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Original Contributions.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

NOTES ON THE SYMPTOMATOLOGY AND DIAGNOSIS OF SENSORY, MOTOR OR TROPHIC PARALYSIS, CONSECUTIVE TO LESIONS OF CONTIGUOUS PARTS, RESULTING FROM VIOLENCE.

BY THOMAS H. MANLEY, M.D.,

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IN the vast majority of cases of the above named description, we will have a clear history of trauma, as a contusion, sprain, fracture or dislocation. The immediate proximate results are direct disorganization of structure, with or without advanced inflammatory changes. The peripheral nerves of a prehensile organ, as the upper extremity, which is called into a great complexity of motion, more often suffer from direct damage, and are therefore the seat of more pronounced pathologic changes than those of the lower limb.

The nerve sheaths of the brachial plexus, as they dip under the acromial end of the clavicle, pass closely to the shoulder joint, and are so firmly held in position by the cellular tissues that a sudden wrench of sufficient violence to twist the head of the humerus out

of the glenoid cavity—especially when the dislocation is forward, by a combination of pressure, locomotion and torsion—in many cases so damages the neural structures as to thereafter dangerously compromise the vitality, nutrition and contractile power of the muscles which this plexus animates. Hence, with many dislocations at the shoulder, we will find the full functional strength of the joint permanently impaired. And when active myositis spreads, and the thoracic muscles with the advance of sclerogenic changes within the muscle sheaths with adhesions binding more or less the various muscles together, the range of articulation is greatly restricted. In others, although reduction is readily effected, a more serious phase of contracture may follow. Progressive parenchymatous inflammation may occupy one or more muscles and wholly destroy their striated corpuscular elements. When this change occurs, degeneration, atrophy and immobility follow, and the full functional use of the joints is forever lost. In another class, though not so very rare, we will observe that from the time of accident, as all muscular contractile power at the shoulder is destroyed, the bone cannot be retained in the socket, but continually falls out as often as returned. When, however, none of the muscles, except those which fix the bone in its articulation, are injured, the limb may possess a fair share of usefulness. Similar myopathic states are met with in other articulations, but in none so commonly and so well accentuated as at the shoulder. The primary, initial and predominant lesion here is neural; the muscular, arthritic, vascular and osseous are chiefly, if not solely, consecutive.

Among injuries which occupy the front rank in frequency and importance in inducing circumscribed or extensive atrophies or motorpalsy, are the different varieties of fracture. These lesions entail damage to the neural trunks, the muscular and other tissues—first, by extreme tension, contusion or laceration; secondly, by the extremely active inflammatory reaction, which may follow, when the extent of bone disorganization is extensive; and thirdly, by inclusion or pressure, or by an over-riding or angular deformity of the reunited bone shaft.

In certain phases of fracture which involve different bones, temporary or permanent atrophic phenomena, with or without motor paralysis, are unavoidable and inevitable, during early childhood particularly. Hence, in consequence of this, unless a critical and discriminating examination is made, with a full knowledge of

this fact, after the reparative processes are complete, the practitioner or surgeon may be unjustly blamed, or be compelled to defend a malpractice suit, for the presence of a defect or deformity for which the processes of nature, and not he, are responsible.

The very means which have been employed to bring the over-riding fragments of a broken femur into apposition—bandage-pressure, the splint, the weight, extension or counter-extension—though necessary appliances to obviate a greater evil, each and a by pressure, interfere with the circulation of the limb, and its fixation disturbs normal nutritive processes. The protracted inaction necessary in the fracture of a femur causes an arrest of growth in children

Not long since, Prof. A. M. Phelps, in a series of experiments on the lower animal, demonstrated that a healthy joint could bear immobilization with impunity. With the limb in its entirety, however—the muscular, neural and osseous structures—it is quite different. Any pathological condition involving a limited area of a limb of a child, be it of a constitutional or traumatic character, attended with inflammation entailing articular and muscular inaction, is as a rule attended not only with atropho-motor paralysis, but likewise with arrest of growth. So that on careful measurement it will be found that the sound limb has gained on the diseased to a marked extent. When the limb is confined but a short period the difference will be slight. It is a well-known fact that during the growing stages of the body, an attack of sickness or confinement, rendered necessary by injury, the body suddenly lengthens out, so that as the patient takes his feet his gain in stature is usually marked and noticed by everyone. Perhaps the fresh impetus imparted to the sound side on rest in bed, with temporary arrest of developmental processes on the injured side, in cases of femoral fractures and other injuries of the lower extremities in children, may account for the differences in length after processes of repair are complete. This explains what had long been a mystery to me in cases of femoral fracture in children who had marked shortening when they recovered; yet, when the fractures were in the lower third of the shaft and subperiosteal, and when the fragments were brought into perfect apposition, and on recovery the perfect outline of the shaft was evident from an examination of its external outline, still there was a shortening of from one-quarter to an inch. When we finally encountered numerous cases of simple injury at the hip, followed by myositis or arthritis without any lesion of

bone at all, but which after recovery left the patient with a shortened limb, though with full functional use, the difficulties in etiology became greater than ever.

There can be scarcely a doubt that many cases of malpractice have been instituted in that class of fracture—cases in which the deformity or shortening resulting was often in part, if not wholly, dependent on atrophic vaso-motor changes, temporarily disturbing nutritive processes and thereby arresting growth, rather than solely by an osseous distortion of any description whatever.

The essence of pathological changes in those cases of motor-atrophy accompanied with an arrest of growth, is neuropathic: an enervation induced in the first place by a propagation of inflammation from the muscle to the nerve. The nervous system in early life must serve a dual purpose. First, to preside over the normal nutrition, and secondly, to supply the necessary pabulum in normal growth and development.

In those cases marked by an arrest of growth, the second or temporary function is only in abeyance. But in those neurotrophic manifestations, so common in disorganizing injuries, in which the visible gross lesions are chiefly arthritic or osseous, the temporary or permanent pathological changes present a complexity and diversity of phases. These will be more readily comprehended if divided into groups

The first will embrace those cases in which after the injury of a joint there is an absolute arrest of growth involving the entire limb, and in which trophic inhibition is the most positive neural symptom, i.e., though the limb has temporarily ceased to grow, mobility is not wholly arrested, and though certain muscle groups, single muscles, or parts of a muscle, may be wanting in reflex response to the will, none will resist electrical irritation. And furthermore, though in time functional restoration has returned, and the local disease has vanished, yet on a critical inspection of the joint (if one of a complexity of motion as the hip, shoulder or wrist) it will be noted that there is a want of uniformity in the strength and mobility of certain sets of muscles, and likewise a marked disparity in their contour and consistence, thereby, at least for a time, giving the limb below (if the leg) a distorted inclination—a partly flexed, adducted, abducted or rotatory position, which, however, in time with appropriate treatment, or even without treatment, in healthy subjects may be corrected by a later full development of the enfeebled parts, or by a com-

pensatory inclination or adjustment of subsidiary or neighboring structures. Indeed, in many of the most aggravated cases, with a slight raise on the shoe and but a moderate inclination of the pelvis, without a nude examination scientifically executed, no one can detect any marked impediment in locomotion.

The pathology of this first type of motor-trophic action has in recent years been made the subject of extensive experimental and clinical study by neurologists and surgeons. Raymond declares that it is wholly dependent on changes in the ganglionic cells of the anterior coruna of the cord, and technically designates it "peripheral motor-atrophic paralysis," and claims that it is of a reflex nature and purely eccentric in origin (Raymond, "Malad du System Nerveux," p. 171). This view will scarcely suffice, for in many important particulars it is wanting in clinical support. His theory—one which has the support of Hammond, Dana, Wood, Duchenne, Rosenthal, Sandras and others—though it accounts for many of the phenomena present, is yet very defective. As a matter of fact, in many of the most typical cases which we ever meet there is no paralysis of any kind. In some respects it is quite the contrary. The crippled limb is always hyperæsthetic over its entire areas. The child does not move it, not because he cannot, but because as voluntary motion of it gives him pain he keeps it quiet. Atrophic muscular changes are not well marked by any means in all cases. My own impression is that trophic influence is suspended, as a consecutive incident to inflammation. The original lesion is a multiple neuritis, which is propagated along the nerve trunks to the trophic ganglia or such centres as preside, not over nutrition, as the vaso-motor system, but central processes of development and growth. Neurologists and pathologists of modern times quite generally agree that the anterior nerve root is both motor and trophic. Is it not reasonable to assume, too, that there are molecular elements lodged in the ganglionic cells or anterior coruna, whose sole functions are to preside over growth, and which, after maturity of the body, having accomplished their purpose, assimilate with other elements or are absorbed and disappear?

The function of the ganglia lodged in the anterior coruna is demonstrated rather by the study of morbid anatomy and clinical observations than by physiological proofs. We may have, as is well known, motor-palsy without marked atrophy, and progressive muscular atrophy or pseudo-hypertrophy without serious interference with mobility. Is it not rational then to assume that in

those cases of arrest of growth in a limb the centres only concerned in the phenomena of development are affected, and that such centres constitute a distinct and separate neural entity in the anatomo-physiological make-up of the spinal cord ?

An inflammatory process having been propagated to the growth centres, there is also attendant a migration of leucocytes and proliferation of nuclei of the fixed connective tissue cells, which press on and interfere with the nutrition of the nerve fibres and cellules to such an extent as to temporarily suppress function.

As the nerve root escapes through the intervertebral foramen, it is freely invested outside of its dural sheath by loose connective tissue which readily hypertrophies and impedes circulation after inflammatory processes have been transmitted to it.

Now the usual rule is that after a joint has been injured through a fall, twist or bruise, or a bone has been fractured or dislocated, processes of repair are prompt and the patient is soon on his feet again. But in a considerable number the sequence is not so simple. In this class we naturally enquire for the fundamental cause, why one so soon and so completely recovers, while others drift into a chronic state, and sometimes make at best imperfect recoveries ? Without the least doubt the cause lies in a constitutional cachexia, either acquired or inherited, as tubercle rheumatism or syphilis. With one the inflammatory exudate is moderate and is soon dispersed by resolution and resorption. On the contrary, when either one of the other dyscrasie, as syphilis or rheumatism, is in operation its role involves a complex and altogether more serious pathological change than the other. With the latter there is a tendency of the inflammatory processes to spread into and involve the cellular elements and fibrils of the nerves, when we will have genuine parenchymatous inflammation. But in most cases this will cease before degenerative changes follow, though seldom without seriously disturbing the nutrition of the ganglionic cells, reducing their number or leaving a granular residue which will be slow of resorption.

When this process is complete on the affected side, nature is permitted, as it were, to finish her work of complete growth and development. The limb on the sound side during the months of restraint has been growing, so that on comparison as our patient "takes his feet," we will find a marked disparity in length which the injured limb never regains. In the second group of this class of injuries, the lesion of the nerve is direct and tangible. But it

differs pathologically from the first, inasmuch as arrest of growth is not always so accentuated, nor are constant tropho-motor changes of a peripheral order always present. The spinal changes are always secondary to the traumatism. They are reflected back as a motor-paresis, with muscular and other tissue wasting. Though always present they are more definite and positive when we have evidence of direct injury to a nerve or plexus of nerves, as when their trunks are lacerated by spiculæ of fractured bone, by the pressure of a viscus or by excessive callus, by great and sudden stretching or contusion as in certain dislocations. In this class of cases, most authors on the neural system rather confine their observations to the nerve roots and the secondary changes in the muscles, as though these tissues alone were the only ones that suffered atrophic or degenerative changes. This is a great mistake from a surgical standpoint, for to the most superficial observer it is evident that the vaso-motor system is profoundly affected and that degenerative changes are active when a fracture is very slow of repair, or serious local symptoms follow a dislocation. As a matter of fact the circulation is slow and languid and an œdematous state of the limbs everywhere is seen where the dense investing aponeurotic sheath does not confine the capillaries or vessels. The bone elements actively participate, become anæmic, the seat of fatty degeneration, are very brittle and may fracture at the distal part of the same limb with great ease.

In certain cases we will, in consequence of a definite concentrated pressure on a nerve trunk, observe a series of symptoms indicative of positive parenchymatous changes at the seat of compression. A pathological condition here is met with, which may be appropriately designated *transverse peripheral myolitis*. It almost invariably occurs as a consecutive condition to fracture, and is directly caused by the inclusion of a nerve trunk in a callus or by the nerve being caught between the osseous solder and another neighboring bone shaft, as in fracture of the clavicle at the acromial end, and also those of the ribs, forearms and legs. In many of the slighter cases of callus pressure, as the cartilaginous knob is absorbed the paralysis gradually disappears; hence it is only in those cases attended with considerable over-riding of the fragments, or direct canalization of the callus by the nerve itself, that we have any permanent loss of power or sensation following.

(To be continued.)

Surgery.

SURGERY WITHOUT ANÆSTHETICS.

ONE of the most interesting papers read at the recent celebration in Boston of the fiftieth anniversary of the first administration of ether in a surgical operation was that by Dr. John Ashhurst, of Philadelphia, on "Surgery Before the Days of Anæsthetics." It vividly recalls the horrors of those days when the surgeon's knife was an object of far greater terror than now, and inflicted untold tortures upon the conscious patient.

"A study of the condition of surgery before the days of anæsthesia," said Dr. Ashhurst, "reveals on the one hand a picture of heroic boldness and masterly self-control on the part of the surgeon, and on the other a ghastly panorama, sometimes of stoic fortitude and endurance, sometimes of abject terror and humiliation—but always of agonizing wretchedness and pain—on the part of the unhappy victim who required the surgeon's aid.

"The 'pitilessness' which Ceicus urged as an essential trait in the operative surgeon was, before the days of anæsthesia, a feature in the surgeon's career which impressed very strongly the public generally as well as those immediately connected with the operation. It is interesting to recall that Sir James Simpson, of Edinburgh, shortly after beginning his professional studies, was so affected by 'seeing the terrible agony of a poor Highland woman under amputation of the breast,' that he resolved to abandon a medical career and seek other occupation; happily his intention was reconsidered, and he returned to his studies, asking himself 'Can anything be done to make operations less painful?' and, as every one knows, in less than twenty years became a high priest of anæsthesia, and the introducer into surgical and obstetrical practice of ether's great rival, chloroform.

"No braver or more gallant gentleman ever lived than Admiral Viscount Nelson, and after his right elbow had been shattered by a French bullet in the assault at Teneriffe he manifested the utmost courage, refusing to be taken to the nearest ship lest the sight of his injury should alarm the wife of a fellow officer whose own fate was uncertain, and when his own ship was reached he climbed up its side without assistance, saying: 'Tell the surgeon to make haste and get his instruments. I know I must lose my right arm,

so the sooner it is off the better.' 'He underwent the amputation,' we learn from a private letter of one of his midshipmen, 'with the same firmness and courage that have always marked his character.' And yet so painfully was he affected by the coldness of the operator's knife that when next going into action at the famous battle of the Nile he gave standing orders to his surgeons that hot water should always be kept in readiness during an engagement, so that if another operation should be required he might at least have the poor comfort of being cut with warm instruments.

"On the side of the surgeon we find throughout the ages a constant effort to diminish the terrors of operations and a continuous reprobation of the distressful, not to say cruel, modes of practice adopted by preceding generations. And yet the time is not very far distant from ours when they lopped off a limb by striking it violently with a heavy knife; that time when they knew neither how to stop nor how to prevent hæmorrhage but by burning the part whence the blood jetted with boiling oil or the red hot iron; that time when surgeons armed themselves at every moment with pincers, with burning cauteries and with instruments, the representations even of which cause terror.

"The belief that operations might be rendered painless appears to have been present in the minds of surgeons from the earliest periods. Witness the accounts of the Memphis stone, described by Dioscorides and Pliny, which by steeping in vinegar was made to give forth the fumes of carbonic acid; and of the mandragora, employed, according to Theodoric, when mixed with other narcotics, by inhalation, and causing a sleep from which the patient could only be aroused by the fumes of vinegar. So profound was the stupor induced by this drug that Bodin assures us that under its influence a man submitted without consciousness to a painful operation and continued to sleep for several days thereafter.

"Vigo speaks of the whole body being 'brought asleep by the smelling of a sponge wherein opium is,' but warns his readers that the practice is dangerous, because the use of opium is sometimes followed by gangrene. In his work on 'Natural Magic,' Baptista Porta speaks of a volatile drug kept in leaden vessels, which produced sleep when applied to the nostrils, and Perrin suggested that this may actually have been ether or some other of our modern anæsthetic agents.

"Mental preoccupation was sometimes sought as a means of preventing pain. Richard Wiseman found that soldiers dreaded the

loss of a limb much less if it were removed immediately, while they were 'in the heat of the fight,' than if the operation were postponed until the next day; 'wherefore,' he says, 'cut it off quickly, while the soldier is heated and in mettle;' and Renauldin recalls the case of the amiable Dolomieu, who, exposed to the pangs of starvation in a Neapolitan dungeon, measurably alleviated his own distress by engaging in the composition of a treatise on mineralogy, while his unfortunate servant and fellow prisoner, who had not the same intellectual resources, was hungry enough for both.

"But the presence of pain was not the only evil dreaded by our predecessors in attempting important operations; the great risk of fatal accident from some involuntary movement of the patient was constantly present to the mind of the conscientious surgeon. 'How often,' says Dr. Valentine Mott, 'when operating in some deep, dark wound, along the course of some great vein, with thin walls alternately distended and flaccid with vital current—how often have I dreaded that some unfortunate struggle of the patient would deviate the knife a little from its proper course, and that I, who fain would be the deliverer, should involuntarily become the executioner, seeing my patient perish in my hands by the most appalling form of death! Had he been insensible I should have felt no alarm.'

"Coming down to the days more immediately preceding the date of the great discovery, we find that opium and alcohol were the only agents which continued to be regarded as of practical value in diminishing the pain of operations, though the attendant disadvantages of their employment were, of course, recognized. Meanwhile, facts were accumulating, the significance of which we now plainly recognize, but which excited no attention.

"Sir Humphry Davy, in the early days of the nineteenth century, suggested the use of nitrous oxide gas as an anæsthetic in minor operations, and it was the custom of some of our medical schools—at the University of Pennsylvania, for one—for students to breathe 'laughing gas,' as it was then called, for diversion. But yet—and yet—surgeons went on, in every country, cutting and burning, and patients went on writhing and screaming, until the 16th day of October, in the year 1846, in the Massachusetts General Hospital, Dr. John C. Warren painlessly removed a tumor from a man who had been previously etherized by Dr. William T. G. Morton, and surgical anæsthesia became the priceless heritage of the civilized world."—*Sci. Am.*

F. W. S.

Pediatrics.

NOTES UPON THE ESTIMATION OF THE NUMBER OF BACTERIA IN MILK.*

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THE examinations of milk which this paper reports were undertaken on account of the writer's interest in pediatrics, the object in doing the work being to learn, so far as such a bacteriological test would teach, the fitness of milk from various sources for infant feeding. The facilities of the pathological laboratory of the University of Buffalo were at the experimenter's disposal, and the work was done under the direction of Dr. Herbert U. Williams.

The method used for counting bacteria in milk was as follows: To a test tube containing a definite quantity of sterile water, say 50 c.c., 0.5 c.c. of milk was added and the contents of the tube thoroughly shaken. One cubic centimetre of this mixture, containing 0.01 c.c. of milk, by means of a sterile pipette was added to a test tube containing liquefied sterile nutrient gelatine or agar. This tube was then whirled or agitated until the gelatine and diluted milk were thoroughly mixed. The contents of the tube were then poured into a sterile Petri plate. These plates, whether gelatine or agar was used, were kept at the room temperature. At the end of forty-eight hours in summer, after seventy-two or more in winter, the colonies were counted. The apparatus used for this was devised in the laboratory. The Petri dish was placed over a piece of glass, the under surface of which was painted black, the upper surface ruled in square centimetres. Then with the aid of a small magnifying glass, which in this case was an ordinary engraver's lens, the colonies were counted. If not many were present the entire surface was gone over; if the number was great, ten alternate squares were counted and the number on the plate estimated from the area of the dish. The number of colonies represented approximately the number of bacteria in 0.01 c.c. of

* Read before the Buffalo Academy of Medicine, June 16th, 1896.

milk. At the time of making the culture two control plates, one of the water used in diluting, one of the medium, were made. So long as these remained sterile whatever grew on the milk plates necessarily had its origin in the milk.

The dilution of milk is necessary for two reasons: First, to add to the gelatine even 0.5 c.c. of milk would make a mixture so opaque that the little grayish or creamy white colonies would be indiscernible. Second, even in the best milk the number of bacteria in 0.5 c.c. is so great that it would be almost impossible to count them. Indeed, it is only the best milk that requires so little dilution. At this time of the year (June) for grocery milk a second dilution is done and cultures are made from a mixture of which 1 c.c. contains approximately 0.0001 c.c. of milk. Of course so much dilution increases materially the chance for error.

Gelatine was used as a culture medium until the weather became so warm that it liquefied at the room temperature, when agar was substituted. Either medium has its disadvantages. The rapid development of liquefying organisms in gelatine soon renders counting impossible. No less an objection is the cloudiness which certain bacteria produce in agar. In which medium the greater number of colonies develop was not determined. One experiment showed about the same number in each.

The influence of temperature on the number of bacteria in milk is noticed in comparing the results of examinations of the same milk supply made last winter and this spring and summer.

A point of some interest is that all bacteria do not develop with equal rapidity. There will be a considerable increase beyond the number found on the usual day of counting.

Certified milk, plated February 6th, on February 11th showed 88 colonies; on the 13th, 139.

Grocery milk, plated March 21st, on the 23rd showed 246 colonies; on the 24th, 369.

Sterilized milk (from dairy), plated April 2nd, gave 8 colonies on the 7th, 10 on the 11th. No further increase was found, though the culture was kept one month.

Crèche milk, plated May 13th, on the 16th showed 84 colonies; on the 18th, 158.

Certified milk, plated May 9th, on the 12th showed 255; on the 14th, 323. The same, plated May 16th, gave on the 18th, 350; on the 19th, 480. The same, in agar, June 10th, showed on the 12th, 44; on the 13th, 58.

It is well known that milk is a medium in which bacteria multiply with great rapidity. Indeed the enormous numbers found in milk depend probably not so much on the extent of the original contamination as upon the length of time and the conditions under which the milk has been kept. But one experiment illustrating this has been done. Certified milk of that day's milking was brought to the laboratory and directly plated. Two days later the plates showed 57,600 bacteria to the cubic centimetre. The milk was left in laboratory, covered as it is sold, for four hours, the room temperature being from 68° to 72° F. A second plate was then made which at the end of forty-eight hours showed 747,200 per c.c.

The examinations of which records have been kept give the following results :

TABLE I.—MILK AS DELIVERED TO THE CONSUMER.

1. December 28th, 1895, bottled milk ..	400,000	to c.c.
2. January 28th, 1896, sold by measure	590,000	
3. May 27th, sold by measure	24,613,900	
4. May 29th (same as No. 3).....	9,820,000	} Many moulds.
5. May 30th, brought from dairy.....	9,963,000	
6. May 31st, bottled milk	796,800	
7. June 3rd (same as No. 1 and No. 8).	48,000	
8. June 11th (same as No. 1 and No. 7)	6,630,000	
9. June 11th, brought from dairy.....	43,600,000	

The conditions under which cultures 3 and 4 were made were not fair, as the milk had stood some time in the laboratory before being plated. They merely illustrate the possibilities of milk as a culture medium. In all other cases the milk, which was brought to the laboratory in sterile bottles, or in the bottles in which it was delivered to the consumer, was immediately plated. The specimens brought from dairies were in both cases got in the afternoon. Morning cultures would show fewer colonies, yet the milk is bought even for little children in the afternoon.

TABLE II.—GROCERY MILK.

1. January 26th	25,000	to c.c.
2. March 23rd.....	246,000	
3. May 25th.....	2,619,900	
4. May 29th (culture at 4 p.m.)	25,090,000	Moulds.
5. June 10th (same as No. 1)	1,220,000	
6. June 11th (culture at 11 a.m.; same as No 4).....	7,390,000	

The milk sold at the grocery which supplied the material for cultures 1 and 5 is received each morning from the country. The first culture was made during extremely cold weather and probably does not represent the average condition of that milk in winter. Grocery milk compares very favorably with that from other sources.

Table III. gives the results of examinations of "certified milk." This milk comes from a dairy located some distance out of Buffalo, the manager of which endeavors to supply clean and wholesome milk. The stables are kept scrupulously clean; the cows, all of which have been submitted to the tuberculin test, are daily groomed; the food and water supply of the cattle receive careful attention; the milkers are required to be clean, and the pails, bottles, etc., are bacteriologically clean. The milk is shipped and delivered packed in ice. The name "certified" is given to the milk from the fact that a committee of physicians certify to their knowledge of its condition, a bacteriological examination being made semi-monthly by Dr. Herbert M. Hill to determine how nearly clean the milk is kept.

TABLE III.—CERTIFIED MILK.

1. January 20th	13,000 to c.c.
2. February 11th	10,000
3. May 12th.....	25,900
4. May 18th.....	35,000
5. June 2nd.....	132,720
6. June 10th	4,400
7. June 15th	57,600

A culture made by Dr. Hill of the same milk on May 18th, a different medium being used, gave 26,000, which we regard as a confirmation of real results.

Table IV. is milk prepared for the infants received at the Fitch Crèche, a day nursery for the children of working women. Milk sent from the country on the morning of the day it is used is sterilized in the Arnold sterilizer, being kept at the boiling point for forty-five minutes. The cream used is prepared in the same way. The bottles containing milk and cream are stoppered with absorbent cotton, cooled, and put into the ice chest. Boiled water is kept in a fruit can in the ice chest. The lime water used is made at the creche, with boiling water. The milk sugar is dissolved fresh in boiling water each time. These ingredients are

mixed for each feeding as needed. The bottles are filled after using with cold water, then as soon as possible scalded and filled and left to stand with a solution of borax. All dishes used in making up the mixture are kept for this purpose alone, and are well scalded after use. That the preparing of the food is carefully done I am confident. Yet examinations of the mixture give the following results :

TABLE IV.—CRECHE STANDARD MIXTURE.

1. May 16th	8,400 to c.c.
2. May 29th	17,600
3. June 1st	456,320
4. June 12th	31,000
5. June 13th	851,440
6. June 15th	1,002,400

The fault in this process is that the bottles have to be opened repeatedly, giving chance for contamination. But the bacteria in this mixture, really only a relatively small number, seem harmless. *At any rate the babies thrive on it.*

Some points which may be noted are these :

Certified milk contains comparatively few liquefying organisms, cultures occasionally showing none at all. The hay bacillus and the potato bacillus, both liquefying organisms common to milk, and both by some accused of an active part in certain digestive troubles of infancy, may be said to be present in this milk in small numbers if at all.

No count is anything more than approximately correct. All estimates probably fall far short of the actual number of bacteria present.

Courts, to be of value in comparing the purity of various kinds of milk, must be made under identical conditions as regards medium, temperature of room, and time of counting.

This work was begun with but little faith in its value, but as it went on the conviction grew that by ascertaining the number of bacteria in a given quantity of milk we had a valuable test as to its fitness for food; the original amount of contamination, the length of time the milk has been kept, and the conditions of temperature and cleanliness determining the luxuriance of bacterial growth.

A. S. G.

Pathology.

NOTES ON THE COMPOSITION OF THE BLOOD SERUM IN PERNICIOUS ANÆMIA.

BY F. RUTTAN, B.A., M.D., F.R.S.C.,
Professor of Practical Chemistry, McGill University, Montreal.

AND

J. G. ADAMI, M.A., M.D.,
Professor of Pathology, McGill University, Montreal.

As far as we can learn, the chemical analysis of any very large quantity of blood or blood serum from cases of pernicious anæmia has so far never been made, and, although we freely admit that objections may be taken to the following analysis on the ground that the blood was not obtained *intra vitam*, nevertheless, we think the following analysis of the blood serum obtained at the necropsy upon a typical case of the disease deserves to be placed upon record. This analysis was made from the serum obtained from an extremely distended right heart, removed five hours after death in the month of February. It may be noted that the mean temperature in Montreal in February is several degrees below freezing point, and that the body in this case had been placed immediately after death in a room the temperature of which was close upon freezing point; the room, indeed, was so cold as to make the performance of the necropsy somewhat of an ordeal. The body was found not completely cold.

HISTORY OF THE CASE.

Before giving the analysis, it will be well to say a few words in reference to the history of the case.

The patient, a man of fifty-three, began to feel weak in March, 1892; there was a numb sensation in the lower extremities as from "pins and needles," and he soon noticed that his knees were liable to give way under him. He had lived in England until the age of forty-two, when he came to Canada. For the greater part of his life he had been a carpenter; the last two years he had undertaken work as a shorthand reporter. His personal history was very good. About the only trouble he had suffered from previously was a right-sided rupture, brought about when he was forty by lifting a heavy weight. His condition upon admission to the Montreal General Hospital, under Dr. George Ross, in August, 1892, was one of great pallor and slow mental condition, with no pain experienced

in any region. The knee-jerks were much diminished. The appetite was good, the digestive system apparently in fair condition; there was no abdominal pain. The arteries exhibited a slight amount of arterio-sclerosis; the heart was definitely enlarged, with the apex at the fifth interspace, just outside the nipple line. Upon auscultation, there was noted a soft blowing systolic murmur at the apex. An examination of the blood immediately on admission gave the number of red corpuscles at 570,000, a proportion of white to red corpuscles at 1 in 200 (about), the amount of hæmoglobin at 25 per cent., and this confirmed the diagnosis of pernicious anæmia. The patient was placed upon increasing doses of liquor arsenicalis, and in less than a fortnight the number of red corpuscles had increased to 1,353,333, and the patient was feeling stronger and was of better color. On September 7th the red corpuscles were 2,006,000, proportion of white to red 1 in 301, and on September 17th, the number still further rising to 2,363,333, the proportion of white to red was 1 in 331; hæmoglobin had increased to 36 per cent. The patient was discharged on this date. On February 8th, 1893, he returned to the hospital, and was under Dr. James Stewart. The number of the red corpuscles had sunk to 700,000. The percentage of hæmoglobin had not fallen to the same extent; indeed, comparing the hæmoglobin percentage with the number of corpuscles, there was an actual increase of 23 per cent. per corpuscle. The patient was very prostrate, and the progressive asthenia ended in death upon February 21st. There had never been any hæmorrhage or diarrhœa, and vomiting occurred but twice, and on both occasions after taking arsenic.

NECROPSY.

The necropsy, performed by one of us, fully confirmed the diagnosis made during life.

There was the characteristic lemon-yellow tint of pernicious anæmia, and the subcutaneous fat was found in fair amount; the brain was large and anæmic; the lungs also pale, but crepitant throughout; the stomach was large, with distinctly thin and pale walls, presenting two small papillomatous overgrowths close to the pylorus (? gastritis polyposa). The lower part of the ileum presented also walls greatly thinned. The liver was large (2,020 grammes), brown in color, varying to orange yellow, and friable. Sections showed the characteristic Quincke's siderosis both by the ammonium sulphide and by the hydrochloric acid and potassium ferrocyanide tests, with some fatty degeneration. The bile duct

was pervious, and a greenish-yellow bile stained all the intestinal contents. The kidneys showed a large cortex, and were pale, fatty and friable. The bladder was distended with more than 500 c.cm. of dark amber-colored urine: prostate not enlarged. The spleen was of fair size, firm on section, but it yielded, upon being scraped, a considerable amount of purplish bloody pulp. The sternal bone marrow was increased in amount, and of a purplish-red color. There was a right inguinal hernia, the pouch being filled with a large adherent mass of great omental tissue.

Turning now to the circulatory system, there were found slight atheromatous changes in the aorta. The heart was large (370 grammes), the right side being especially distended, indeed relatively enormous, auricle and ventricle being filled with pale very dilute blood, in which floated some soft reddish clot. The left side was smaller, the left ventricle dilated, with slight hypertrophy. The tricuspid valves were distinctly thickened along their free margins, and only admitted three fingers with difficulty. The mitral valves were still more fibroid. The aortic and pulmonary valves were competent and normal.

Of the blood distending the right heart, 300 c.cm. were immediately removed, placed in a clean bottle, and sent up to the Chemical Laboratory of McGill Medical College.

The analysis of the blood serum, made by one of us, gave the following results:

The clear, almost colorless, serum had a specific gravity of 1026.1. This is below the figure usually given as being that of the specific gravity of serum, namely 1027 to 1030. It contained only 5.2 per cent. of proteids (by weight). These proteids consisted of 2.3 per cent. of globulins precipitated by saturation with magnesium sulphate, and 2.9 per cent. of serum albumin proper. There was 0.875 per cent. of ash. It will thus be seen that not only were the total proteids reduced about 40 per cent. below the average normal quantity, but also that the normal ratio of the globulins to the serum albumin was considerably altered, the ash also was about 12½ per cent. above the normal.

The total quantity of iron found in the liver was 0.2433 per cent. by weight calculated to the fresh undried tissue. This is equivalent to about 0.72 per cent. in the dried tissue. The estimation accords fully with the observations of previous observers, as showing the very great increase in the iron contained in the liver in this disease, to which, among English workers on the subject, Dr. W. Hunter has especially called attention.—*B.M.J* *W.H.P.*

Public Health and Hygiene.

MONTHLY REPORT OF DEATHS FROM CONTAGIOUS DISEASE IN ONTARIO FOR DECEMBER, 1896.

PREPARED BY P. H. BRYCE, DEPUTY REGISTRAR-GENERAL.

		Total Reported.	Per cent. of Whole Reported.
Total population of Province.....	2,233,117	1,546,598	70
" Municipalities	745	559	75
" Cities.....	13	13	100
" Towns and Villages	236	176	74
" Townships	496	370	74

VARIOUS DISEASES REPORTED.

Municipality.	Pop. Reported	Typhoid.		Diphtheria.		Scarlatina.		Tub'rcul'sis	
		Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum
Cities	429,000	14	0.3	45	1.2	4	0.1	65	1.8
Towns and Villages	313,523	8	0.3	22	0.8	0	..	25	1.0
Townships	804,075	13	0.1	22	0.3	2	0.3	40	0.6
Total Pop. Reported	1,546,598	35	0.2	89	0.6	6	0.4	133	1.12

Public Health and Vital Statistics.

The departments of Public Health and Vital Statistics in Ontario have been placed under the charge of Hon. E. J. Davis Provincial Secretary. The first quarterly meeting of the Provincial Board of Health for the current year will be called for February 10th. An important report will be presented by the Committee on Ventilation.

J. J. C.

Proceedings of Societies.

THE TORONTO MEDICAL SOCIETY.

THE regular meeting of this Society was held in the Council buildings on the evening of the 7th of January. Dr. W. J. Wilson presided.

The minutes of the previous meeting were read and adopted.

Dr. G. A. Peters read a paper on "Procidentia Recti." The paper began with a discussion of why and how this condition, a normal phenomenon, occurs in the horse. The points of difference between prolapse and procidentia were referred to. He then gave a classification of the forms of the latter condition, according to Allingham. Water color drawings were shown which illustrated the various forms. Authorities differed as to the age at which this condition was most usually found. The various causes were then given and methods of cure, both palliative and radical, were detailed. The history of a case treated by the essayist was read. The patient was a boy aged two years and seven months, admitted to the Victoria Hospital for Sick Children in September, 1896. The anterior wall of the abdomen below the umbilicus was wanting, there being ectopia vesicæ. The symphysis pubis was also absent. The doctor described the anomalous condition of the genitalia. The posterior wall of the bladder bulged forward as a florid fungating mass, irregular in shape. It was ulcerated in parts, and very tender and sensitive. The mother said that the child had always strained severely when the bowels moved. Prolapse was noticed about eighteen months ago. When first observed the bowel came down only one inch. The protrusion rapidly increased in size and came down with each evacuation. At first it was easily returned, but soon refused to remain reduced. It had been down almost continuously for one year. When the child lay quiet the protrusion measured about four inches in length, but when it cried it reached eight inches below the anal ring. It had the shape of a truncated cone. In the quiescent state the color was pinkish, but during straining or if exposed to the air it became purplish. There were a few spots of ulceration on its surface; some sloughs also. There was a small depression just external to the external sphincter. There was great pain and straining when the bowels moved, the child showing the most intense agony.

Before referring to the particular treatment used in this case the doctor referred to the treatment of prolapse and procidentia in general. In prolapsus recti, any cause should be removed—such as pin-worms, stone, phimosis. The child should be made to stand or lie down when the bowels moved. If the bowel protruded the application of cold or astringents was useful. In the severer forms applications of strong nitric acid should be made, the patient being anesthetized.

The treatment of procidentia was more serious. Many cases were intractable and incurable. Sometimes the nitric acid treatment would effect a cure. Astringents should be avoided and injections into the tissues around the perineum should not be made. One surgical procedure was to remove elliptical or triangular portions of the mucous membrane and stitch the edges together with catgut or horsehair. Another process was to remove such pieces with the clamp and cautery. Another procedure described was that of removing the whole mass by means of an elastic ligature. The ligature was applied a short distance from the anus, made tight enough to shut off the circulation. An incision was then made into the perineal sac and any hernial protrusion reduced, the incision being made on the distal side of the ligature. Having reduced the protrusion, the ligature should be tightened. Next a canula is introduced from before backward through the whole mass on the outside of the ligature. Each half of the bowel can then be tied off by an elastic ligature, leaving the end to slough off. The method adopted by Treves was to dissect off the mucous membrane and stitch the edges to the skin. This had met with a good deal of favor. Lange's method, in which the coccyx is removed, was described and commented upon. Another method was to open the abdomen anteriorly and stitch the rectum after it had been drawn up to the abdominal wall. The method employed in the case reported was to make an anterior abdominal incision, draw up the rectum, narrow the intussusciens by stitching so that two lines (longitudinal) on the bowel would be approximated and thus make a fold, the sutures being left long and subsequently stitched through the anterior abdominal wall, thus suspending the rectum. So far, some three weeks, the patient had done well.

Dr. John Hunter spoke of the value of a mixture containing magnesium sulphate, morphia and aromatic sulphuric acid in cases of prolapse.

Dr. H. B. Anderson related the history of a case which had

come under his observation in which the cautery had been used. A good recovery followed. Dr. Anderson discussed some other points in the paper.

Dr. H. B. Anderson presented a tubercular testicle for examination. The specimen showed an involvement of the epididymis and cord.

Dr. W. J. Wilson presented for Dr. Hay a surgical kidney and its mate which was acutely congested. The specimens were from a young woman aged twenty. She consulted her physician for irritability of the bladder at first. A time after she was attacked with a sudden pain in the region of the left kidney. Became feverish; was put to bed, and never was up afterward. Examination revealed an enlargement in the region of the pain, and cystoscopic examination showed pus oozing from a ureter. Death subsequently ensued.

Dr. William Oldright read a few notes on some points in midwifery practice. He made it a point always to examine the urine of the patient he was asked to attend in confinement. He would call the patient's attention to any vaginal discharges and emphasize the necessity of frequent cleansings. It was important to secure an intelligent nurse; this the doctor should superintend; if not, very often he would find one employed who had no idea of asepsis. The introduction of the hand prior to the application of the forceps to dilate the vaginal outlet was a useful device; in this way the time of descent of the head would be greatly lessened. Care should be taken to apply the forceps in such a way as not to impinge on the face. Due deliberation should be observed in this important procedure. The position should be noted, so as to avoid delivery of the face to the pubes, as was often done, time not being allowed for turning to take place. In version one should not be particular to secure both feet, as one was enough. The speaker advised a plan he uses to support the perineum, viz., with both hands around the orifice, at the same time the head may be directed in such a way as to avoid undue stretching of the weak places. Another important point was to determine after expulsion of the placenta whether any membranous shreds were left in; this would often save hours of painful waiting for oozings of blood to cease. In a case reported the speaker said that after eight days of normal convalescence the temperature rose to 104, with other symptoms of sepsis. After the use of a blunt curette and irrigation with an antiseptic solution, patient did well.

Dr. Oakley said that under the teaching of Meggs, who held that meddlesome midwifery was bad midwifery, he believed he had erred in being too cautious in leaving the progress of labor in many cases in his earlier practice too much to nature. He thought it was better to err on the side of boldness rather than to wait too long for delivery to take place. He said that it required a great deal of thought to perform Crede's method of expelling the placenta properly. In his early practice he used to make traction on the cord. He believed a good many of the older men had done the same. It was probably wisest on the whole to allow the placenta its own time to come away. He had been taught to apply a folded napkin to the perineum while the head was coming down. This, however, tended rather to laceration than preservation. Better, he believed to introduce the four fingers of one hand between the coccyx and the rectum and press downward and forward, using the other hand to bring the head down under the symphysis. It was important to keep the head well flexed. As to cutting the cord, it was his custom to wait until it was flaccid. He thought the use of ergot in the third stage was of benefit, and should not be given before.

Dr. G. A. Fletcher asked as to the advisability of attending to lacerations of the cervix immediately after labor. He had observed this lesion in two cases. Instead of anæsthetizing under chloroform to do perineal repair, he had found local obtunding with cocaine did very well.

The President, referring to the necessity of inquiring into the matter of who the nurse was, related a case of puerperal sepsis with death where the nurse employed was a neighbor woman, who had only a short time before recovered from the same disease. He had had a child die from hæmorrhage. The other children of the family had been handling it somewhat roughly, and had drawn off the cord. He had taken the precaution recommended by the first speaker of tying the ligature a second time. The matter of after-douching in normal cases was perhaps unnecessary. He had often found that the blood serum was a normal disinfectant. As to the use of uterine stimulants in the early stages, he had found quinine and wine of ipecac of decided value. He would not recommend ergot.

Dr. Oldright closed the discussion.

J. N. E. B.

THE CHATHAM MEDICAL AND SURGICAL SOCIETY.

THE regular monthly meeting was held January 14th, 1897, the President, Dr. Duncan, in the chair.

Dr. Charteris read the paper of the evening, on "Osteo-Sarcoma," with history of a case. The paper first drew attention to the extreme malignancy of sarcoma, the inefficacy of all medicinal treatment, the only hope of preventing a fatal termination being a radical surgical procedure, and, after shortly discussing the different varieties of sarcoma, gave a description of the following very interesting case :

W. W., aged nineteen, excellent family history. At the age of thirteen was kicked on the left thigh by a horse, causing at the time some soreness and swelling which, however, quickly subsided. Two years subsequently he began to suffer slight pain at the seat of the former injury. At first little attention was paid to the symptom, it being attributed to "growing pains," as the lad was apparently in perfect health. After a time the pain increased in severity, at the same time a slight enlargement on the thigh was observed, and he began to lose flesh, and suffered also from slight chills and fever. Dr. C. inserted an exploring needle with negative results, thinking possibly it might be chronic inflammation of the bone. The tumor continued to grow more rapidly, became very hard, and the doctor concluded it must be a sarcomatous growth, and after a consultation amputation at the hip joint was advised. The parents demurred for a time, but the tumor continuing to grow, and as the boy was rapidly losing flesh and strangled, amputation was consented to. Wyeth's method was adopted, with the loss of but little blood. In seventeen days after the operation he left the hospital and returned home, the wound healing by first intention without the formation of a drop of pus. He recruited rapidly, and was soon enjoying perfect health again. The operation was performed in September, 1892, and the patient a month ago weighed 165 pounds and stood six feet high. His health during the four years since the operation has been excellent. There was no sign of any reappearance of the disease until October, 1896, when he noticed a small lump on the right side of his head; it was not tender, and he suffered no pain from it. Dr. C. did not see him, however, until December last, when, on

examining the growth, and knowing the previous history of the young man, he advised its removal at once. A horse-shoe shaped incision was made around the base of the tumor, the flap reflected and the tumor carefully removed from the bone, which was thoroughly scraped and chiselled. Spicula of bone were found penetrating the tumor. The wound healed at once, and up to the present—one month since the operation—there has been no return of the growth. Dr. Charteris presented photographs of the patient before and after the first operation, and a longitudinal section of the growth: also the tumor removed from the head.

Dr. Holmes—No surgical subject demanded more careful attention. If allowed to run its natural course the termination was always fatal. The early diagnosis was often difficult, yet most important: attacks all ages: more apt to occur in early life than the carcinomata. The two principal forms of the sarcomata which attack long bones are known as the central and subperiosteal—the one presented is one of the latter kind. Dr. Holmes gave short histories of several cases under his care at various times.

Dr. Rutherford—Fortunately it was a rare disease. He had had three cases: in one the original growth developed from the spinal column: another in the abdomen, probably from the pelvis, and the third on the tibia. All three were rapidly fatal, notwithstanding that in the last case amputation was resorted to early: metastatic deposits rapidly grew in various parts of the body.

Dr. Duncan asked if any members of the Society had any experience with iodide of potash in sarcoma. He had been advised to use it. Also, whether opium had the same influence in retarding the growth and development of sarcomata as it apparently frequently had in the carcinomata.

Dr. McKeough—The case related is an exception to Volkman's three-year limit, and proves that it is not always safe to regard as cured those cases which after the expiration of three years show good health. Still he thought it was a victory for surgery, as the young man had over four years of perfect health before a return occurred. He related a case in which the superior maxilla was removed five years ago from a lad for a large sarcoma, and at present there were no signs of a recurrence. In his experience opium did not have the same retarding influence in these growths as it had in carcinoma, and in one case in which the diagnosis was obscure, with a possible specific causation, the patient was saturated with potassium iodide without any benefit, the post mortem revealing undoubted round-cell sarcoma.

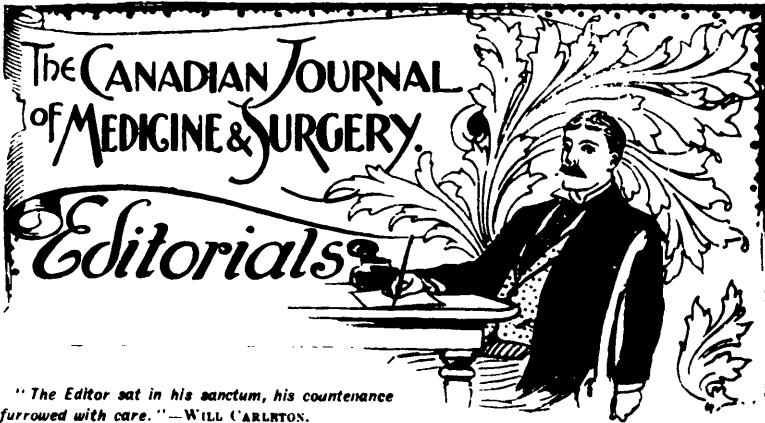
Dr. Charteris briefly replied, thanking the members present for taking so much interest in the paper and subject.

Under the head of "Pathological Specimens," Dr. Holmes presented a carious sacrum with the following history: The patient was a young man, aged twenty-four years. Had good health until about a year ago, when he was said to have had typhoid fever. The fever continued longer than usual, but eventually left him. He returned to work, but was never well. In August last he was compelled to give up work through weakness. In October he suffered much pain in the lower part of back, which radiated towards the right hip, and had fever. An abscess finally pointed in the gluteal region, about midway between the sacrum and great trochanter, which was opened, but the fever continued, the temperature frequently reaching 104° F.; the discharge was very offensive, and the patient was greatly prostrated. Dr. Holmes saw the patient in this condition, and under ether explored the sinus, which he found extended in different directions; the main channels passed into the pelvis between the sacrum and the rectum, where dead bone could be felt: the patient being very weak, a drainage tube was inserted, hoping that proper drainage would improve his condition. The patient did rally for a short time, fever was less, and appetite improved, and by the use of a solution of formaline the odor became much less offensive. The fever, however, returned as high as ever, and in hopes of improving the drainage a counter opening was made on the opposite side of the sacrum, and the tube passed through. The condition of the patient did not improve, and he gradually sank and died. The specimen exhibited showed a large carious spot on the anterior surface of the third sacral vertebra, involving the cancellous tissue of all the bodies of the sacral vertebra above.

G. T. MCK.

Vessel for Invalids.

It is said that an English steamship company is about to build a vessel which will be for the "sole use of invalids." The steamship is to be fitted up very luxuriously and devoted entirely to the service of wealthy sufferers who are afflicted with pulmonary troubles. An eminent corps of medical men will be on board, and the cuisine will be in charge of chefs trained to the delicate taste of ministering to the refined and capricious tastes of invalids.—*Chicago Record.*



"The Editor sat in his sanctum, his countenance furrowed with care." —WILL CARLTON.

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Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, Resident Physician, Toronto Asylum for the Insane.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. I. TORONTO, FEBRUARY, 1897.

NO. 2.

CANADIAN NURSES IN THE UNITED STATES.

AS OUR readers are doubtless aware, an Act was approved in 1885, "prohibiting the importation and immigration of foreigners and aliens under contract or agreement to perform labor in the United States, its territories, and the District of Columbia." The provisions for excluding aliens did not apply, among others, "to actors, artists,

lecturers, or singers, nor to persons employed strictly as personal or domestic servants." This last section was amended by an Act, passed in 1891, providing that the exclusion did not apply "to ministers of any religious denomination, nor persons belonging to any *recognized profession*, nor professors for colleges and seminaries."

Attention has been attracted to the status of Canadian nurses employed in the United States, some contending that, as nursing is a recognized profession, they ought to be exempt: others, that nursing is not a profession, and that, therefore, Canadian nurses immigrating to the United States are liable to deportation.

Desirous of obtaining exact information on this subject, we wrote to the Commissioner of Immigration, Ellis Island, New York Harbor, Mr. D. J. H. Senner, who promptly and courteously replied, sending copies of the laws relating to the immigration of aliens to the United States. For a reply to a question asked, "What action, if any, has been taken by the American Government relative to the deporting of Canadian nurses?" he referred us to Inspector of Immigration, J. R. DeBarry, of Buffalo, N.Y. A letter was then sent to Mr. DeBarry, requesting information as to what decision had been arrived at by the American Government relative to the status of the Canadian nurse, whether she immigrates under contract or simply asks for employment after her arrival in the States. The following is Mr. DeBarry's reply:

"TREASURY DEPARTMENT,

"U. S. IMMIGRATION SERVICE,

"BUFFALO, N.Y., January 12th, 1897.

"*Editor Canadian Journal of Medicine and Surgery, Toronto:*

"SIR,—The Commissioner of Immigration at New York having referred you to me for information on the subject of your letter of the 9th inst., I beg to say that, as nurses do not belong to a 'recognized profession,' they can *not* come under contract to 'labor' or 'perform a service of any kind' in the United States. Laws of 1885 and 1891.

"The same laws place the medical and surgical fraternity in a higher sphere, i.e., 'members of a recognized profession,' therefore they may come under contract and engage in their professional calling.

"There are no laws against Canadian nurses other than the laws affecting subjects of all nations, so there is no law forbidding a Canadian nurse immigrating to the United States, and when domiciled here she may present herself to any private family or hospital, and, if accepted, can enter into contract with the person or hospital desiring her services. 'Soliciting or encouraging the migration of aliens to enter the United States to perform labor or service of any kind' is a violation of law, and the penalty is \$1,000 and costs in each case, *no less*.

"The decision you refer to was rendered on the 10th day of December, 1896, and had reference to five *special* cases at Dansville, N.Y.

I am, sir,

"Very respectfully,

"JOHN R. DEBARRY,

"*Inspector of Immigration.*"

This is sufficiently explicit. In the United States, a nurse, whatever her attainments may be, is not considered by the Government of the country as belonging to a recognized profession.

We think that Canadian nurses ought, through the agency of the National Council of Women, to represent to their American sisters the inferior grade to which the art of nursing has, apparently, sunk in public estimation in the United States. They should also seek to obtain from the American Government a decision which will place nurses, who have obtained a diploma from a good training school, in at least as favorable a position before the law as actors, artists, lecturers and singers.

J. J. C.

THE TORONTO GENERAL HOSPITAL TRAINING SCHOOL FOR NURSES.

THIS valuable institution, which has been in operation since April, 1881, has granted certificates, up to October, 1896, to 251 nurses. Of these, a large number hold positions in the hospital, some are married, six are foreign missionaries, and many are engaged in private nursing both in Canada and the United States. At present, nurses are required to pass an entrance examination consisting of ordinary English and practical work: a written examination at the end of the first and second year, set by the Superintendent of

the School, and at the end of the third year a written and an oral examination before an examining board.

The School is controlled by the trustees of the hospital, the Medical Superintendent having the general supervision, and the Superintendent of the School immediate charge of the nursing, lectures, discipline and instruction.

Over six hundred applications are received every year. Selections are made from these to the number of about thirty. These are admitted, and if found satisfactory during the period of probation (two months) are enrolled as pupil nurses. During the period of probation nurses are boarded and lodged at the expense of the hospital, but receive no other compensation. Pupil nurses are expected to perform any duty assigned to them either as nurses in the hospital or when sent to private cases among the rich or poor in any part of the Province. Nurses when sent out will not be entitled to any extra payment for such service, nor to receive any perquisite or gratuity without the sanction of the Lady Superintendent, their regular pay with their education being considered a full equivalent.

When not engaged in the hospital, nurses live in their own residence, which is called "The Home." This residence affords accommodation for sixty pupils. The parlors are bright and home-like; a piano, a good library, and a large number of monthly and weekly periodicals furnish means of relaxation when the hours of duty are over.

Each nurse on duty is allowed one hour in the afternoon for rest, besides meal-time, also an afternoon each week, and one-half of Sunday, except in emergencies. A holiday of two weeks the first year, three weeks the second year, and four weeks the third year, is also allowed.

The facilities for obtaining a good training are large. The hospital has four hundred beds for patients. In addition to the numerous medical, surgical, eye and ear, nose and throat wards, there is also a pavilion, containing forty beds, set apart for gynæcological work, while a maternity pavilion, containing twenty-eight beds, known as the Burnside Lying-in Hospital, affords thorough training in obstetrical nursing. The practical knowledge obtained in the wards is supplemented by a regular course of study and lectures extending over nine months in each year.

The course comprises elementary anatomy, physiology and hygiene, with lectures given by members of the hospital staff on

a number of subjects calculated to make the nurses more intelligent and efficient.

We deem it only our duty to say that not the least claim of Toronto General Hospital on the grateful recognition of the public is the very efficient work done by the Medical Superintendent, Dr. O'Reilly, and the Lady Superintendent, Miss Snively, in conducting this large and flourishing training school for nurses. J. J. C.

THE POSSIBILITIES OF THE X-RAYS.

WE are pleased to learn that an enterprising city confrere has, by actual experiment, powerfully assisted in dispelling the extravagant prophecies which had been indulged in by many persons to the effect that the X-rays could be used so as to restore sight to the blind. The *Globe* says: "The apparatus used in the test was in every respect the most modern. The strength of penetration of the X-rays from the tube was such that the bones of the hand were easily seen at a distance of ten feet and through a closed door. The same day it penetrated through the thickness of two city directories, showing metal objects behind them. The test was made with and without the fluoroscope. The result of the test was, however, most disappointing to those mainly interested, namely, the blind. It was clearly proved that the X-rays are not effective for the purpose of making the blind see. The test was a most thorough one, the sixteen subjects ranging in age from fifteen to fifty years, of both sexes, and representing every degree of the malady from total blindness to partial sight."

While the effort to apply the X-ray to the relief of blindness has resulted in failure, the new discovery will, it is to be hoped, prove of great service in clinical medicine, and more particularly in surgery. As we said in last month's issue, clinical medicine draws its sustenance through many roots in numberless fields. One of the more recent discoveries in bacteriology, namely, the Widal reaction, gives a precision to the diagnosis of typhoid fever which up to the present time has been unattainable. As further improvements in electricity develop we may hope to obtain good photographs of the heart, kidneys and other viscera, which, when examined with the X-rays, appear merely as shadows. With the X-rays, surgeons are now able to make a very exact diagnosis in cases of disease of the

bones, which formerly they were obliged to leave very much to conjecture. In fractures, an X-ray photograph can now be taken through the splints, showing the exact position of the injured parts.

Now that a private physician has led the way in this city, we hope to see a new department of electrical photography created in our city hospitals. Surgeons, before performing important operations on the bones, or when searching for foreign bodies, should leave nothing to surmise: no guess-work should be permitted. Science may fairly demand that no amputation shall be done until, among other information, ocular evidence is given that the injured bone cannot be saved.

J. J. C.

HARD TIMES AND HYGIENE REDUCE THE SICKNESS RATE.

It is a matter of everyday observation among Toronto physicians that the percentage of sickness has of late been very much reduced. Even dispensing druggists are willing to admit that "business is quiet," and this remark applies to the sale of patent medicines as well as original and pirated compounds. About one hundred beds are vacant at the Toronto General Hospital; and the average lodge physician is astonished at the amount of rest he obtains both day and night. The cause of the complaint is said to be "hard times." Still this omnipresent condition, which the physician recognizes as clearly as his neighbor, surely does not make the air more healthful and does not affect the development of microbes. A reasonable explanation of the hard times theory of exemption from sickness is that a long, strong dose of misfortune is either a powerful tonic to the brain and nervous system, or a depressing influence which leads the way to despair and suicide. That suicide has increased of late is true. The converse of the proposition, that misfortune is curative or preventive of disease, should be true also.

That poverty and distress prevail in Toronto is easily seen. The faces of the people, which to the looker-on are true indices of the color of their lives, are grave; smiles are rare, except where children play. People are thinking earnestly of their position, striving to escape from dangers of debt or loss of property. They have no time to think of trifles. They can no more afford to be sick for a trifle than a man, alone on a raft in mid-ocean, can find time to devote his attention to a phlegmon on his foot. The derelict feels

pain, after a fashion : but he is struggling for his life and pays no attention to trifles.

Then men avoid the sources of disease. They cannot afford to wine and dine, and even if they can, they do not indulge in these pastimes as freely as in former years. A perusal of the descriptions of certain notable banquets given of late in Toronto will show that the attendance was small, although the attractions were in some instances great.

The ladies also, who are generally the most frequent sufferers, have to turn to their female friends for consolation : but, worse luck ! since the athletic era for women began, it is no longer the correct thing to be sick. Ladies do not respond as readily to the plaint of a sister's woe as formerly : the inevitable bicycle is recommended, enforced by convincing example, and except the case calls for operative procedures, many fair patients get rid of their disorders simply by continuing to exist in a healthful physical and mental environment. Then in many cases they begin to think intently about somebody or something other than themselves or their immediate concerns—how John is going to keep on paying that heavy life insurance premium ; how Lily is going to survive since her ne'er-do-well husband has fled to the States ; how Herbert is going to secure that situation, etc.

As to the young folks, thanks largely to the good stock from which they spring, and abundance of cheap nourishing food, young Torontonians, when free from infectious diseases, are a healthy generation. That infectious diseases are powerfully repressed the school history of the last year can attest, and every Toronto physician knows.

These reasons, therefore—the divergence of thought from self to intensely interesting ulterior objects, clean living, and the practice of civic and domestic hygiene, are explanations of a state of affairs which most of us have occasion to note—a visible falling off in patients and a notable reduction in revenue. J. J. C.

“ SURGERY WITHOUT ANÆSTHETICS.”

THE recent gathering of distinguished members of the medical profession and others at Boston, at the celebration of the fiftieth anniversary of the first administration of ether in a surgical operation, at which such tribute to Drs. W. T. G. Martin and

John C. Warren was paid, was indeed a most memorable one. After Dr. Ashhurst had finished his paper, which appears under "Surgery" in this issue of the JOURNAL, Dr. David W. Cheever, of Boston, dilated upon what anæsthesia had done for surgery, adding, "Apart from the benefits to the patient, avoidance of mental as well as physical shock, it is a benefit to the surgeon in that his moral fibre is less strained and judicial callousness is no longer called for: he need not steel his heart, for his victim does not feel." Dr. John P. Reynold, of Boston, told of the benefits of anæsthesia to women in labor. Dr. William T. Welch, of Baltimore, referred to the benefits to be derived in experimental medicine from vivisection of animals. Dr. Charles McBurney, of New York, read a splendid paper on "The Surgery of the Future."

The programme had upon it as its last item a poem on "The Birth and Death of Pain," by Dr. S. Weir Mitchell, of Philadelphia, paying therein a tribute to Oliver Wendell Holmes:

"Forgive a moment, if a friend's regret
 Delay the task your honoring kindness set.
 I miss one face to all men ever dear;
 I miss one voice that all men loved to hear.
 How glad were I to sit with you apart,
 Could the dead master use his higher art
 To lift on wings of ever lightsome mirth
 The burdened Muse above the dust of earth.
 To stamp with jests the heavy ore of thought,
 To give a day with proud remembrance fraught,
 The vital pathos of that Holmes-spun art
 Which knew so well to reach the common heart.
 Alas! for me, for you, that fatal hour!
 Gone is the master! Ah! not mine the power
 To gild with jests that almost with a tear
 The thronging memories that are with us here."

Among those present at the Jubilee celebration were Dr. J. Collins Warren, presiding, a grandson of Dr. John C. Warren, whose courage permitted the experiment of the first administration of ether for anæsthetic purposes fifty years ago: Mr. Charles H. Dalton, President of the Massachusetts General Hospital, who delivered the address of welcome: and Dr. Robert T. Davis, of Fall River, who was a student and eye-witness of Dr. W. T. G. Morton's first operation, and who gave a brief account of the steps of the operation.

Lord and Lady Playfair, of London, were present, as also the widow, son and daughter of the late Dr. Morton. Over and above those more distinguished guests, there was a very large number of physicians present from all parts of the continent.

W. A. Y.

WHO WILL IT BE ?

As we read almost daily, in this age of study and onward progress, of some new discovery, be it a new bacillus, or how to change the color of a prima donna's eyes, the question comes to us,—will a genuine *cure* for that "seal of death," phthisis, ever be discovered. True, by change of climate, nourishment properly administered, and careful treatment, the pain and distress of the patient may be relieved; and in a few instances (if the disease be not hereditary) cured. But as the physician diagnoses the case, and in all honesty tells the name of the dread disease to the friends of the patient, in at least five cases out of ten the answer comes, "Yes, consumption is hereditary in our family." In the name of humanity let all physicians try, as much as it in their power lies, to advise and warn against marriage, all over whom this dread sword of Damocles hangs, ready to smite at the first chill blast. There came recently under the writer's notice a case in which an educated married lady, whose constitution was undermined by hereditary consumption, had already borne a child, and was soon again to become a mother. As she put it, "just to prolong her own life, she really did not want the children particularly." Such a crime against innocent childhood! Surely such cases are rare: a physician is not a sentimentalist, he must be made of sterner clay: but he is a man, and such a statement as the one quoted is enough to make even the stoutest heart quail, and make physicians feel it to be a duty to advise against motherhood and fatherhood, all who are prone to this awful disease. Often medical men say, "The profession is over-crowded." No, it is not; for we still stand where our fathers stood and ask, How shall we *cure* phthisis? We reverently bow the knee of homage and give to the Jenner, the Simpson and the Koch, of yesterday, the thanks and admiration of a world for what they did to alleviate the suffering of humanity. But we still look anxiously for the man who will give to the world a *cure* for this dread malady, and add to the ranks of our noble profession a hero.

"I want a hero, an uncommon want,
When every year and month sends forth a new one."

W. A. Y.

LECTURESHIP ON ANÆSTHETICS.

THE following notice appeared lately in the *Philadelphia Polyclinic*:

"Dr. W. Oakley Hermance has been appointed instructor in the administration of anæsthetics in the Philadelphia Polyclinic, and anæsthetizer to the Polyclinic Hospital. The faculty and trustees recognize the growing sentiment among the profession that the administration of anæsthetics should be entrusted to skilled hands only, and in providing for proper instruction of the incoming residents of the hospital, they at the same time afford an opportunity to the pupils of the college to gain similar knowledge and experience."

At last we have it. The appointment of a lecturer on how anæsthetics should be administered is certainly a great step in advance. There is no duty which a physician has to perform which requires such care and attention as the administration of ether or chloroform, and in these days of advancing surgery it would prove a perfect boon to the student to have, even during his last year at college and just before he obtains his diploma, a course of lectures on this subject, where he would be taught just what precautions should be exercised in this regard. We hope that it will not be long before this worthy example will be followed in our own country, so that it will not be necessary for the student to get the knowledge in a post-graduate or polyclinic school, which he ought to have obtained before his graduation. W. A. Y.

MANY THANKS!

WE have already received over thirty replies to a typewritten letter, addressed to the prominent medical journals of the United States and Canada, and sent by concurrent mail, with a copy of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY. The writers all express kind wishes for our success, and agree to exchange with us. We have also heard complimentary remarks, and have received by letter, favorable notices on the typographical appearance and literary quality of our journal.

We are much indebted to our confreres of the medical press for their kindly expressions. By devoting both time and study to the

editing of this journal, we shall endeavor to retain their good will, and hope, in the not distant future, to earn the cordial approval of the medical profession at home and abroad. J. J. C.

ACCESSIONS TO OUR STAFF.

It is with great pleasure that we welcome to the ranks of our editorial staff Dr. Thomas H. Manley, Professor of General Surgery in the New York School of Clinical Medicine. Dr. Manley is visiting surgeon to Harlem Hospital, consulting surgeon to Fordham Hospital, and Hospital for the Aged, Yonkers; Vice-President of the National Association of Railway Surgeons, a member of the New York Academy of Medicine, and many other city, county and national medical societies. His monographs on "Hernia" and "Local Anæsthetics" are well-known to Canadian readers. Dr. Manley will take charge of the department of Surgical Pathology in THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

Drs. B. E. McKenzie and H. P. H. Galloway, both well-known orthopedic surgeons have kindly consented to look after the department of Orthopedic Surgery. J. J. C.

FOOD TABLETS.

NOT long ago an American chemist, evidently a disciple of Prof. Berthelot, of France, stated that the time was near at hand when hot water and food tablets would be the sole accoutrements of a kitchen; that the essential food elements of a twelve-hundred pound steer can be put into an ordinary pill-box, and that a single concentrated soup tablet the size of a pea will make a large bowl of soup full of nourishing strength. A ration case weighing eight ounces was planned. It contained the following supply: Three tablets of concentrated soups, equal to three quarts; four beef tablets, equal to six pounds of the meat; one milk tablet, equal to one pint; two tablets wheaten grits, equal to two pounds; one tablet egg food, equal to twelve eggs.

Viewed from a chemical standpoint, it may seem possible to reduce, by condensation, the bulk of man's food almost indefinitely, and thus furnish in a thoroughly portable and convenient form nutriment for the body which will remain unchanged through long

periods of time and in spite of the influence of varying conditions of temperature and climate; but from a physiological point of view may be seen serious obstacles to the successful consummation of such a proposition. That condensed and concentrated foods have a direct sphere of usefulness will not be denied, but that food tablets and similar products are well adapted to constitute the sole food of healthy men for any length of time is an undeniable fallacy. Combined with fresh foods they may yet prove of service for, like the particles of yeast added to the dough, the necessary principle contained in the ordinary food may leaven the whole lump.

But practical experimental evidence is always most convincing, and hence we append the following despatch which recently appeared in a reliable periodical: "A despatch from Denver was published stating that the troops at Fort Logan have made the first test of the new emergency ration. One company went out for three days of forced marching in the foothills of Denver, loaded with coffee tablets and compressed soup that was supposed to contain all the advantages of hard tack and coffee. On the night of September 11th, the medical officer charged with weighing and watching the men rode into Morrison for assistance. He reported that thirty-six out of the fifty men are down with griping pains resulting from the non-assimilation of the scientific ration. The order could not be revoked, and the men in the field were informed that they would have to remain on the march for two days longer."—*Dietetic and Hygienic Gazette*. W. A. Y.

The Gynæcologist Himself.

It seems to me that no physician with hands above medium size should attempt to practise gynæcology. Of course no physician can be blamed if he has unusually large hands, but it is a misfortune that should debar him from attempting to practise a branch of the profession when a small or medium-sized hand and a light and sensitive touch are among the requirements that are almost indispensable. The gynæcologist, of course, should thoroughly understand his business first of all, and should always know what he is about to do, and why, thereby inspiring the confidence without which success is very problematical in any branch of the profession.—*New York State Medical Reporter*. W. A. Y.

THE MODERN TREATMENT OF DIPHTHERIA.

DR. EDWIN ROSENTHAL, of Philadelphia, who has had large experience during the past two years in the treatment of diphtheria by antitoxin, in the *Medical World* of December last gives a resumé of his work in this direction. He says that his cases were sometimes mild, and at other times of a very severe laryngeal variety requiring intubation, but adds that he found they never recovered so quickly as under the antitoxin. He classifies the cases as follows :

Whole number treated	141
Number of deaths	6
Mortality	4½%
Faucial	86
Laryngeal	55

FAUCIAL VARIETY.

Tonsils	68
Pharynx and tonsils	14
Nasal	3
Pharynx	1
	<hr/>
	86

LARYNGEAL VARIETY.

Laryngeal	18
Tonsils and laryngeal	22
Pharynx, tonsils and laryngeal	8
Nasal, pharynx, tonsils and laryngeal	4
Pharynx and laryngeal	3
	<hr/>
	55

Of the 55 laryngeal cases, 5 died; 24 required intubation, of which 2 died. The result of the laryngeal cases shows conclusively the value of the antitoxin. The doctor is strongly of the opinion that the earlier the antitoxin is used the better. In 128 cases he used the serum on or before the fourth day. To show the results of his cases, Dr. Rosenthal quotes from his laryngeal cases: Intubated before antitoxin, 100 cases; 62 died—a mortality of 62 per cent. Since antitoxin, 24 cases; 2 died—mortality of 8½ per cent. The doctor goes on to show the therapeutical effect of the antitoxin on the various organs of the body, its lowering effect on the pulse rate, rapid decline in temperature, its sometimes wonderful effect on the diphtheritic membrane (a line of demarcation forming between the healthy and diseased mucous membranes). In laryngeal cases, when the antitoxin is used early, there is seldom any need of

intubation or tracheotomy; and when intubated the tube can be withdrawn in a much shorter time than heretofore. Antitoxin has conspicuously proved its action in shortening the course of the disease.

Dr. Rosenthal gives it as his opinion that the employment of a concentrated serum permits the injection of smaller amounts of substances other than antitoxin; diminishes the metabolic effect said to be produced by a large amount of foreign serum upon the blood; lessens the dread of injection since we can now employ smaller syringes; permits of larger doses where necessary, and insures more rapid absorption, and more prompt results may be expected. Dr. Rosenthal speaks of the great value of antitoxin (having used Mulford's exclusively during the past year) to produce immunity against diphtheria. In over six hundred cases immunized by him not one showed symptoms of diphtheria, although in many cases isolation could not be carried out, patients having frequently lived in the same room with those affected.

W. A. Y.

In the Clinics.

At the Toronto General Hospital the Esmarch bandage is no longer used in amputations, digital compression of the blood vessels being found sufficient. The principal objection to the bloodless method is that by compressing the capillaries too much it seriously interferes with the local circulation, and thereby injures the nutrition of the stump. Surgeons in the rural districts who may not be able to secure skilled assistants at amputations will probably continue to use the Esmarch bandage, taking the precaution of not leaving it on the limb too long.

PAMPHLET No. 1, 1896, on "Meat and Milk Inspection," containing the Act providing for the inspection of meat and milk supplies of cities and towns; plans and estimate of cost of a municipal abattoir, and regulations of the Provincial Board of Health regarding the same; also report on inspection of meat and milk, and regulations relating thereto, has been issued by Provincial Board of Health of Ontario. Toronto: Warwick Bros. & Rutter, printers, bookbinders, etc., Front Street West. 1896.

The Physician's Library.

Autoscopy of the Larynx and the Trachea. By ALFRED KIRSTEIN M.D., Berlin. Authorized translation by MAX THORNER, A.M., M.D., Cincinnati, O., Professor of Clinical Laryngology and Otology, Cincinnati College of Medicine and Surgery. With twelve illustrations. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street; Toronto: A. P. Watts & Co., College Street, Canadian Agents.

This interesting monograph lays before the profession a method of examining the interior of the laryngeal chamber without resorting to the use of the laryngoscope.

The Surgery of the Chest. By STEPHEN PAGET, M.A. Oxon., F.R.C.S., Surgeon to the West London Hospital, and to the Metropolitan Hospital. Illustrated. New York: E. B. Treat, 5 Cooper Union; Bristol, Eng.: John Wright & Co.; Montreal: J. Hood Company. 1897.

There has never yet been written a work on the whole subject of the surgery of the chest, both in injury and disease; and now that this important branch has been taken up by a surgeon as prominent as Mr. Paget, especially at a time when we seem to have reached a degree of excellence in our art beyond which on our present lines we cannot advance much farther, it will be received with pleasure. The subject is presented clearly and fairly, and presents those rules which are most likely to help the surgeon in the difficulties of practice.

Anomalies and Curiosities of Medicine, being an Encyclopædic Collection of Rare and Extraordinary Cases, and of the most Striking Instances of Abnormality in all branches of Medicine and Surgery, derived from an Exhaustive Research of Medical Literature from its Origin to the Present Day. Abstracted, classified, annotated and indexed by GEO. M. GOULD, A.M., M.D., and WALTER L. PYLE, A.M., M.D. With 295 illustrations in the text, and twelve half-tone and colored plates. Philadelphia: W. B. Saunders. 1897.

Here is a book discussing a subject in medicine, certainly out of the ordinary. To man, the anomalous and the curious are of excep-

tional interest, especially so of the construction and functions of the human body. Any work taking up a subject in as thorough and able a manner as Drs. Gouid and Pyle have done in this instance will certainly meet with the heartiest support from the profession, as there must be an exceedingly small percentage of men who style themselves physicians who will not take as keen interest in studying the abnormalities of the human structure as they will in the treatment of disease. The book commences in chapter I. by taking up genetic anomalies, obstetric anomalies, followed by a most interesting chapter on anomalies of stature, size and development. The author then takes up in several chapters surgical anomalies; after which anomalous skin, nervous and mental diseases are discussed. The book is well illustrated, and will be found of peculiar interest to the practitioner.

The Physician's All-Requisite Time and Labor-Saving Account Book. Designed by WILLIAM A. SEIBERT, M.D., of Easton, Pa. Philadelphia and London: The F. A. Davis Co., Publishers. 1893. Toronto: A. P. Watts & Co., College Street.

There have been placed upon the market in past years quite a number of physicians' account books, some possessing a certain amount of merit. The great fault with the majority, however, has been that practitioners could not depend upon them as being acceptable in a court of law as proof of an account. Dr. Seibert's "All-Requisite Time and Labor-Saving Account Book" has this great advantage in that it has been tested in this respect, *and not found wanting*. This when known will be more than sufficient to sell the book, as too many good accounts have been lost in the past by doctors owing to this very fault. It is sufficient to say for this book that the entire account appears on one page, so that it only requires a glance to see just how Mr. or Mrs. or Miss So-and-So stand financially with their attendant physician. The book is on very good paper, and is so bound that no amount of wear can damage it.

E. B. TREAT, publisher, New York, has in press for issuance early in 1897, the "International Medical Annual," being the fifteenth yearly issue of that well-known one-volume reference work. The prospectus shows that the volume will be the result of the labors of upwards of forty physicians and surgeons, of international reputation, and will present the world's progress in medical science.

The publisher states that the kind reception accorded to the "Medical Annual" has rendered it possible for him to spare no expense in its production; while the editorial staff have devoted a large amount of time and labor in so condensing the literary matter, as to confine the volume within a reasonable size, without omitting facts of practical importance.

The value of the work will be greatly enhanced by the thoroughness of illustration: both colored plates and photographic reproductions in black and white will be used wherever helpful in elucidating the text.

"To those who need the condensed and well arranged presentation of the medical advances of the past year—and this class must necessarily include all physicians—we heartily commend the 'International Medical Annual.'"

The volume will contain about seven hundred pages. The price will be the same as heretofore, \$2.75. Full descriptive circular will be sent upon application to the publisher.

REPORT of the eleventh annual meeting of the Association of Executive Health Officers of Ontario, held at Niagara-on-the-Lake, September 14th, 1896, has been received. Toronto: Warwick Bros. & Rutter, printers, bookbinders, etc., Front Street West. 1896.

Obituary.

THE LATE MRS. WASSON.

THE medical profession all over Ontario were greatly shocked when they took up the papers on the morning of December 30th last, and read of the tragic death the previous evening of Mrs. Wasson, wife of Mr. Thomas Wasson, who for nine years past has occupied the position of Detective to the College of Physicians and Surgeons, as well as caretaker of the buildings on the corner of Bay and Richmond Streets. The accident was simply unaccountable, as the deceased had been known to be exceedingly careful to avoid even any chance of accident occurring in any way in connection with the elevator in the building. Mrs. Wasson was not only a favorite in the ordinary sense of the word, but was more than that—she was esteemed by every one who knew her.

The Physician Himself.

DR. P. D. KEFFER has moved to No. 50 Alexander Street.

DR. W. F. GALLOW has taken up practice at 261 College Street.

DR. LEE, of Niagara-on-the-Lake, has "gone west" to British Columbia.

DR. J. P. HUBBARD, of Brock Avenue, city, has moved to Forest, Ont.

DR. NORMAN ANDERSON has removed from 263 Victoria Street to 83 Bloor Street West.

DR. THOS. H. MIDDLEBRO', Toronto, '92, has received the appointment of gaol physician at Owen Sound.

DR. WM. GRANT, of Perth, Ont., died suddenly on Saturday, January 16th, at his residence in that town.

DR. JOHN PERCY WADDY, of Rosseau, has been appointed Associate Coroner for Districts of Muskoka and Parry Sound.

DR. ALEX. DAME, of Spadina Avenue, was married last month. The doctor and his wife returned to the city three weeks ago.

DR. E. H. ADAMS has been appointed as chairman of a joint committee of the Toronto Public School and Collegiate Institute Boards.

DR. F. W. H. YOUNG, of Rosseau, and Dr. J. E. Jenner, have been appointed Associate Coroners of the Districts of Muskoka and Parry Sound and the County of Essex respectively.

DR. W. J. GLASSFORD died at his residence at Scotland, Ont., on January 2nd. The doctor was an old Toronto School boy, having graduated in 1837. He leaves a widow and one baby.

DR. H. FERGUSON, who was physician to the Victoria Hospital for Sick Children, has returned from his trip to Mexico and taken the office occupied by the late Dr. R. J. Hastings, of 535 King Street East.

THE Chatham Medical and Surgical Society will meet regularly on the second Tuesday of each month.