and had gained four pounds more. I may add that the cough and general condition of the patient were very much improved."

JAS. McWILLIAM.

CLINTON, Jan. 4, 1881.

"It has answered the purpose better than anything I have yet used, and my impression is that it will supersede all other remedies now in use for chronic pulmonary troubles."

A. WORTHINGTON, M. D.

MALTOPEPSYN.

BRUSSELS, ONT., June 28, 1880.

"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."

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."

WALLACE, N. S., Oct. 4, 1880.

"The Maltopepsyn was given in a marked and distressing case of Indigestion with the most rapid, pleasing and beneficial results."

Z. W. KEMPTON, M. D.

ATHLONE, ONT., Jan. 20, 1880.

"The Maltopepsyn I obtained from you has far more than answered my anticipations. Having tried it in two old and very obstinate cases of indigestion, I found it to act like a charm."

C. MCKENNA, M. D.

GEORGETOWN, ONT., Dec. 17, 1880.

"I like your Maltopepsyn; I find it to act very nicely and to do all that you recommend it to do."

WM. J. ROE, M. D.

MIDLAND, ONT., Dec. 24, 1880.

"I regard it (Maltopepsyn) as a very valuable preparation."

P. E. KIDD, M. D.

CAMBAY, ONT., Jan., 1881.

"I have used your Maltopepsyn in severe cases of Indigestion and Malnutrition in adults, and Diarrhoea of children, and am so well pleased with the results that I have instructed my druggist to keep a supply on hand."

T. W. READE, M. D.

ATHLONE, ONT., Dec. 30, 1880.

"After giving your Maltopepsyn a trial in some of my worst cases, for which it was recommended I am well pleased with the way in which it acts. Continue to make a good article like that now in use and it will be a universal favorite."

R. HAMILTON, M. D.

OHIO, YARMOUTH Co., N. S., Dec. 1, 1880.

"I may say I like it (Maltopepsyn), much better than any preparation of the kind that I have used, as it is certainly both more prompt and effective, and it further has the advantage of being much cheaper."

J. A. W. MORSE, M. D.

ELMVALE, ONT., Dec. 30, 1880.

"From my experience with Maltopepsyn I feel justified in saying that is quite as useful as Lactopeptine, and more palatable. I regard it as an important remedial agent in the ailments of infants, which are generally due to indigestion; and in prescribing Maltopepsyn in those cases, I feel that I am giving, in an elegant and palatable form, what is most likely to assist nature, and at the same time I run no risk of injuring the child."

GEO. BROWN, M. D.

BOWMANVILLE, ONT., Dec. 31, 1880.

"I am much pleased with the preparation Maltopepsyn in the case of faulty or difficult digestion."

W. H. LAW, M. D.

OPINIONS OF THE MEDICAL PRESS.

HYDROLEINE.—This new preparation of Cod Liver Oil is deserving of the attention of the medical profession. Its use is not confined to cases of phthisis alone, but is found servicable in all wasting diseases, and also in convalescence from protracted illness. Under its use the weight may be greatly increased. It is claimed to be artificially digested by the combination employed, and produces no unpleasant eructations or nausea. Our own experience of its use has been most favorable.—*The Canada Lancet*, Toronto, December 1st, 1880.

Among the many new preparations brought to the notice of the profession, none perhaps deserves more attention than Hydroleine, a preparation of Cod Liver Oil. The efficacy of Hydroleine is, it is claimed, not confined to cases of phthisis solely, but it also has a valuable tonic effect on the system generally. We have been using Hydroleine for some time, with the most satisfactory results, and value it very highly for its nutritive and waste preventing properties. We have also been using Maltopepsyn in cases of indigestion, with marked success.—*Canada Medical and Surgical Journal*, Montreal, November, 1880.

FROM LEADING CHEMISTS AND DRUGGISTS.

144 ST. LAWRENCE MAIN STREET, MONTREAL, NOV. 18, 1880.

"I beg to say that Hydroleine is increasing in favor with the medical profession. It digests easily and in most cases rapidly; and brings up the weight of the patient. To prove which, several physicians have weighed their patients before beginning the remedy. My sales this month are larger than ever."

HENRY R. GRAY, Chemist.

YORKVILLE, ONT., July 21, 1880.

"Since the introduction of Hydroleine into this locality, I have sold over three dozen bottles, and find that it gives every satisfaction; it is an excellent preparation and I have no doubt of its becoming very popular."

WM. S. ROBINSON, Chemist.

WALKERTON, ONT., Oct. 27, 1880.

"I have been troubled with indigestion of and on for some years. Some time ago I commenced using Maltopepsyn, and must say I have had great relief, and I think will prove a cure with me before long."

W. A. GREEN, Chemist.

TORONTO, July 1st, 1880.

"In reference to your preparation "Hydrated Oil," known as Hydroleine, it affords me pleasure to state I have sold over two dozen since its introduction, and it has given general satisfaction. In one case the person having taken two bottles gained upwards of 4 lbs. in about two weeks."

EDWIN A. SMITH, City Pharmacy.

PRICE LIST.

<i>Hydroleine, half pound bottles,</i>	-	-	-	<i>Per Bottle,</i>	\$ 1.00.
" " " "	-	-	-	<i>" Dozen,</i>	10.00.
<i>Maltopepsyn, 2 oz. bottles, containing nearly 1½ ozs. powder, 50c. per Bottle.</i>					
" " " " " " " "				<i>" " " "</i>	\$5 per Dozen.
" " " " " " " "				<i>" " " "</i>	\$5 per Pound.

EXPRESS CHARGES PREPAID.

Free Pamphlets by G. Overend Drewry, M. D., and H. C. Bartlett, Ph.D., F.C.S., explaining the principles upon which the discovery of Hydroleine is based, together with cases illustrating the effect in practice, and a pamphlet descriptive of Maltopepsyn sent free to any medical man upon application.

One bottle of Hydroleine will accomplish greater results than can be obtained by using ten bottles of Cod Liver Oil.

N.B.—I will forward to any *Medical man* desiring to test its virtues for himself one full-sized bottle Hydroleine upon receipt of fifty cents (half price), also one full-sized bottle of Maltopepsyn for 25 cents (half price,) express charges prepaid. This offer only applies to the first bottles.

HAZEN MORSE,

57 FRONT STREET EAST,

TORONTO.

**Sole Agent for the sale of Hydroleine
in the Dominion of Canada.**

and life—or, to speak more properly, diseased and healthy life—existed perfectly well side by side, in the sense that disease indicated so much abstracted from the healthy life. Disease, in fact, was no longer spiritualized: it was a material entity, a real living thing, a cellular change (*die veranderate Zelle*). Had all these discoveries resulted in tangible advantage to us? Was it worth while for such results that so many animals should suffer pain and death? The questions he could confidently answer in the affirmative. How, he asked, could further important results in the science of healing be looked for, if experiments with animals were prohibited? How else, for instance, could the operation of chloral have been discovered? It could not seriously be expected that medical men should make their own bodies the subject of experiments with very various and perhaps poisonous substances. They were already more exposed to danger in their contact with disease than any other class of the population. If no suffering whatever was to be inflicted upon animals, our social habits in relation to horses, dogs, etc., would be very much altered. It was absurd to contend, as the vivisectionists did, in effect, that suffering was worse than death. There was no greater hardship involved in putting animals to death, in order to promote the public welfare by means of scientific experiment, than in killing them for food. Abuses, of course, he did not defend, but so long as every person who owned an animal had the right of killing it, necessarily it followed that scientific experiments involving the death of animals were justifiable. And of the necessity of these experiments, and the mode of carrying them out, the investigator alone could be the judge, though, as to the question of time and place, a judicial authority might fairly have something to say.

At the conclusion of his address, which lasted over an hour, and which, marked as it was by many gleams of humor and passages of eloquence, evoked much applause, the learned Professor pleaded that vivisectionists should not be regarded as heartless barbarians, but as men who were working to promote the welfare of humanity. Of science it might be said, as Bacon said of the sun—"Palatia et cloacas ingreditur, neque tamen polluitur."

CASES IN HOSPITAL PRACTICE.

CLINIC BY AUSTIN FLINT, M.D., NEW YORK.

Cirrhotic Liver.

This specimen was taken from the woman who was shown you at a former clinic, and represents the gross appearance of a cirrhotic liver. It is very much contracted, and presents the hob-nailed

appearance in a very marked degree. I will only say, regarding the case, that the patient was tapped several times for abdominal fluid distention, which gave marked relief, and probably prolonged life. She gradually failed, however, lost her appetite, and died of exhaustion. When the autopsy was made, the liver weighed thirty ounces, the normal weight of the liver being about four and a half pounds.

The next cases that I shall present to you, gentlemen, are examples of a disease which I leave for my colleague, Dr. Janeway, to lecture upon. But as there is no didactic course at present, I will make some remarks upon these cases. The history of the first patient reads as follows:—

Aphasia.

David —, fifty-five years of age, a laborer, a native of Ireland, admitted on the eighth of this month. He has been for years a hard drinker, frequently going off on a prolonged debauch, and being drunk most of the time for a month or two. About six weeks ago he was suddenly taken with convulsions, grew black in the face, foamed at the mouth, worked the legs and arms, and then lay in an unconscious state for several hours. His condition gradually improved, and after four or five days he went to work again. Two weeks ago he was attacked in a similar manner, and when consciousness returned it was found that he could not speak, and that his right side was paralyzed. Since then he has been lying in a stupid condition, unable to speak, with but slight power of motion, and rejecting all food. That was the history obtained when he entered, on the eighth instant. On his admission no history could be obtained from him. He had aphasia; was stupid; the pupils were normal; there was no paralysis, no cardiac affection; the arteries were atheromatous. The arteries now feel like a tube composed of hard rings. On the 10th he was a little less stupid, and, although articulation is difficult, he can speak a few words. He takes food much better. The urine is albuminous, but no casts have yet been found, of normal specific gravity.

This, then, is a case of aphasia, connected with paralysis of the right side. These attacks of epileptoid convulsions were very probably due to the excessive use of alcohol, although there is ground for strong suspicion that there exists renal disease. I do not think it is possible, from what data we have, to decide whether the coma and convulsions were alcoholic or uræmic; there may have been a mixture of both. He has recovered from the paralysis, so that we may conclude that there was no extravasation of blood; there was either thrombosis or embolism, not sufficient to produce any persistent obstruction.

Now, in regard to the aphasia, of which I wish to speak in connection with this and another case;

the patient is now able to speak, but how much it is difficult to tell, for he was and is stupid, his general mental faculties being oppressed. Before making further remarks, I will bring in the next patient.

No previous history was obtained of this patient, but he has a pulmonary affection, and when he entered the hospital, about three months ago, he had complete aphasia, and paralysis of the right side of the face. You notice that to-day there is scarcely any paralysis of the face, and that he can speak, although he uses words with difficulty, and sometimes uses wrong ones. He has, then, paraphasia.

I will present some general remarks in connection with these two cases, but have not time to go fully into the subject of aphasia. We mean by aphasia the loss of speech, in contradistinction to the loss of voice, which is aphonia. As a rule, aphasia occurs in connection with right-sided paralysis or hemiplegia. With few exceptions the paralysis is on the right side. The cerebral lesion, of course, being on the left side. But we sometimes meet with aphasia, as in this case, without any paralysis of the extremities; there is no evidence that this patient had any paralysis of the upper or lower limbs, but, as you see, he has some paralysis of the facial muscles. We may have aphasia, however, without any motor paralysis. We occasionally meet with cases of that kind. Aphasia has given rise to a good deal of observation and discussion within the past few years, and it still opens a field for discussion, and further investigations are very much to be desired. We have come to know that, in a large proportion of cases of aphasia, a lesion of some kind exists in the left anterior portion of the cerebrum, in the neighborhood of the island of Reil, and more especially in the posterior part of the third frontal convolution. Now, we may assume that this localization is the rule, but with some exceptions. In some exceptional instances the lesion is similarly located on the right side, giving rise to left hemiplegia; and in some instances, as stated, the lesions are found elsewhere, while the situation in which lesions are usually found is free from lesions. There is always some room for doubt in regard to the latter part of the statement, because there may be lesions which may escape attention unless very close examination be made, and perhaps the closest examination may fail to discover a lesion which does exist.

Now, when we come to the symptom, we find that it differs in different cases, and there are different varieties of aphasia, and some writers, especially the author on that subject in Ziemssens' Cyclopaedia, go very much into refinements, in some of which I do not see any practical advantage. But some distinctions are obvious and important. There is one variety of aphasia in

which the patient has evidently in mind the appropriate words for expressing the idea; that is, there is no lack of the symbols of ideas which language furnishes in the mind of the patient, but the patient cannot give utterance to those words. The words are in the mind, but they cannot be conveyed by speech. And when this kind of aphasia is complete the patient is perfectly mute, and says nothing, and makes no effort to say anything. That is known as ataxic aphasia, but it is not a proper term, for ataxic means a lack of coördinating power in the muscles, but the patient does not move the muscles at all. You cannot compare it with a case of locomotor-ataxia, in which the patient uses the muscles, but does not use them right. As just said, in this so-called ataxic aphasia there is no effort to use the muscles. Exactly what the nature of the difficulty is, it is difficult to say. But we see the character of the difficulty; the patient cannot give utterance to the words which are in his mind, to express his ideas. That the words are in his mind is evidenced by the fact that he can write them. He knows and understands the words, but cannot give utterance to them.

Then, there is another variety of aphasia known as amnesic aphasia, in which the patient cannot communicate the words expressing ideas, either orally or by writing. This implies a greater aphasic effect than the other. There is still another, in which the patient cannot communicate his ideas by signs, and he does not understand words when spoken to him. Here we have a combination of the different varieties. But in this latter case it seems to me clear enough that there is a condition of mental imbecility. A pretty important conclusion, if true; although I would not say that the patient must necessarily be altogether without intelligence, like an idiot. The difficulty involved carries with it a certain grade of insanity, so that the patient is not accountable for acts. But in ataxic aphasia there is every reason to believe that the patient may preserve the intellectual faculties intact, being capable of performing important acts which shall stand in law, such as the making of a sale, transferring property, and so on. That is a question of much interest and importance when made the occasion of very important medico-legal investigation.

Then, there is another form still, in which the patient has not lost the power of endeavoring to express words by speech, but there is not the command of words which the patient wishes to use to express ideas. He uses wrong words, as this second patient does; although he has improved to a certain extent, he uses wrong words, paraphasia, as it is called. Such a patient seems, sometimes, to have clear enough ideas in the mind, but when he attempts to convey them he uses language which conveys to the listener no apprehension of the ideas which he wishes to express. I have been

for several days seeing a patient who has this form of aphasia. There was a little paralysis of the right side, perhaps a little now, but it is very slight. That patient, whenever I see him, endeavors with the greatest possible earnestness to try to express something to me, but he uses incoherent words; his speech is a jumble of words, so that one cannot form the least idea, from the words he uses, of the ideas which he wishes to convey, and that fact gives him, as it is apt to do patients who retain their intellectual faculties more or less complete, an intense feeling of chagrin, so that after talking that way for a while he becomes almost wild with a feeling of irritation. Paraphasia is the proper name for it. In a practical view this is probably a sufficiently comprehensive representation of this symptom.

Now, these forms of aphasia depend upon the different causes which may give rise to paralysis; and aphasia usually, but as I have stated, not invariably, is associated with paralysis. These different conditions are: Extravasation of blood, and the formation of a coagulum within the brain, thrombosis, the obstruction of an artery by the conveyance to it and lodgment in it of a clot from the heart, embolus. These are the three causes which stand in relation to the aphasia and the paralysis in the great majority of cases; but other lesions of the brain may be the cause, such as a syphilitic growth, and tumors of different kinds, etc.; but I repeat that, in the great majority of cases, when we come to the question of pathological condition, we have to decide between extravasation of blood, thrombosis and embolism. I would take up some differential points, etc., but we have not time to-day.—*Med. and Surg. Reporter.*

ABDOMINAL SURGERY AND LISTERISM.

The three topics of interest in the Surgical section of the International Medical Congress were Abdominal Surgery, "Intra Peritoneal," the programme had it, Modern Lithotrity,—they wont say "Litholapaxy" over here,—and the Treatment of Wounds to secure Union by First Intention.

I may say parenthetically that the mode of procedure was for some one, or more, who had previously promised it, to read a paper upon the subject, and the discussion of those papers was taken up by the gentlemen appointed for that duty, whose names were printed upon the programme, and who were called in regular order by the president. And I may also say, right here, that every delegate was anxious to ascertain the exact position of "Listerism" in the convention. It was noticeable that early in the sessions when certain men, who shall be nameless, *seemed* to try to test the matter by initiating applause at every allusion to antiseptic surgery there was very little response.

Mr. Lister himself was always and everywhere heartily received. But it required no great sagacity to see that the majority of surgeons were *reserved* in the matter. But more of this further on.

Spencer Wells read a paper. He took strong Listerian ground, and said that now he had given up drainage altogether, so great was his faith in antiseptic surgery. Several others, Volkmann especially, followed in a similar strain. Then Marion Sims arose, and while he declared for Listerism he advocated drainage, and reminded Mr. Wells of a case (ovariotomy), in which he assisted him in a bad operation,—bad on account of adhesions,—and the patient *almost* died, but at last nature opened the abdominal wound and discharged a large amount of fetid fluid, and immediately she recovered. Finally came Mr. Keith to close the discussion. Never in the history of surgery did a few modest words make such a recoil in the "currents of expectant thought" as his.

It has been said, and was repeated by Volkmann and Kuget, in this discussion, that intra-peritoneal surgery was the "touchstone of Listerism." Professor Keith has been quoted the world over, again and again, as not only a warm disciple of Lister, but as illustrating in his remarkable success in ovariotomy, *more than any other surgeon*, the value of the antiseptic, or rather, the Listerian method. No one can deny this.

So slowly were his few words uttered that I can almost repeat every one *verbatim*.

You can imagine the effect much better than I can describe it when he said that for several months past he had "abandoned the antiseptic treatment altogether." "True," he said, "I had eighty successive recoveries under Lister's method, and *stopping there* it would be a wonderful showing. *But out of the next twenty-five I lost seven.* One died of acute septicæmia, in spite of the most thorough antiseptic precaution; three of "unquestionable carbolic acid poisoning; one of renal hæmorrhage." He went on to say that out of the eighty consecutive cases (or rather he said it first) many came too near dying; that a large number got a high temperature—105°, 106°, 107° Fahrenheit—the evening following the operation, but he said, "they happened to pull through." He then said that since he had for four months past abandoned the antiseptic method, and relied upon perfect cleanliness, care in controlling hæmorrhage, and thorough drainage, his cases were giving him much less trouble, and he was getting more satisfactory results.

He now stopped for a few moments, hesitating, as he must have realized the importance of his words, knowing that the whole world—surgical—was lending a "listening ear" to his utterance. The silence was "audible." Then he raised his head, and looking his audience squarely in the face, he said, "Gentlemen, I have felt it my duty

to make these statements, for *they are true*," and took his seat. I shall not attempt to describe the applause, nor the effect of his statements. Professor Keith, by the way, told me privately that he almost died himself from using the carbolic acid so much. He got renal hæmorrhage and debility to an alarming degree. He said, moreover, that he never had great faith in it, and should not have continued its use so long—I mean the "Lister method"—but for the fact that so many eminent men were carried away with it; and if, after his remarkable series of cases, he had changed, and lost seven out of twenty-five, as he did, without Listerism, all the world—he himself—would have attributed the result to the change.

One thing is certain: Mr. Keith's statements, in connection with those of others *and his own experience*, put Mr. Lister in a very unpleasant position; for he was put down on the programme to close the discussion on the treatment of wounds to secure union by first intention, which took place on Monday, 8th inst. Although four days had elapsed, he had no answer. To show how deeply he was impressed by all that had been said, he began his remarks, which were extemporaneous instead of written, as was expected, by saying that he never had admitted that abdominal surgery was the "touchstone of Listerism," and to the surprise and dismay of his followers went on to argue that, with the rapidity with which wounds of the peritoneum heal and the remarkable absorbing power of that membrane, and therefore its ability to take care of its exudates, he "doubted very much" whether, in the hands of a skillful, careful operator, it was not better to dispense with the antiseptic plan. I realize how important are the statements I am making, and lest some of your readers may think that they are open to criticism as to accuracy, I will say that I sat near enough to hear every syllable uttered, and I pledge my honor as a man and surgeon for the absolute accuracy of every statement, though I took few notes.

Then, seeming to realize the danger of admitting such wonderful absorbent qualities to the peritonæum, he went on to say that he had recently made some experiments that surprised him very much, which proved that serum or bloody serum was "a very poor soil for the development of germs from contact with air-dust, and that blood clots were still more sterile. Indeed, it was very difficult to make them grow or develop at all, unless diluted with water." By the way, he declared that he had witnessed free cell development in a blood clot.

And these remarkable facts, said he, "at once call in question the necessity of the spray."

He then went on to say that he was not yet ready to give up the spray, but if simple irrigation or lavation should prove as good, he would say, "*Fort mit dem spray*," and he further said, "I am

not at all sure but that before the next meeting, two years hence, I shall have abandoned the spray altogether." (His recent house surgeon says that he has lost all confidence in its utility.)

As to carbolic acid, he said, "I am forced to admit its unfortunate character." That was all; not a word about oil of eucalyptus or any other substitute. He kept referring again and again to abdominal surgery, but his manner showed to everybody that he was upset.

He gave no statistics, no large comparisons, as was expected by his disciples. He referred to the excellent results in two cases of recent operation, saying that "I could hardly believe I should have got such results without the antiseptic plan; I did not before I used it."

And this is the fault that the best surgeons here find with him. They are all ready and glad to give him or any other man credit for all he has really done, and they all admit that Mr. Lister has done much to improve surgery, especially German surgery. I need not explain. But they very properly say, "With his unprecedented opportunities, both in his host of followers, why don't he give us large and complete statistics? Instead, he only gives either isolated cases or a small group of successful ones, such as may be found under almost any plan." I quote one of London's most eminent and fair-minded men.

It was curious to watch the effect of the thing. I have alluded to the impression produced by Keith's remarks. As Lister was speaking, one of his ardent admirers—I mean an admirer of his mode of dressing; I am not discussing the man, who is an earnest hard-working, accomplished gentleman—turned to me, and said, "I would never have believed Professor Lister would have admitted that." Another said, "Well, if Lister abandons the spray and carbolic acid giving us no substitute, where is 'Listerism?' We had drainage, we had animal ligatures, we had air-proof dressings, before." And so on. Every little group of surgeons was discussing the matter; those who had never accepted the Listerian method being quite as much surprised as its warmest adherents.

"Mein Gott!" said a German whom I did not know, "Lishtereism ist todt." "Fort dem Spray? Fort dem Acid Carbolique? Was giebt's zu bleiben?"—*Boston Medical Journal*.

RELATION OF ULCERATED OS TO PREGNANCY.

Dr. J. H. Bennett, narrates this case in the *British Medical Journal*, (*Med. and Surg. Reporter*):

I was applied to in February, by a Polish lady, "to bring on abortion." She was thirty-six years of age, the mother of several children, and had

nearly lost her life a year before, at Warsaw, from uncontrollable sickness and constant and profuse hemorrhage, during pregnancy. She had the best consulting advice to be obtained at Warsaw; and, after every ordinary means had been tried in vain, abortion was induced, at the end of the sixth month, to save her life, as she was rapidly sinking. She came south, partly to recruit. When she sent for me, she considered herself about three months gone, and had had bleeding for a month. Latterly, the loss had been hemorrhage, and she was becoming anæmic. There was constant sickness, and she was blanched and weak. All these facts were placed before me by her relatives, and my assistance demanded on the lines laid down by her previous Warsaw physicians. I refused to accede to the request until I had ascertained that such a course was imperatively necessary, demanding an examination. This was allowed; and I found a hypertrophied cervix, with fungoid bleeding ulceration. These lesions were treated as described. In a fortnight, the bleeding ceased entirely; in less than a month the sickness had ceased; and in two she was quite well and in a fair general health—five months gone in a then all but normal pregnancy; the foetus vigorous. She left me to go home, in this, state in April, and has since been happily confined of a live, healthy child. Her obstetric physicians at home were much surprised at the treatment of her case, and at the results.

The existence of inflammatory lesion of the cervix or uterus, at the time of parturition, does not give the accoucheur any particular clue for any special treatment; but it prepares him for accidents. He should know that he has a bad case in hand; that rigidity of the os; slow, painful labor; laceration of the cervix; hemorrhage, during or after parturition; adherent placenta; metritis; ovaritis; hemorrhagic; purulent; long-continued lochial discharges; in a word, a bad labor and a bad getting up may be expected, in the natural course of things.

Such woman often do well, however, for two or three weeks after their confinement, and then flag, and become weak, feverish, and ill. Six weeks or two months after their confinement, their uterine condition should be carefully investigated; and, if any disease exist, it should be treated and cured before they are restored to their ordinary duties, as I stated at the commencement of this essay. By always following this course, when actively engaged in midwifery practice, I shielded my patients from the illnesses which often follow confinements. In ordinary practice, I believe the accoucheur takes leave finally of his patients three weeks after the confinement, and hears no more about them.

WHITLOW.—In a clinic on this painful affection by Mr. Christopher Heath, (*Medical Times and*

Gazette, vol. i., 1881), he says that the subject is meagrely treated of in the text-books. If met with in the earliest stage, when the finger has just begun to redden and tingle, a twenty-grain solution of nitrate of silver, or the silver stick wetted and lightly pencilled over the affected part and a little beyond, checks it at once. When the whitlow is a little more severe,—that is, when pus forms about the nail or the tip of the finger,—the cuticle, which is insensitive, may be incised. Occasionally, however, when a foreign body has found its way beneath the nail, pus forms there and gives rise to excruciating agony from the tension beneath unyielding structures. Judicious cutting away of the nail will relieve this if near the margin; but if near to the base, it is much better to pare down to the nail with a sharp knife until the matter is let out than to resort to the unnecessary cruelty of removing the entire nail.

The third kind of whitlow is really an acute necrosis of the terminal phalanx, following periostitis and suppuration beneath the periosteum, just as it does in the case of a long bone. A very slight injury—the prick of a needle or a pin—may set it up. After some hours' uneasiness, the pain becomes acute and throbbing, and entirely prevents the patient sleeping. If timely relief is not given, pus will very slowly make its way to the surface of the finger, but never up the sheath of the tendons, and, when discharged, will leave the greatest part of the phalanx bare and dead behind it. A timely and free incision is the only mode of saving the phalanx, and cannot be resorted to too early; for, if no pus be present, the inflamed periosteum will still be divided with great relief to suffering. The finger should be held firmly on a table, and the surgeon, entering his knife just above the transverse interphalangeal mark in the skin, should cut boldly down to the bone in its whole length from base to apex. When, as so often happens, these cases have been treated domestically with "soap and sugar" and poulticing until the end of the finger is riddled with sinuses, there is nothing to be done except to extract the necrosed phalanx as soon as it is loose and to bring the finger into shape by careful water-dressing applied in strips. The base of the phalanx usually survives, giving a point of attachment to the tendons.

Inflammation of the skin and subcutaneous tissues may occur in any part of the finger. Incisions must here be made with care, so as not to open the theca or sheaths of the tendons, which then invariably slough, and the patient is left with a useless finger. For this reason incisions on each side of the finger are safer than one in the centre, that may unawares let out the tendons, which will look perfectly healthy at the moment, but soon become sodden and softened.

The synovial sheaths of the flexor tendons of the thumb are often, though not always, in direct communication with the synovial membrane of the

annular ligament of the wrist, and hence pus is rapidly conducted in this way up to and, if not relieved, into the forearm.

There is much difference in the importance of saving the different digits. The thumb must be saved at all hazards. The middle and ring fingers are comparatively unimportant, and, if stiff, are apt to be in the way. A stiff forefinger is better than none.

VIBURNUM PRUNIFOLIUM IN UTERINE DISEASES.—Dr. E. C. Mann (Boston *Medical and Surgical Journal*) gives the following in reference to the use of this remedy: As many cases of diseases of women occurring in connection with nervous diseases are annually treated here, I desire to call attention to my own investigations with this comparatively new medicine. It appears to me to act directly and specifically upon the special nerves of the uterus as a true nerve sedative. I have had several very violent cases of congestive and neuralgic forms of dysmenorrhœa being accompanied by epileptiform convulsions of a very severe type, and in each and every case I have seen almost magical relief following the use of the fluid extract of viburnum prunifolium. The case referred to, which was so severe that the intensity of the pain had worn out the unhappy sufferer and induced the epileptiform attacks, was completely cured in a few weeks by the combined use of the viburnum prunifolium and the use of the constant current of electricity, the positive pole being applied to the hypogastric region, and the negative pole, to which was attached a cup-shaped electrode, directly to the uterus. The galvanic current has a very powerful influence in suspending contractions of the uterus, and also is very efficacious, when used locally over the ovaries, in controlling ovarian neuralgia. Previous to my using viburnum prunifolium I had been accustomed to rely on valerianate of zinc and fluid extract of gelsemium, with the constant current of electricity, but since my first experience with the former drug I have used nothing else. Although I have not had occasion to use it in cases of threatened abortion, I should deem it worthy of use from its action on the ganglionic nerve of the uterus. I have failed to perceive any action on the general system, the whole force of the medicine appearing to be directed to the uterus and its system of nerves. When the pulse has been high, from nervous excitement, and the temperature centres in the brain have been temporarily paralyzed, allowing sudden rise in temperature, from nervous excitement, both pulse and temperature have fallen to the normal as the uterine pain has been relieved. It must be remembered, also, that my cases have been aggravated ones, many of my cases have been sent to Sunnyside on the verge of insanity. My conclusions, therefore, are, that in viburnum prunifolium we have a uterine sedative more powerful

than any other in controlling dysmenorrhœa and uterine contractions, and that it probably acts by passing from the blood to the nerve centre, and is special in its effect upon the ganglionic nerves of the uterus.

CHRYSOPHANIC ACID IN PSORIASIS.—Chrysophanic acid has been used successfully for some time as a remedy for psoriasis. It is, perhaps, the best remedy we possess for that affection. Where, however, the skin affection is extensive, or the remedy too strong, it sometimes causes sickness and vomiting. It may be applied in combination with melted lard, or what is better, with vaseline, in the proportion of from 30 to 60 grains to the ounce. Dr. M. Charteris, of England, has been using the remedy, in combination with vaseline, with complete success in quite a number of cases. His article is published in the *Lancet* for July, 1881. In a case where the disease (*psoriasis*) extended over the whole body the usual formula of 1 to 8 of vaseline was found too strong; nausea and vomiting occurred, so that he was compelled to apply it of a much weaker strength, viz.: 1 to 16. During his experience he learned one singular fact, that where the disease was nearly equal on both sides, or was symmetrical, the application of chrysophanic acid and vaseline to one side of the body acted equally on both sides. He took patients, so afflicted, covered the arm and leg with close-fitting flannel, so that nothing could touch it, and made the application to the arm and leg of the opposite side. The covered limbs recovered from the affection nearly, if not altogether, as soon as those receiving the ointment.

Cases affected for months and years, and which had resisted all kinds of treatment, readily yielded to this plan in from 10 to 14 days.

It would appear from the disappearance of the affection on one side by the application of the remedy to the other, and also from the sickness it occasioned, that the acid is absorbed into the blood and acts as a constitutional as well as a local remedy. This fact explains the observations of Dr. R. Crocker, who applied the acid to one side of the body and turpentine to the other, and found the respective sides healed in about the same time. He concluded, therefore, that turpentine was as good a remedy for psoriasis as chrysophanic acid.

From the above experiments of Prof. Charteris, it is evident that the acid acts both locally and constitutionally, and that in Crocker's case the disease yielded to the constitutional effect of the acid, and not to the turpentine.—*Pittsburgh Medical Journal*.

THE TREATMENT OF SPERMATORRHŒA.—Dr. S. W. Gross, in his *Practical Treatise on Impotence and Sterility*, says: In all cases of seminal incontinence, with rare exceptions, the remedies

at the onset should be directed to overcoming the sensibility of the mucous membrane of the urethra, of the ejaculatory ducts, and of the seminal vesicles; to subduing the irritability of the muscles concerned in ejaculation; and to diminish the reflex excitability of the genito-spinal centre. Hence, they should be of a calming and sedative nature. By the ignorant and indiscriminate employment of strychnia, cantharides, phosphorus, damiana, and cold sitz-baths or affusions during the stage of hyperæsthesia, much harm is done and the therapeutics of spermatorrhœa are brought into disrepute.

Premising the statement that tonic should follow the sedative plan of treatment, I will now give an outline of my view as to the best management of the varieties of the affection:

Under all circumstances thirty grains of bromide of potassium, along with about ten drops of the fluid extract of gelsemium (Bartholow), every eight hours, and one-sixtieth of a grain of sulphate of atropia (Rosenthal) on retiring, are worth all the other internal remedies combined. In anemic subjects the bromide may be administered at night and quinine and iron be exhibited during the day; but if the bromide be badly borne, it should be guarded (or its cumulative action must be prevented by promoting its excretion by the urine by combining it with a diuretic, as ten grains of nitrate or bitartrate of potassa (Rosenthal). This combination is far better than that with Fowler's solution, which is advised by Gowers and Bartholow); or it may be replaced by twenty grains of chloral. Not only does atropia diminish reflex mobility of the genito-spinal centre, but the recent researches of Kenchel, Heidenhain, and Stricker and Spiner show that it paralyzes the movements of the cells of the acinous glands and checks their secretion, so that it cannot be dispensed with.

INOCULATION IN "CHARBON."—Monsieur Pasteur has lately accomplished a remarkable triumph as the result of a thoroughly scientific investigation into the cause of a disease which has occasioned much alarm among the stock-breeders of France. The disease is known by the name of "charbon," and has particularly attacked sheep, to such an extent that it is estimated to have caused injury to the amount of several million francs a year. M. Pasteur's investigation led him to the conclusion that the malady is communicated by infected grass. The grass, however, is only infected where animals that have died of the disease have been buried. In these spots worms, after having fed on the diseased carcass, rise through the soil to the surface collect round the roots of plants, are swallowed by the animals, and thus communicate to them the deadly virus. M. Pasteur has collected these worms. He separated the virus and fully examined it, ultimately obtaining it in all conditions, from

the most harmless to the virulent state. He then set up the theory that by inoculation the animals might be protected from "charbon." These theories, conceived in the laboratory, discussed before the Academy of Medicine, and warmly combatted, have lately been tested by practical experiments. On May 5th, M. Rossignol's farm and sixty sheep were placed at M. Pasteur's disposal. Ten of these sheep were left untouched, in order that they might later on serve for a comparison. Of the remaining fifty, twenty-five were marked with a hole in their ears and inoculated, first time on May 5th, and the second on May 17th. On May 31st, none of the inoculated sheep had lost fat, or gaiety, or appetite. On May 31st, the fifty sheep were taken without distinction and inoculated with the strongest virus. M. Pasteur predicted that by June 2nd, the twenty-five sheep not inoculated would be dead, and that the inoculated animals would show no symptoms of sickness. On that date, therefore, a number of eminent spectators came together to witness the result. Things turned out as M. Pasteur had foretold. At 2 o'clock twenty-three of the sheep which had been inoculated were dead. At 3 o'clock died the twenty-fourth, and the twenty-fifth an hour later. The twenty-five inoculated animals were sound, and frolicked and gave signs of perfect health. Only one of the twenty-five inoculated animals had been feverish, but the fever had entirely disappeared. It was caused by the animal having designedly been inoculated with too strong a dose of the virus. The twenty-five carcasses were buried in a fixed spot, and on the infected grass which will grow over it experiments are to be made with the inoculated and non-inoculated sheep. But the experiment is complete for all practical purposes, and M. Pasteur has thus been able by the exercise of his remarkable scientific skill to confer on his country a benefit, the capital value of which is at once calculable, and would amount, no doubt, to some millions of pounds sterling.—*C. emist and Druggist.*

TREATMENT OF EXTRA-UTERINE PREGNANCY.—Dr. Lusk (*Boston Med. and Surg. Journal*) cites several cases of extra-uterine pregnancy in which faradization and galvanism have been effectually used.

In the larger number the faradic current was employed, and of these his own case was one. Faradization in extra-uterine pregnancy was first successfully used by Dr. J. G. Allen, who reported in 1872, two cases of recovery through its instrumentality. So far, since then, his method, faithfully carried out, has proved uniformly successful, has presented no drawbacks, and all the women are known, from private inquiry, to be enjoying good health at the present time; while of one hundred and fifty cases of tubal pregnancy collected by Henning only seventeen survived.

The transmission of the current through the ovum has thus been proved a safe and efficient means for destroying the life of the fœtus, during the first three months of its existence. The application consists in passing one pole into the rectum to the site of the ovum, and pressing the other upon a point in the abdominal walls situated from two to three inches above Poupart's ligament. The full force of the current of an ordinary one-cell battery should be employed for a period varying from five to ten minutes. The treatment should be continued for one or two weeks, until the shrinkage of the tumor leaves no doubt as to the efficacy of the treatment.

PROLAPSUS ANI.—R. Eichler, M.D., in *Western Lancet*, says: A boy five years of age came under my treatment, suffering from prolapsus ani of two years standing. The gut came out to the extent of two and a half inches after each passage. My treatment at first was of a routine kind—cold effusions, cauterizations with nitrate of silver, tincture of iron, etc. The bowel persisted in coming down at every passage. As a last resort, I tried an ergotine suppository.

R. Ergotine.....gr. ij
But. cocoa.....q. s.
M. Ft. Suppos.....no. j.

One after each passage.

The effect of the remedy has been magical, as after the use of a few of the suppositories, there has been no return of the condition, and the case is cured.

READY METHOD OF PREPARING FOMENTATIONS.
—Take your flannel, folded to the required thickness and size, dampened quite perceptibly with water, but not enough to drip, and place it between the folds of a large newspaper, having the edges of the paper lap well over the cloth, so as to give no vent to the steam. Thus prepared, lay it on the heated surface of the stove or register, and in a moment steam is generated from the under surface and has permeated the whole cloth sufficiently to heat it to the required temperature. This method is often very convenient and efficient where there is no opportunity to heat much water at a time.—*Michigan Medical News.*

PHthisis is being treated now, with reported success, by the continuous inhalation of the vapor of carbolic acid. Lister's gauze is occasionally dipped in a solution of the acid and then inhaled from a constantly worn respirator. "It is fair to infer that the application to internal suppurating surfaces of an agent, which has been used in similar cases, externally, with such benefit, will be equally efficacious in checking the growth and development of morbid germs and thus allow tissues to be reconstructed."—*Brit. Med. Journal.*

NOCTURNAL INCONTINENCE OF CHILDREN.—Prof. S. D. Gross, of Philadelphia, advises:

R—Strychniægr. j.
Pulv. cantharides.....grs. ij.
Morph. sulph.....grs. iss.
Ferri. pulv.....grs. xx.—M.

Mix: Make 40 or 50 pills or powders, *pro re nata*.

Sig.—One three times a day to a child ten years old.

This prescription will speedily relieve the irritability of the bladder, especially if conjoined with such means as a cold shower bath daily, the avoidance of irritant food and late suppers, the patient lying on the side or belly, and taking care to drink nothing for the few hours preceding sleep, and to empty the bladder on going to bed.—*Mich. Med. News.*

PROF. HUXLEY says: "The body resembles an army; each cell, a soldier; an organ, a brigade; the central nervous system headquarters, a field telegraph; the alimentary and circulating system, the commissariat, and in which losses are made good by recruits born in camp, and the life of the individual is a campaign, conducted successfully for a few years, but with certain defeat in the long run."

At a meeting of the American Neurological Association, in speaking of the administration of the bromides, Dr. W. A. Hammond said that of the salts he preferred the bromide of sodium, but had given of late bromine alone.

R—Bromine, ʒ i
Aquæ, ʒ viii.—M.

S.—Teaspoonful, well diluted.

Dr. Jewell had used bromine with favorable results, and Dr. Seguin said that he considered that the efficient agent was the bromine, and not the potash or soda.

A **DOCTOR** who had continued his visits on a wealthy lady for an inordinate time after convalescence had set in, was somewhat surprised one day, at being told by the servant that madame could not see him that day as she was ill.

MR. LISTER, recently, in a case of fractured patella, laid open the joint with antiseptic precautions, evacuated the extravasated blood, and brought the fractured ends of the patella into apposition by a strong wire suture.

PROF. PAUL BERT has shown that just twice the quantity sufficient to produce anæsthesia, by any anæsthetic, will produce death.

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TORONTO, OCTOBER 1, 1881.

This Journal has the largest circulation of any Medical Journal in Canada.

PRESIDENT GARFIELD.

In our last issue we made some allusion to the illness of President Garfield, and to the probable result of the case. Since then our predictions have been verified by the sad ending of one whose life hung in the balance for eleven long and dreary weeks. The medical profession watched with intelligence, interest and sympathy, the varying course and symptoms of this now historical case, and many no doubt were forced to the same conclusion as ourselves as to the issue. Symptoms of pyæmia were manifest at a comparatively early period, and though the attending surgeons were slow to acknowledge it, they knew it to be the fact nevertheless. That pyæmia did exist, and was the principal factor in causing his death, was abundantly attested by the *post mortem* examination. The parotid, intra-abdominal, and renal abscesses demonstrated this only too well. The immediate cause of death, however, was the giving way of one of the mesenteric arteries, a circumstance which could not have been anticipated. Even if this accident had not occurred, it is not possible that life could have been prolonged many days, and recovery was out of the question. The autopsy, the official report of which we give below, was a surprise to many. The ball appears to have taken nearly a direct course and was found flattened, and completely encysted, two inches and a half to the left of the median line, below the pancreas and behind the peritoneum. In its course it had fractured the eleventh rib and also the anterior surface of the body of the first lumbar ver-

tebra. What was supposed, during life, to have been the track of the bullet turned out to be a sinus leading to an abscess cavity extending downwards towards the right ilium. Even had a correct diagnosis in this respect been made during life, the result would still have been the same. Gunshot wounds of the spongy portions of bone, such as the vertebræ, are among the most fatal of accidents, and this case proved no exception to the rule. The following is the official bulletin of the autopsy issued by the attending surgeons:—

Present, — " Drs. Hamilton, Agnew, Bliss, Barnes, Woodward, Reyburn, Andrew H. Smith, of Elberon, and Acting Assistant-Surgeon D. S. Lamb, of the Army Medical Museum, Washington. The operation was performed by Dr. Lamb. It was found that the ball after fracturing the right eleventh rib had passed through the spinal column in front of the spinal canal, fracturing the body of the first lumbar vertebra, driving a number of small fragments of bone into the adjacent soft parts and lodging below the pancreas, about two inches and a half to the left of the spine and behind the peritoneum, where it had become completely encysted. The immediate cause of death was secondary hemorrhage from one of the mesenteric arteries adjoining the track of the ball, the blood rupturing the peritoneum, and nearly a pint of blood escaping into the abdominal cavity. This hemorrhage is believed to have been the cause of the severe pain in the lower part of the chest, complained of just before death. An abscess cavity six inches by four in dimensions was found in the vicinity of the gall bladder between the liver and transverse colon, which were strongly inter-adherent. It did not involve the substance of the liver, and no communication was found between it and the wound. A long suppurating channel extended from the external wound between the loin muscles and the right kidney almost to the right groin. This channel is now known to be due to the burrowing of the pus from the wound. It was supposed during life to be the track of the ball. On examination of the organs of the chest, evidence of severe bronchitis were found on both sides, with bronchopneumonia of the lower portions of the right lung, and—though to much less extent—of the left. The lungs contained no abscesses, and the heart no clots. The liver was enlarged and fatty, but

free from abscesses, nor were any found in any other organ except the left kidney, which contained near its surface a small abscess about a third of an inch in diameter. In reviewing the history of the case in connection with the autopsy, it is quite evident that different suppurating surfaces, and especially the fractured spongy tissues of the vertebra, furnish a sufficient explanation of the septic condition which existed. (Signed), D. W. Bliss, J. K. Barnes, J. J. Woodward, R. Reyburn, F. H. Hamilton, D. H. Agnew, A. H. Smith, D. S. Lamb."

There can be no doubt, in view of all the facts of the case, that the late President received all the aid which medical science and intelligent medical skill could give. The surgeons in attendance deserve the thanks of the Nation, and it is the manifest duty of the profession to uphold and defend them from any reproach which may be heaped upon them by the laity or dissaffected doctors. There is one circumstance, however, which the medical press and profession can hardly afford to pass over in silence. We refer to the reported unprofessional conduct of Dr. Bliss. After the wounding of the President, messengers were sent, as is usual in such cases, in all directions, for physicians. Dr. Townshend was first in attendance, and according to ordinary courtesy, and the code of ethics, should have had charge of the case until the family physician arrived. Dr. Purvis was the next to arrive, and after him Dr. Bliss, who at once assumed control of the case, and retained it until the arrival of Dr. Baxter, U. S. A., the President's family physician, who had been out of the city. On Dr. Baxter's return, he presented himself at the White House, where he met Dr. Bliss, whom he asked to take him to see the President. This Dr. Bliss refused to do, stating that he wanted to keep the President quiet. Dr. Baxter said he made the request as the President's physician, having attended him for years. To this Dr. Bliss replied: "I know your game, you wish to sneak up here and take the case out of my hands." Angry words followed, and Dr. Baxter recognizing the impropriety of making any disturbance in such a place, took up his hat and left the room. It is wholly unnecessary to comment upon the unprofessional and unbecoming conduct of Dr. Bliss. Such conduct is unworthy of any member of the profession, and carries with it its own condemnation.

MEDICAL FEES.

Of all subjects treated of, none should interest the medical profession more than the subject of medical fees. Most medical men in this, and we suppose in most countries of the world, have to rely upon the fees derived from their practice for the support of themselves and their families, and it is very much to be regretted that they are in many instances so poorly paid for their services. The reason for this state of affairs in general, is not difficult to apprehend. Medical men, as a rule, are themselves to blame, from the fact that they do not sufficiently appreciate the value of their services; they do not properly insist upon being paid suitable fees; and what is worse, they occasionally endeavour to detract from the value of each other's services. The acquisition of an unusual fee by some fortunate "medico" is the occasion for any amount of shoulder-shrugging, and an envious cry of "high charges." As a rule, the regulars get the "regular fees" and the big fees go to the quacks.

In respect of fees, there is a most striking contrast between members of the medical and legal profession. Who ever heard a legal gentleman crying out against "high charges" in respect of his brethren at the Bar? Neither as a rule, in this part of the country, at all events, can the profession complain against the lawyers or judges for not supporting their claims when necessity compels them to bring them before the Courts. One Judge in this city, to our own knowledge, requested the plaintiff to double the charges, which were ridiculously low, and gave a verdict in his favor immediately.

The local medical attendants upon the late lamented President of the United States, are said, according to newspaper reports, to have charged the Government \$100 per day, and Drs. Hamilton and Agnew, each \$1,000 per day. These seem large fees, but not more, we venture to say, than would have been charged by any leading lawyer in some important suit in which the Government might be concerned. We trust that no medical man in the United States will be found mean enough to carp at the above fees paid to his medical brethren, but rather that he will congratulate himself and his confreres on the fact that the claims of the profession in the matter of fees have for once, at all events, had a proper recognition.

The medical fees in this city, and in fact in all parts of the country, are ridiculously low, and in view of the return of the country to prosperity, and the increase of wages to laboring men and salaries to public officers, it is a most opportune moment for the medical profession to institute a movement for an increase in the ordinary fees. We would urge this strongly upon the attention of our brethren, for depend upon it, if we do not put a proper estimate upon the value of our services the public never will. It only requires a little energy and activity on the part of the profession at the present moment to accomplish this most desirable reform, and we trust that no time may be lost.

Another matter occurs to us, which we think requires to be ventilated. We refer to the large amount of gratuitous work done by medical practitioners, especially in towns and cities. Every person, rich or poor, seems to think he has some claim upon the services of a medical man, and what a cry of inhumanity is raised against a physician if he refuses his services to the poor without a fee. Yet the baker is not blamed for refusing bread on the same conditions, or the butcher for refusing meat. The London *Lancet* in a recent number gives the following in reference to this subject:—"There is a very comfortable doctrine abroad, that doctors are at everybody's service in an emergency, and that they are bound to rise from their beds and go to a distant alley to save a life or ease a pain, without the least prospect of pay. But is such mercy to be shown only by doctors? Why does not the public share with doctors the cost and the credit of such service? It is society's duty, not that of any single profession, to see that no human creature, however poor, dies without medical aid. A country like this should make provision for the emergencies of its poor, and not throw the whole onus on the much enduring and little paid members of our profession."

Medical men are not only supposed to attend all the sick poor gratuitously, but they are also expected to give of their scanty earnings to charitable purposes. This is certainly asking too much—and we wonder that the overburdened profession does not cry out against such injustice. Medical practitioners are also taxed by the municipal authorities to the full extent of their income from practice, and in some cases, for more than they

actually receive, and yet they are expected to treat the poor gratuitously. Of course this will continue as long as the profession is willing to submit to it; but we maintain that it is manifestly unjust and unfair, and the sooner it is rectified the better. We submit that the municipal authorities should either remit the taxes on the doctors' incomes from their practice, or pay for the medical treatment of their poor. The fact that the injustice of taking the medical man's services for nothing and taxing his scanty earnings, has been the custom for years is no reason for its longer continuance.

MEDICAL THERMOMETRY.

This subject has come to be regarded as one of very great importance, both in medical and surgical practice. The ordinary means of determining the temperature of the body are so very imperfect, that a considerable deviation may be present and escape observation. All abnormal temperatures denote the presence of disease, and in many cases the physician is greatly aided in his diagnosis and prognosis of a case by ascertaining the temperature of the body, and this, with the means at our command, may be determined with a nicety which is common to few other phenomena. The temperature of the body cannot be feigned or falsified, and its abnormality may decide the degree or danger of the attack. Relapses, complications, or transitions in the course of disease, may in this way be discovered before they could otherwise be recognized. It reveals the imminence of a fatal termination, or the impossibility of recovery. In surgery the application of the thermometer determines the practicability or possibility of an operation where there are grave doubts.

The variations of temperature, however, to be of any real practical value must be taken regularly night and morning. A single observation, while it may point out that a patient is very ill, is not by itself conclusive as to the kind of disease present. When we have extremes of temperature we know there is great danger. For example, temperatures below 96.5F. are *collapse* temperatures, 92. fatal collapse. Temperatures from 100 in the morning to 104 in the evening, are *febrile* temperatures, and temperatures from 104 in the morning to 107 in the evening are *hyperpyretic* temperatures, 107

and above indicating a fatal termination. Every medical practitioner is aware of the difficulty in diagnosing at an early stage between the different febrile diseases, and it is here that the thermometer comes largely to our aid. If the temperature is normal, or only slightly increased, pneumonia, scarlet fever, typhoid fever and small-pox are excluded; if the temperature is high at the outset, typhoid fever, influenza, and articular rheumatism are excluded, but pneumonia, pleurisy, intermittent and ephemeral fevers, the exanthemata, pyæmia, or meningitis, may be present. In the early days a high morning with a normal evening temperature would indicate intermittent fever, while a high febrile temperature the first or second day would exclude typhoid.

It would, however, be entirely a work of supererogation on our part, to urge upon the profession of to-day the value and utility of the thermometer in daily practice, and while this is no doubt universally recognized, it is of equal importance that these instruments of precision should be what the name implies. From the report of the Winchester Observatory of Yale College, it would appear that many of the thermometers in daily use by medical men are inaccurate. In June, 1880, a circular was issued from this bureau in which the subject was discussed, and an offer was made to the members of the profession in the United States and Canada to correct any clinical thermometer sent for the small sum of fifty cents. Many availed themselves of this offer, and the result has been that sixteen hundred and sixty-seven thermometers have been corrected and certificated since that date; among these fifty physicians' thermometers had errors exceeding a degree and a half. If thermometers are to be used at all in the practice of medicine, and we apprehend no one doubts their utility in certain cases, they should be as accurate as possible. Proper seasoning of the tubes used in the manufacture of thermometers, and more careful graduation, are the remedies proposed by the bureau, and manufacturers are recommended to send the tubes to the Observatory to remain under seal a year before being graduated, and some are already taking advantage of this suggestion. In the meantime, those who have thermometers that are not above suspicion, should lose no time in having their presumed errors rectified, by sending them to the Winchester Observatory, Yale College, New Haven, Conn.

ELECTRICITY AND BULLET WOUNDS.—Since the autopsy in the case of President Garfield, there is curiosity manifested to know why the electricians failed to locate the fatal ball. Some seem to think that the failure to locate the bullet by the induction balance was caused by the experimenters trying to obtain results beyond the power of the instrument. With the ordinary induction balance, as invented by Prof. Hughes, the absence or presence of the smallest piece of metal is clearly indicated at short distances. When Prof. Bell tried the experiment in Washington the bullet was at too great a distance from the coils. The consequence was, that as the experimenters knew they could get only the faintest results, if any, from the presence of the bullet, they were led perhaps to accept imaginary differences in the sounds they heard. The error may have occurred in another way, namely, through the presence of some metallic substance (other than the looked for bullet), which was overlooked by the experimenters. Notwithstanding, however, the failure of the experiment in this instance, surgeons should not be deterred from repeating it in cases where it may prove useful. There is not the least doubt that when the conditions are favourable the induction balance will give effectual aid in treating gun-shot wounds. By using the instrument any bullet that is not very distant from the surface could probably be detected at once.

SPECIALISTS IN MEDICINE.—Dr. Billings, in his address before the International Medical Congress in London, said:—"There must be specialties and specialists in medicine, and the results will be both good and evil; but the evils fall largely upon those specialists who have an insufficient general education, who attempt to construct the pyramid of their knowledge with the small end as a foundation. It has been said by Dr. Hodgen, that 'in medicine a specialist should be a skilled physician, and something more: but that he is often something else—and something less.' There is truth in this; truth which the young man will do well to consider with care before he begins to specialize his studies; but, on the other hand, it is also true that the great majority of men must limit their field of work very much and very clearly if they hope to achieve success. The tool must have an edge if it is to cut. It is by the labor of specialists that many of the

new channels for thought and research have been opened, and if the flood has sometimes seemed to spread too far, and to lose itself in shallow and sandy places, it has nevertheless tended to fertilize them in the end." The specialists are not only making the principal advances in science, but they are furnishing both strong incentives and valuable assistance towards the collection and preservation of medical literature and the formation of large public libraries.

OPHTHALMOLOGY: MIDDLEMORE FUND PRIZE ESSAY.—The interest on the fund of £500 given in trust to the British Medical Association by Mr. Richard Middlemore of Birmingham, to found a prize for the best essay on Ophthalmology, having accumulated for three years, the Committee of Council now offer, in accordance with the terms of the trust deed, a prize of £50 for the best essay on the Scientific and Practical Value of Improvements in Ophthalmological Medicine and Surgery made or published during the past three years. The successful essay will be the property of the Association. Essays must be in English or accompanied by an English translation, and forwarded under cover, with a sealed envelope bearing the motto of the essay, and containing the name and address of the author, addressed to the General Secretary of the British Medical Association, 161A, Strand, London, and must be in his hands on or before May 31st, 1882.

SUIT FOR MALPRACTICE.—We regret to learn that Prof. McLean, of Ann Arbor, (formerly of Kingston, Ont.,) is about to be subjected to a suit for malpractice, the damages being laid at \$20,000, in consequence of his failure in an operation for the relief of recto-vaginal fistula. In order to bring the parts properly together, the Dr. divided the perineal body. Union did not take place owing to the patient's ill-health, and there is now prolapsus of the uterus and rectum. Suits for malpractice are the opprobria of surgical practice, and both judges and juries too often fail to understand that surgeons cannot always overcome natural defects. The differences of opinion also among medical men, where, in many cases no difference should exist, often occasion a failure of justice. We trust, however, that Prof. McLean will be supported by the testimony of his professional brethren, and that the verdict will be in his favour.

PRIZE ESSAY.—The committee of selection appointed by the chairman of the section on Practical Medicine, Materia Medica and Physiology, at the recent meeting of the American Medical Association, have selected, and hereby announce, as the subject for the prize to be awarded in 1883, the following question :

What are the special modes of action, or therapeutic effects upon the human system, of water, quinia, and salicylic acid, when used as anti-pyretics in the treatment of disease? The essays must be founded on original experimental and clinical observations, and must be presented to the chairman of the committee of award on or before the first day of January, 1883—N. S. DAVIS, H. D. HOLTON, W. B. ULRICH, *Com. of Selection.*

TINC. FERRI MUR. IMPROVED.—The addition of half a drachm of citrate of potash to the drachm of tincture of iron improves the quality of the latter for internal administration, by removing the peculiar roughness of the iron and its unpleasantness in the mouth. The following formula will be found most suitable :

R.—Tinc. Ferri Mur.....ʒij.
Potas. citrat.....ʒj.
Syr. Limonisʒiiss.
Aquæ ad.....ʒviii.—M.

SIG.—A tablespoonful three times a day.

It may also be combined with substances containing tannic acid, as gentian, &c., without decomposition.

PROGRESS OF MEDICAL SCIENCE.—A little over a hundred years ago, Haller, in Göttingen, was professor of anatomy, botany, physiology, surgery, and obstetrics, and lecturer on medical jurisprudence. At the same time he was writing one review a week, and summing up existing medical science in his "Bibliotheca." To-day any one of these branches requires all the time of the most energetic and learned of our contemporaries. but, on the other hand, the well-educated medical graduate of to-day could give Haller valuable instruction in each of branches of which he was professor.

MARKED C. O. D.—A doctor in Dayton, (Ohio *Med. Journal*) was recently attending a case of labor in the family of one of his patients who, though a very excellent man, is a little slow in the payment of his medical bills. Immediately after

the birth of the child the father nervously asked, "Doctor, is the baby marked?" Yes, quietly replied the doctor, "It is marked C.O.D." The hint was taken, and the bill for that baby promptly settled.

FEES WORTH HAVING.—According to newspaper reports, the four surgeons in attendance on President Garfield, Bliss, Barnes, Woodward and Reyburn, charged the Government \$4,200 each, or \$100 each per day, for 42 days attendance. Dr. Agnew's bill for the same number of days for "consultations, operations and visits" was \$32,600, and Dr. Hamilton for "visits and consultations," rendered a bill for a similar amount. The remaining 38 days will no doubt be charged at the same rate.

THE GILCHRIST SCHOLARSHIP.—The Gilchrist Scholarship of this year has been won by Mr. Howard Murray, of New Glasgow, son of Dr. George Murray, formerly M.P.P. for Pictou. This is another honor for Pictou county and for Dalhousie College. Mr. Murray was for three years a student of Dalhousie, and stood first in each subject in all three sessions.

MILK DIET IN RENAL DROPSY.—M. Chautreuil, in the *Gaz. des Hopitaux*, May, 1881, records a number of cases of general dropsy with albuminuria occurring in the later months of pregnancy, which were relieved and uræmic eclampsia apparently prevented by milk diet. In cases in which there was swelling of the feet and legs with more or less general anasarca, and abundant albumen in the urine, milk diet persevered in for a short time had the effect of removing the anasarca and diminishing the quantity of albumen in the urine. In one case the quantity of albumen was greatly lessened and the patient did well throughout, while in her previous confinement she had a severe attack of puerperal eclampsia.

APPOINTMENTS.—Dr. Whiteford of Winnipeg, and late of Ottawa, has been appointed chief medical officer of the Manitoba and South Western Railway.

Dr. Edward J. Kelly has been appointed assistant surgeon 41st Brockville Battalion *vice* A. Fowler, left limits.

Dr. Robert H. W. Powell has been appointed surgeon 43rd Ottawa and Carleton Battalion.

Dr. H. Augustus Wilson has been appointed Pathologist to the Presbyterian Hospital, Philadelphia, *vice* De Forest Willard, M.D., resigned.

CORONER.—Dr. Finlay McMillan, of Sheet Harbor, has been appointed coroner for the county of Halifax, N. S.

Books and Pamphlets.

A SYSTEM OF SURGERY, THEORETICAL AND PRACTICAL. In Treatises by various Authors. Edited by T. Holmes, M.A., Cantab., Surgeon and Lecturer on Surgery at St. George's Hospital. First American from second English Edition, thoroughly revised and much enlarged. By John H. Packard, A.M., M.D., Philadelphia. Assisted by a large corps of most eminent American Surgeons. In three volumes, with many illustrations. Philadelphia: Henry C. Lea's Son & Co. Toronto: Hart & Co.

The work before us is the first volume of this admirable work on surgery. The publishers have been able, by setting it in smaller type, to compress the original five volumes into three, which will be published during the present year. Vol. I. is devoted to general pathology, morbid processes, injuries in general, complications of injuries, and injuries of regions, and is illustrated with 245 wood-cuts and nine chromo-lithographs. Among the English contributors are John Simon, J. Burdon Sanderson, John Croft, W. S. Savory, Henry Lee, Sir James Paget, Timothy Holmes, and Geo. W. Callender. Among the American are John B. Roberts, Jas. Nevins Hyde, Samuel Ashurst, John H. Packard, J. S. Jewell, Roberts Bartholow, and John T. Hodgen. The matter added by the latter is enclosed in brackets. The English edition of Holmes' Surgery has long occupied a leading position in the surgical literature of the day. It therefore needs no words from us to commend it to the favorable consideration of the profession in Canada. It is a work that should be on the shelves of every medical man's library. It contains all the recent advances in this most important subject, and is fully abreast of the present state of surgical science. Each writer may be considered as a specialist in the subject upon which he has written, a circumstance which greatly enhances the value of the work. We cannot commend the work too highly. It will be sold only by subscription.

A TEXT-BOOK OF PRACTICAL MEDICINE, with special reference to Physiology and Pathology. By Dr. Felix Von Niemeyer. Translated from the 8th German Edition, in two volumes. New York: D. Appleton & Co. Toronto: Willing & Williamson.

Niemeyer's Practice of Medicine has been extensively read by the profession in this country, and was, ten or twelve years ago, considered by many as the work *par excellence* in medicine, and one that might be placed side by side with Watson's Practice, the "Blackstone" of our schools in those days. The author died in 1871, and no new editions have been published until the present one, edited by Dr. Eugene Leitz, who has made extensive alterations and inserted a large amount of new matter, in order to bring the work abreast of the recent advances in Pathology. Those who have read the previous editions will be glad to learn that the work of the great teacher has again been placed in the front rank. Notwithstanding the large number of books on the practice of medicine, we have no doubt that this great work will make its way before the profession, and be again adopted as a standard work on the Practice of Medicine.

ATLAS OF SKIN DISEASES. By Louis A. Duhring, M.D. Parts VIII. and IX. concluding the series. Price \$2.50 each. Philadelphia: J. B. Lippincott & Co., 1881. Toronto: Willing & Williamson.

These are the last two numbers of the series of this admirable Atlas, by Dr. Duhring. This work which is now completed, is an enterprise which both publishers and author have good reason to be proud of. The plates portray in living colors the forms of skin disease of most common occurrence, and the descriptive text is all that can be desired in connection with an atlas. We have in previous editions given expression to our appreciation of this interesting and instructive work, and trust that the author may reap the full reward of his arduous labors in connection with its preparation. We prize the work highly, and are having it handsomely bound.

A TREATISE ON CONTINUED FEVERS. By James C. Wilson, M.D., and J. M. Da Costa, M.D. New York: William Wood & Co. Toronto: Willing & Williamson.

The authors of this treatise, whilst engaged in their work of teaching, have evidently felt the want

of a work to which they might refer their pupils in which the diseases treated of were described at greater fulness than is usual in text books, yet without the extreme elaborateness of Ziemssen or other cyclopædic writers. After the introduction by Professor Da Costa, the work consists of eight chapters on simple continued fever, influenza, cerebro-spinal fever, enteric or typhoid, typhus, relapsing fever, and dengue. The volume bears in every page the impress of the care that has been expended on its execution, and is eminently calculated as a work of reference to both practitioner and student.

WOOD'S PHYSICIANS' VADE-MECUM AND VISITING LIST. By H. C. Wood, M.D. Philadelphia: J. B. Lippincott & Co.

This is a most excellent physicians' visiting list. It is nicely bound in morocco, of convenient size, and contains much useful information. A new feature is the introduction of woodcuts, showing the motor points of nerves for the application of electricity. We commend it to the consideration of our readers.

THE PATHOLOGY AND TREATMENT OF THE DIARRHŒA OF PHTHISIS.—Dr. C. T. Williams has a series of articles upon this subject in the *Lancet*.—*N. Y. Record*. He divides the different diarrhœas of phthisis into three classes. The first includes those simply due to irritation or a catarrh of the intestines. The treatment consists simply in altering the dietary and ordering a few doses of alterative and purgative medicine, with some alkali to reduce the acidity. The second form is that arising from ulceration. The ulcers usually begin in the small intestine, near the ilio-cæcal valve; as the ulceration progresses, however, the large intestine becomes most affected. The treatment of this form requires very careful attention. It resolves itself into three sets of measures: (a) Rest in bed with the administration of easily assimilable food, such as chicken-broth, beef and veal-tea, milk gruel, blanc-mange, always combined with *liquor pancreaticus*, after the methods described by Dr. Wm. Roberts. Koumis is also highly recommended. (b) Warm applications to the abdomen, in the form of linseed poultices, turpentine stupes, or hot-water fomentations, to reduce the pain and produce derivation to the skin. In severe pain small blisters are useful. (c) Internal medicines: bismuth and opium will answer in slight cases. The most powerful astringent is sulphate of copper in one-quarter or one-half grain doses. Of vegetable astringents tannic acid is the best, in four-grain doses. Indian ball is often efficacious. If the

ulcerations are largely in the colon, injections or suppositories are often needed. The ordinary enemata of lead and opium will sometimes answer, but in severe cases a pint or a pint and a half of linseed tea, combined with medicines, are needed. Linseed tea seems to be especially efficacious. The third form of diarrhoea is due to waxy degeneration of the intestinal wall. This is hard to deal with successfully. The waxy degeneration indicates a need for phosphates of potash. The diarrhoea can only be treated, as in other diarrhoeas, by the use of astringents.

ABERNETHY ON TABLE-HYGIENE.—There are still, we believe, some apostles of rapid eating among the doctors in this country. We commend to their attention the following interview (from "Sam Slick"), which is worth a hundred lectures: "The Honourable Allen Gobble was dyspeptic, so he goes to Abernethy for advice. 'What's the matter with you?' says the doctor. 'Why,' says Alden, 'I presume I have the dyspepsy.' 'Ah!' says he, 'a Yankee, swallowed more dollars than you can digest.' 'I am an American citizen,' says Alden, with great dignity; 'I am secretary to our Legation at the Court of St. James.' 'The devil you are!' says Abernethy; 'then you'll soon get rid of your dyspepsia.' 'I don't see that inference,' said Alden. 'But I tell you it does follow,' says the doctor, 'for in the company you'll have to keep you'll have to eat like a Christian.' It was an everlasting pity Alden contradicted him, for he broke out like one moon-distracted mad: 'I'll be d—d,' says he, 'if ever I saw a Yankee that didn't bolt his food whole like a boa constrictor. How the devil can you expect to digest food that you neither take the trouble to dissect nor time to masticate? It's no wonder you lose your teeth, for you never use them; nor your digestion, for you overload it; nor your saliva, for you expend it upon the carpets. You Yankees load your stomachs as a Devonshire man does his cart, as full as it can hold and as fast as he can pitch it in with a fork, and drive off. And then you complain that such a load is too heavy for you.'"—*Med. Record.*

DEATHS FROM ETHER.—Dr. John B. Roberts (New York Medical Record, July 2, 1881,) is inclined to think that the failure of respiration is not always the first sign of danger of death from ether, but that the heart may begin to fail seriously while respiration continues active. He thinks that the pulse ought to be watched more closely than it usually is, that in some cases the urine ought to be examined as well as the heart and lungs, and that the person who is entrusted with the ether administration should be the most skillful of all the assistants. Dr. Roberts has collected twenty cases of death from ether that have been reported since January, 1872. There is great prejudice in the

United States in favor of the harmlessness of ether that pains-taking researches of this kind are needed to overcome.—*Chicago Medical Review.*

MEDULLARY CANCER OF THE PYLORUS.—Dr. Thomas C. Smith, of Washington, D.C., sends us the history of a case of the above, in which there was no pain or other symptom pointing to the disease during life. The anterior wall of the stomach was also affected, and a perforating ulcer formed at that point, which broke into an abscess in the sheath of the rectus muscle. This abscess communicated a pulsation from the abdominal aorta, which gave rise to the suspicion of the existence of an aneurism at that point.—*Medical Record.*

ASIATIC CHOLERA.—Dr. DaCosta, of Philadelphia, has recently had under observation a case which presented all the symptoms which he, with his great experience, had learned to consider pathognomonic of Asiatic cholera, and he would have so pronounced the disease, were it not that the case was a sporadic one, no epidemic being prevalent anywhere in the United States or Europe. Several additional cases of the same kind have been reported by independent observers in Pennsylvania. Whether this be due to the epidemic tendency to the discovery of diseases which at times seizes the profession, or not, these cases should certainly lead the National Board of Health to keep a close watch on all vessels landing on the Pacific coast, as from them, if anywhere, this danger is to be apprehended.

FOUR rules for the preparation of an article for a journal: 1. Have something to say; 2. Say it; 3. Stop as soon as you have said it; 4. Give the paper a proper title.—*Billings.*

Births, Marriages and Deaths.

On the 14th ult., at St. Paul's Church, Woodstock, Ont., by the Rev. J. J. Hill, Rector, T. Millman, M.D., &c., second assistant physician, Asylum for the Insane, London, to Helen Dick, only daughter of John Craig, Esq., of Woodstock.

At Muskegon, Mich., on the 13th ult., Andrew Chapman, M.D., late of Ancaster, Ont., aged 24 years.

At Shelburne, N. S., on the 5th ult., John A. Purney, M.D., in the 38th year of his age.

At Liverpool, N. S., on the 15th of May, A. Robertson, M.D., aged 34 years.

Warner & Co.'s Sugar-Coated Pills.

PER
100

		MEDICAL PROPERTIES.	Doses.	Each
FEL, Bovinum,	{ Ox-gall,	Laxative.	1 to 3	50
FERRI, (Quevenne's)	{ Powdered Jamaica Ginger,			
"	{ CARB. (Vallet's) U. S. P. 3 grs.	Tonic.	1 to 3	50
"	{ CITRAT. 2 grs.	Tonic.	1 to 2	75
"	{ OOMP. U. S. P.	Tonic.	1 to 4	40
"	{ IODID. 1 gr.	Tonic.	1 to 3	50
"	{ LACTAT. 1 gr.	Tonic, Emmenagogue.	1 to 2	40
"	{ PYROPHOS. 1 gr.	Tonic, Alterative.	1 to 2	65
"	{ VALER. 1 gr.	Tonic.	1 to 3	50
"	{ Fer. per Hydrogen,	Tonic, Antispasmodic.	1 to 2	1 00
"	{ ET QUAS, ET			
"	{ NUC. VOM.			
"	{ ET QUIN. CIT. 1 gr.	Tonic, Nerve Stimulant.	1 to 2	75
"	{ ET STRYCHNIE, 1 three times a day.	Tonic, Antiperiodic.	1 to 2	75
"	{ Ferrum per Hydrog. (Quevenne's)	Tonic, Antiperiodic.	1 to 2	1 40
"	{ ET STRYCHNIE CIT. 1 gr.	Tonic, Nerve Stimulant.	1 to 2	75
"	{ Pulv. Gambogis	Tonic, Nerve Stimulant.	1 to 2	75
"	{ ALOES SOCOT.			
"	{ ZINGIB. JAM.			
GAMBOGLE COMP.	{ Saponis,	Active Purgative.	2 to 5	40
GHEFT. COMP.	{ Ext. Gentian,	Tonic, Purgative.	2 to 4	40
"	{ FV. ALOES SOCOT.			
"	{ OL. CARUL.			
GONORRHOEA,	{ Pulv. Cubebe,	Tonic, Alternative to Mucous Membrane.	1 to 3	60
"	{ Bals. Copalb. Solid,			
"	{ Ferri Sulph. 1/2 gr. Vener. Terebinth 1 1/2 gr.			
HEPATIC,	{ Pil. Hydrarg.	Cholagogue Cathartic.	1 to 2	80
"	{ Ext. Coloc. Comp.			
"	{ Hyoscyam.			
HOOPER. (Female Pills) 2 1/2 grs.	{ ALOES SOCOT.	Emmenagogue.	1 to 3	40
"	{ Ferri Sulph. Exsic.			
"	{ Ext. Hellebore,			
"	{ Saponis,			
HYDRARGYRI, U. S. P., 3 grs.	{ Canella,	Mercurial Purgative.	2 to 3	40
"	{ Zing. Jamaica.			
"	{ Comp. { Mass. Hydrarg. 1 gr.			
"	{ Pulv. Opii,	Mercurial Purgative.	1 to 2	50
"	{ Ipecac. 1/2 gr.	Mercurial Alterative.	1 to 2	75
"	{ Iod. et Opii,	Mercurial Alterative.	1 to 2	75
"	{ Hydrg. Iodid. 1 gr.			
IODIFORMI ET FERRI	{ Ferrum per Hydrog., 1 1/2 gr.	Tonic Alterative.	1 to 2	2
IODIFORM. 1 gr.	{ Iodoform,	Tonic, Alternative.	1 to 2	1 00
IPECAC ET OPII, 3/4 grs. (Pulv. Doveri, U. S. P.)	{ Iodoform,	Anodyne, soporific.	1 to 3	50
"	{ Iridin,	Cathartic, Nerve Stimulant.	1 to 3	50
"	{ Podophyllin,			
"	{ Strychnia,			
LEPTAND. COMP.	{ Leptandrin,	Laxative, Diuretic.	1 to 2	1 00
"	{ Iridin,			
"	{ Podophyllin,			
LEPTANDRIN, 1 gr.	{ Podophyllin,	Cathartic.	2	75
LUPULIN, 3 grs.	{ Anodyne.	Anodyne, Febrifuge.	1	1 50
"	{ Morph. Sulph. 1/2 gr.			
"	{ Tart. Emetic. 1/2 gr.			
MORPHIA COMP.	{ Calomel,	Tonic, Alternative, Anodyne.	1 to 3	3 00
"	{ Quinia Sulph. 2 grs.			
"	{ Morphia Sulph. 1-20 gr.			
"	{ Strychnia,			
NEURALGIC,	{ Acid Arsenious, 1-20 gr.	Tonic, Alternative, Anodyne.	1 to 3	3 00
"	{ Ext. Aconiti,			
"	{ Ext. Hyoscyami,			
NEURALGIC. (Brown-Sequard.)	{ Conit.,	Anodyne.	1	1 00
"	{ Ignat. Am.,			
"	{ Opii,			
"	{ Aconiti,			
"	{ Cannab. L.			
"	{ Stramon,			
"	{ Bellad.			
OPII, U. S. P., 1 gr.	{ Bellad.	Anodyne	1	60
"	{ Pulv. Opii,	Anodyne, Nerve Sedative.	1	80
"	{ Camphors,			
"	{ ET CAMPHORÆ, ET TANNIN,	Anodyne, Astringent.	1 to 3	80
"	{ Camphors,			
"	{ Acid Tannic,			
"	{ ET PLUMBI ACET.	Anodyne, Sedative.	1 to 2	60
"	{ Pulv. Opii,			
PHOSPHORUS COMP.	{ Plumbi Acetas. 1 1/2 grs.	Nerve Tonic.	1 to 4	1 50
"	{ Phosphorus,			
"	{ Ext. Nuc. Vomica,			
PHOSPHORUS, 1-50 gr.	{ Phosphorus,	Nervine Stimulant.	1 to 2	1 00
PHOSPHORUS, 1-100 gr.	{ Phosphorus,	Nervous Stimulant.	1 to 4	1 00
PHOSPHORUS, IRON	{ Phosphorus,	Nervous Stimulant, Tonic.	1 to 3	1 50
"	{ Ferri Carb. (Vallet's)			
"	{ AND NUX VOM.			
POTASS. BROMID. 1 gr.	{ Ext. Nuc. Vom.	Nervous Sedative.	2 to 5	75
"	{ IODID.			
"	{ IODID.			
"	{ Podophyllin,	Purgative.	2 to 4	75
"	{ Leptandrin,			
"	{ Juglandin,			
"	{ Macrotin,			
"	{ Ol. Capsic,	Stimulating Laxative. Mild	1 to 3	75
"	{ Podophyllin,			
"	{ Ext. Bellad.			
"	{ Ol. Res. Capsic,	Stimulating Laxative. Mild	1 to 3	75
"	{ Saccharum Lact.			

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" ET HYOSCYAMUS.	{ Podophyllin. Ext. Hyoscyamus, 2 ½ grs. }	Gentle Cathartic	1 to 2	60
PODOPHYLLIN, 1 gr.	.....	Cathartic.	1	75
QUINIA SULPH.	½ gr.	Tonic, Antiperiodic.	1 to 4	90
" "	1 gr.	Tonic, Antiperiodic.	1 to 3	1 40
" "	2 grs.	Tonic, Antiperiodic.	1 to 3	2 75
" "	3 grs.	Tonic, Antiperiodic.	1 to 2	4 00
" COMP.	{ Quin. Sulph. 1 gr. Ferri Carb. 2 grs. }	Tonic, Antiperiodic.	1 to 2	1 75
ET EXT. BELLADON.	{ Acid Arsenious, 1-60 gr. each meal. Quinise Sulph. 1 gr. Ext. Belladon. ½ gr. }	Nerve Tonic, Antiperiodic.	1 to 2	1 75
ET FERRI.	{ Quin. Sulph. 1 gr. Ferrum per Hydrog. (Quevenne's) 1 gr. }	Tonic, Antiperiodic.	1 to 2	1 75
QUINIA ET FERRI, ET STRYCHNIA.	{ Quin. Sulph. 1 gr. Ferri Carb. (Vallet's) 2 grs. Strych. Sulph. 1-60 gr. }	Tonic, Antiperiodic.	1 to 2	1 75
QUINIA 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
QUINIA 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, Alterative.	1 to 2	3 90
QUINIA ET STRYCHNIA.	{ Quinia Sul. 1 gr. Strychnia, 1-60 gr. }	Tonic, Nerve Stimulant.	1 to 2	1 75
QUINIA, Valerianate, ½ gr.	.....	Tonic, Nervine.	1 to 2	2 00
RHEI ET HYDRARG	{ Pulv. Rhei, 4 grs. Mass. Hydrarg. 2 grs. Soda Carb. Exs. 1 gr. }	Cholagogue Cathartic.	2 to 5	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 gr. Myrrh, 1 gr. Ol. Menth. Pip. 1 gr. }	Purgative.	2 to 4	75
RHEUMATIC,	{ Ext. Coloc. C. 1½ grs. " Colchici Acet. ½ gr. Hyoscyam. ½ gr. Hyd. Chlor. Mit. ½ gr. }	Anti-Rheumatic, Purgative.	1 to 3	90
SANTONIN, 1 gr.	.....	Anthelmintic.	1 to 3	1 00
SCILLA COMP. U. S. P.	{ Pulv. Scilla, 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. Rosse. }	Stimulating Purgative.	1 to 2	50
SYPHILITIC,	{ Potass. Iod. 2½ grs. Hyd. Chlor. Corros. 1-40 gr. }	Specific Alterative.	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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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 Alterative.	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 4	50
" Cannabis Indica, ¼ gr.	.....	Nerve Sedative.	1 to 3	40
" Hyoscyamus, (Eng.) ¼ gr.	.....	Nerve Stimulant.	1 to 3	40
" Nuc. Vomica, ¼ and ½ gr.	.....	Nerve Stimulant.	1 to 4	50
GELSEMIN ½ gr.	.....	Arterial Sedative.	1 to 2	75
" ¼ gr.	.....	Emetic, Diuretic, Cathartic.	1 to 2	95
HYDRASTIN, ¼ gr.	.....	Cathartic.	1 to 2	50
HELONIN, 1-10 gr.	.....	Cathartic.	1 to 4	50
LEPTANDRIN, ¼ gr.	.....	Cathartic.	1 to 4	50
MERCURY, Iodide, ¼ gr.	.....	Alterative.	1 to 4	40
" Red, 1-16 gr.	.....	Alterative.	1 to 2	70
MORPHEA, Acet. ¼ gr.	.....	Anodyne.	1 to 2	60
" Sulphate, 1-10 gr.	.....	Anodyne.	1 to 2	70
" " ¼ "	.....	Anodyne.	1 to 2	70
" " 1/8 "	.....	Anodyne.	1 to 2	80
" " 1/4 "	.....	Anodyne.	1 to 2	1 00
" Valerianate, ½ "	.....	Anodyne.	1 to 2	1 00
PODOPHYLLIN, 1-10 gr.	.....	Cathartic.	1 to 4	40
" ½ gr.	.....	Cathartic.	1 to 4	40
" ¼ gr.	.....	Cathartic.	1 to 2	50
" COMP. { Podophyllin, ¼ gr. Ext. Hyoscyam. ¼ gr. Nuc. Vomica, 1-16 gr. }	.....	Cathartic and Tonic.	1 to 2	75
SILVER, Nitrate, ¼ gr.	.....	Alterative, to Mucous Memb'ne.	1 to 4	75
" Iodide, ¼ gr.	Alterative, 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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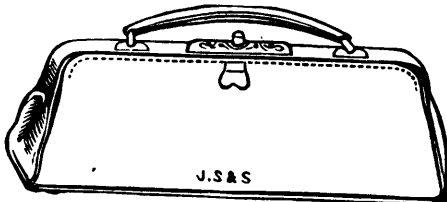
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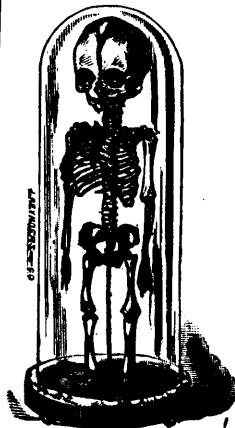
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THE REGULAR SESSION will begin on Wednesday, September 21, 1881, and end about the middle of March, 1882. During this Session, in addition to four didactic lectures on every weekday except Saturday, two or three hours are daily allotted to clinical 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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Dissection Fee (including material for dissection).....	10 00
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Recitations, Clinics, and Lectures	35 00
Dissection (Ticket valid for the following Winter)	10 00

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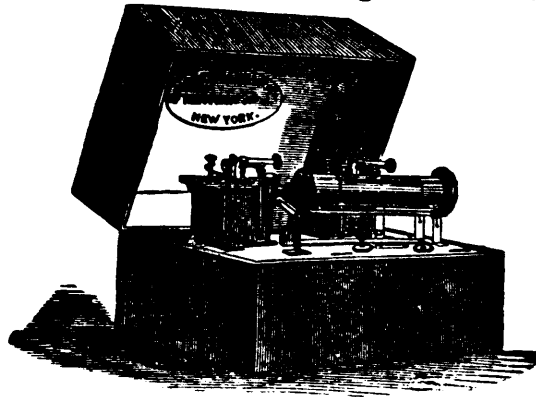
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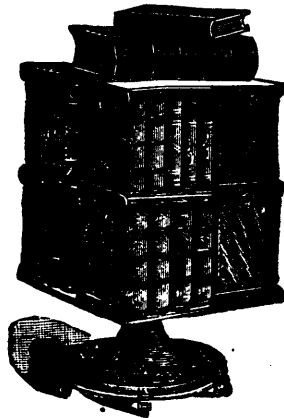
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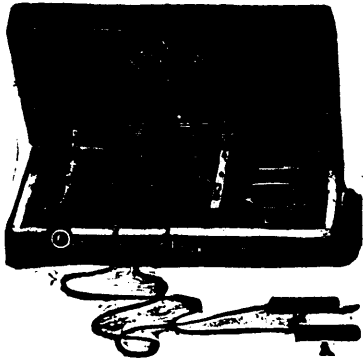
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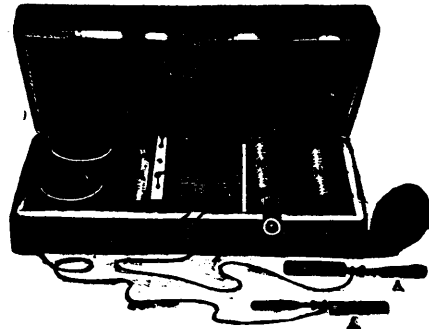
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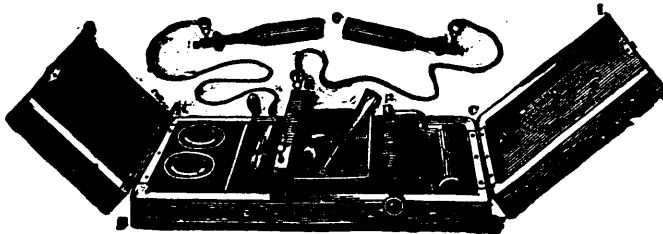
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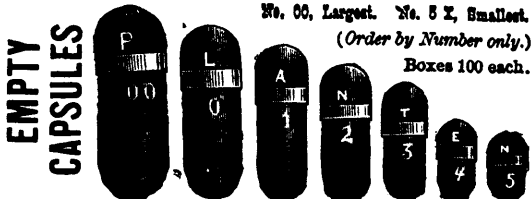
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Extract from Report of Dr. Galezowski, the distinguished French Oculist.

"Vaseline is the best pharmaceutical preparation in the making of Ointments, as it is completely neutral and unchangeable. I saw it used for the first time in London by Dr. Lanson. I then procured the 'Vaseline' myself, and have experimented with it for four months on over one thousand patients, and I must declare that the knowledge acquired by practice has surpassed my expectations by far. * * * I have also prepared large quantities of eye ointments with 'Vaseline,' and have employed them on numerous maladies with very great success, and I can affirm that 'Vaseline' is very precious in ocular therapeutics, and must replace all the ointments in use at the present time. * *"

"In conclusion, on account of its unalterability and its great affinity for perfumes, I believe that 'Vaseline' merits the attention of the scientific and industrial world."

DR. REUSCHE, of Hamburg (translation) says:

"In six cases of small-pox I have used Vaseline with eminent success—one a severe case of variola vera—a boy sixteen years old, not vaccinated.

"It developed the disease rapidly, and shortened considerably the duration of it—the time varying from seven to twenty days, the latter period for the most serious case only.

"While the application of Vaseline was regularly renewed, all inflammation and fever were kept off, and none of the patients, at any time, suffered any pain or great inconvenience, whereas, if neglected, the patient would become irritable and feverish.

"Applied internally, it removed the small-pox in the mouth and throat in a few days.

"A few scars remained in only one case, but the patient will outgrow these, as they are very slight."

From the LONDON LANCET, Jan'y 5th, 1878:

"We have before noticed this preparation of petroleum in terms of warm praise. It is of the consistency of butter, is perfectly free from odor, and does not become rancid. We have now before us several new preparations made from it, which are *so useful* as to call for remark. They are a *pomade*, a *cold cream*, and a *camphor ice*, all of excellent quality. We have tried all of them with most satisfactory results, having found them greatly superior to the preparations in common use."

Silver Medal and Diploma Awarded by the American Institute for 1875.
 "This article is one of great merit as a base for Cerates, Ointments, etc., and for Medicinal and Toilet uses, and is superior to the present bases used for Cerates, etc. It deserves the patronage of the profession, and shows maintained superiority." A Silver Medal awarded.

Signed by { NEWTON SQUIRES, Chemist.
 F. W. HUNT, }
 S. R. PERCY, } M.D.

Signed by { P. W. BEDFORD, } Chemists.
 ISADOR WALZ, }

Bronze Medal and Diploma Awarded by the American Institute for 1874.

"Vaseline is an admirable preparation for many of the uses mentioned. As a base for ointments, it has given very great satisfaction, whilst its freedom from rancidity or liability to become rancid gives it great advantage over many animal and fatty bodies. We deem it an article of great value, and deserving of special mention for the above purposes." Bronze Medal awarded

We manufacture the following Standard Ointments, according to the United States Pharmacopoeia, using Vaseline as a base instead of lard :

Ung.: Hydrargyri (½ Mercury) Ung.: Zinci Oxidi.
 Ung.: Hydrargyri : Nitratis (Citrine Ointment) Cerat.: Resinæ.
 Cerat.: Plumbi Sub-acetatis (Goulards Cerate) Cerat.: Simplex.

We recommend them as vastly superior to anything in use. PRICE 75 CTS. PER POUND. NO CHARGE FOR JARS. Send for Pamphlet.

Chesebrough Manufacturing Company, New York,

No. 249 NOTRE DAME STREET, MONTREAL.

Pomade Vaseline, Vaseline Cold Cream, Vaseline Camphor Ice, and Vaseline Toilet Soap, are all exquisite toilet articles made from pure Vaseline, and excel all similar ones.

Soluble Elastic Filled Capsules.

We desire to secure attention of the medical practitioners to the Soluble Elastic Filled Capsules of our recent introduction into this country. These Capsules are so different, both in appearance and quality, from any heretofore placed on the American market that we especially request that opinion regarding them may not be prejudiced by previous knowledge of a similar class of goods.

Our Capsules are manufactured after a method not previously employed in this country, workmen and apparatus having been especially imported from Germany for the purpose. Our claims of superiority for them are based on the following qualities:

1. Their Transparency. They are made of the finest quality of white gelatine and are perfectly transparent, permitting a full inspection of their contents. This property is calculated to prevent the sophistication possible under the use of opaque gelatine.

2. Their Elasticity and Lubricity. These properties remove from the Capsules, as completely as possible, everything which prevents their easy deglutition. They may be easily moulded between the finger and thumb, and when held for a moment in the mouth the action of the saliva on the gelatine covers them with a mucilaginous coating which greatly facilitates their swallowing.

3. The Quality of their Contents. They are filled with ingredients of the very finest quality obtainable. We invite the closest scrutiny of their contents, and physicians who specify our brand in their prescriptions need have no apprehension on this point.

4. Solubility. The solubility of these Capsules may be determined by the simplest test. Allowed to lie loosely in the mouth the contents escape in from two to three minutes, and there is not the remotest possibility of the Capsules passing intact with the faeces, as is sometimes the case with the ordinary filled Capsules.

5. Their Sizes. Heretofore the filled Capsules offered the profession of this country have not contained more than ten minims of the liquid. We have in our list Capsules containing all the way from ten minims to half an ounce. The larger Capsules are designed more particularly for the administration of cod liver and castor oils. Notwithstanding their size, they are, owing to their elasticity and lubricity, swallowed as readily as an oyster. The advantages of such Capsules are too obvious to require enumeration.

These Capsules are put up in a style in keeping with their elegance, in boxes containing one, two and three dozen.

The following few formulae selected from the list will convey an idea of the class of ingredients with which these Capsules are filled.

Castor Oil,

10 minims.

Castor Oil and Podophyllin,

Castor Oil, 10 minims.

Podophyllin, $\frac{1}{4}$ grain.

Cod Liver Oil, Best Norwegian,

10 minims.

Cod Liver Oil and Creosote (2 grs.),

Cod Liver Oil, 10 minims.

Creosote, 2 grains.

Cod Liver Oil and Iodoform,

Cod Liver Oil, 10 minims.

Iodoform, 2 grains.

Cod Liver Oil and Phosphorus,

Cod Liver Oil, 10 minims.

Phosphorus, 1-60 grain.

Crude Petroleum Mass,

10 minims.

Cod Liver Oil and Creosote (4 grs.),

Cod Liver Oil, 10 minims.

Creosote, 4 grains.

Cod Liver Oil and Iodide of Iron,

Cod Liver Oil, 10 minims.

Iodide of Iron, $\frac{1}{4}$ grain.

Cod Liver Oil and Iodine,

Cod Liver Oil, 10 minims.

Iodine, $\frac{1}{4}$ grain.

Cod Liver Oil and Phosphorus (1-30),

Cod Liver Oil, 10 minims.

Phosphorus, 1-30 grain.

Phosphorated Oil, Compound,

Phosphorated Oil (1-60 gr.) 10 m.

Extract Nux Vomica, $\frac{1}{4}$ grain.

Phosphorated Oil (1-50 gr.),

1-50 gr. Phosphorus in 10 m of Oil.

Cod Liver Oil,

5 grams.

Cod Liver Oil,

15 grams.

Copaiba, Cubeb and Sandalwood Oil,

Copaiba, best Para, 6 minims.

Essential Oil of Cubeb, 2 minims.

Sandalwood Oil, East India, 2 minims.

Copaiba, Cubeb and Buchu,

Copaiba, best Para, 6 minims.

Ethereal Extract Cubeb, 2 minims.

Extract Buchu, 2 minims.

Copaiba, Cubeb and Rhatany,

Copaiba, best Para, 6 minims.

Ethereal Ext. Cubeb, 2 minims.

Extract Rhatany, 2 minims.

Oil of Eucalyptus, 5 gtt.,

With Sweet Almond Oil, q. s. ad. 10 m

Oil of Male Fern and Kameela,

Oil of Male Fern, 9 minims.

Kameela, 5 grains.

Castor Oil,

5 grams.

Castor Oil,

15 grams.

Send for special Descriptive Circular "Filled Elastic Gelatine Capsules."

PARKE, DAVIS & CO., - - - Manufacturing Chemists,
DETROIT, MICHIGAN.

BEATTY & NILES, Toronto, Agts for Dominion of Canada.