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THE

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HALIFAX, NOVA SCOTIA.

Vol. XXI. MAY 1909. No. 5

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WORLD OF MEDICINE.

An Epidemic of Acute Anterior Poliomyclitis

R. Minor Wiley and J. C. Darden, Salem, Va., (in the *Journal of the American Medical Association*, February 20), report a small epidemic of infantile paralysis occurring last summer in Salem, Va., and vicinity. There were 25 cases altogether, while a neighbouring city of 35,000 inhabitants escaped withonly one case though only seven miles distant and daily visited by scores of Salem people over a connecting trolley line. Inquiries made by the state commissioner of health developed no other cases in the state and the condition was without precedent in that section of Virginia. The cases are reported. They were in children under five years of age except in one case, a boy of six. The youngest patient was thirteen months old. There were seven cases involving only one leg, one in which the arm only was affected, five cases in which one arm and one leg were paralyzed, one in which one arm and the leg of the opposite side were affected, six cases in which both legs were involved, four in which all the limbs were paralyzed, five cases with bulbar paralysis, and three deaths, or a mortality of 12 per cent. which is higher than usually reported. In all the fatal cases there were respiratory and cardiac paralyses. A striking feature noted in the majority was pronounced hyperesthesia and another was profuse sweating. The fact that not more than one case occurred in any house, though other children were exposed would speak against the contagiousness of the disease. The epidemic was preceded by intense heat and humidity and there were no new cases occurring for three weeks during which there was a drop in the temperature, though they began to appear again when hot weather recurred, thus pointing to an influence of the weather upon the disease. Eight patients recovered completely and fourteen partially, but all the latter have since shown some improvement and some may ultimately recover. The authors can not give details of treatment except in their own cases. They employed counterirritation and salicylates in the acute stage, followed later by increasing doses of potassium iodide and strychnine to the point of toleration, together with massage, warm baths, and electricity when practicable. None of these patients have yet developed deformities and there is nothing to report as regards orthopædic treatment.

* * *

Surgery of Fractures of Basc

At a meeting of the Medical Society of London, Mr. L. B. Rawling read a paper on the "Surgical Treatment of Fractures of the Base of the Skull. (See *Lancet* March 13, 1909). He classifies these fractures in three groups, according to the temperature, which he regards as the main factor enabling us to decide on a definite line of procedure. In the first class the temperature rises steadily to 103° F. or more, the reaction from the primary collapse being marked and

forcible, and there is evidence of cerebral compression, as slow pulse, stertorous breathing, hot skin and turgid face. As pressure increases the medullary centres become exhausted, the pulse rate rises, and the respiration approximates the Cheyne-Stokes variety. This intracranial pressure must be relieved. If the diagnosis of a bleeding meningeal artery, or a sinus can be made, operation for ligature must be done. But if no positive diagnosis of the source of bleeding can be made, the indication is still clear for some procedure to relieve the intracranial pressure. Three procedings are available, venesection, lumbar puncture, and the so-called "decompressive operation" described by Harvey Cushing of Johns Hopkins. Venesection is a simple and valuable method especially useful in early or slight compression. As to lumbar puncture Mr. Rawling does not consider it of any use in the treatment of injuries of the head; it can only aid diagnosis, as, for instance when blood is found in the fluid removed, showing intradural hæmorrhage. Cushing's operation, (the "intermusculo-temporal" operation) is highly recommended, and Rawling states the advantages as claimed by the originators; firstly, the frequency with which the bone lesion occurs in the middle fossa of the skull, secondly the fact that cerebral contusions are especially liable to involve the tip of the temporo-sphenoidal lobe; thirdly, the ease of access to the meningeal artery, and fourthly, the subsequent protective action of the temporal muscle in case of the formation of a hernia cerebri.

In the second class, the temperature rises to 100° or 102°, and there "marks time." That is the crisis of the case: a further rise of temperature almost invariably indicates death, while recovery is probable if the temperature gradually falls. Apart from symptoms of compression there are no indications for operation.

In the third group the temperature is subnormal, there is severe cerebral shock, and the patient generally dies in a few hours. In these cases the lesion is generally at the anterior and under part of the frontal, or temporo-sphenoidal lobes. The treatment must be for shock. The patient should be placed in the head-down position, and the extremities firmly bandaged from below upwards. The vasomotor depression should be countered by the administration of rectal or intravenous infusions of saline solution, to each pint of which one dram of a 1 to 1000 solution of adrenalin is added. If this treatment tides the patient over the collapse the further treatment must depend on whether the case now falls under the first or second class. It is evident that the means used to combat shock must tend to raise blood-pressure and determine hæmorrhage, so the condition of the patient must be closely watched.

Rawlings points out that plugging of the external auditory meatus for hæmorrhage after head injuries is not good practice, as the hæmorrhage in these cases is probably extradural, and the escape of blood may prevent compression. Also that syringing of the ear is dangerous, on account of the risk of infection of the lacerated tympanic membrane.

Mr. Rawlings conclusions are based on a study of 300 cases during the past six years. This "decompressive operation" which we owe to the surgical school of Johns Hopkins marks an era in brain surgery. In the *Annals of Surgery* for May, 1908, Cushing tells us that the routine, during the past three years, in a fairly large

number of basal features, has been sub-temporal exploration through a split-muscle incision, with sub-temporal decompression, by the removal of a circle of the thin bone 4½ cm. in diameter (rather less than two inches) from under the muscle, together with an opening in the dura. Since instituting this procedure, the results in fracture of the base have been greatly improved. Formerly the mortality was fifty per cent., while of the last fifteen cases at the time of writing ,only two were lost.

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Simple Fractures.

L. A. Stimson, New York, (*see Journal of the American Medical Association* March 27, 1909), remarks that in diagnosis of simple fracture difficulties are often met with and the signs of abnormal mobility and crepitus are frequently unobtainable when actual fracture exists. In many of these obscure or doubtful cases it is important that the positive or probable existence of a fracture should be promptly recognized, and in many cases it is sufficient to establish the probability; that is, in fractures near joints and probably involving them and not in those portions of the articular end of a bone, in some of which an exceptional displacement of the fragment is a detail which it is important to recognize and correct. This probability of the existence of a fracture, amounting in most cases to practical certainty, can be established by a systematic search for pain—pain on local pressure from without, pain on pressure along the axis of the bone, and pain when the patient seeks to use the affected bone against opposition. The search for pain on local pressure is best made with the tip of the finger or the rubber end of a lead pencil. A necessary precaution is carefully to support the limb so that the pressure even at a distance from the fracture shall not move the fragments, one on another, and another precaution is to avoid mistaking the sensitiveness of a bruise for that of a fracture. Pressure against the ends of a bone in the direction of its long axis causes pain when the bone is completely broken across, but may fail when the fracture separates only a portion of the bone, such as a condyle. An important exception is the fracture of the neck of the femur, where forcible pressure of the limb upward often fails to cause pain. An example of the third method is in fracture of the ulna, the radius remaining unbroken; the patient should be asked to extend the elbow in pressing against a fixed object. Another is to have the patient clinch the hand forcibly when the internal epicondyle of the humerus is broken, the flexor muscles being attached in part to the fragment, tend to displace it and thus cause pain. The same method will also cause pain in a Colles' fracture. Other movements, varying with the part broken, will also cause local diagnostic pain, and one single manœuvre namely, pressure upward against the ball of the foot while the patient resists, will often suffice to exclude in a moment fracture of the thigh, leg and foot. If this causes no pain it can be confidently assumed that no bone of the foot is broken and that the femur and tibia are not broken across. Stimson emphasizes the importance of this methodical search for pain in fracture. A large part of his paper is an argument against the tendency to an open operative treatment of simple fractures, which he thinks is only indicated when gross displacement exists and can not be otherwise corrected. He thinks that the surgeon frequently defeats his own purpose by using pins

or sutures; the normal rarefying process in the bone which must precede repair softens the tissues and loosens the fastenings, besides establishing conditions of leverage which go far to ensure the immediate breaking of the suture in some of the inevitable twists and movements of the bone. Moreover, the use of foreign bodies itself causes delay of union and often creates a gap between the fragments and injures the periosteal bridge, which is so important for the repair. Sometimes the tissue between the loop of the sutures completely disappears The additional injury to the soft parts predisposes to suppuration and tends to the production of sinuses and bits of necrosed bone and increase of the cicatricial change and adhesion of the muscle. He refers to a recent report of 2,700 fractures treated in Kœrte's hospital service as confirming his views. The reporter, Petersohn, expresses the opinion that very few cases require operation, and says that this opinion is generally held in Germany. Summarizing the advantages of early operation, Stimson says that the readjustment, if successful, protects against certain irregularities in the outline of the reunited bone and against possible failures of union as might otherwise result to make sufficient reduction. This last condition is rare and the cosmetic advantages are unimportant. On the other hand, there is the danger of trusting to the suture the risk of suppuration and injury to motion from the implication of muscles in the operation and its repair. Operation, he holds, is less prompt in its result and less safe, and only efficient in a very small number of cases, for which it should be reserved.

Dangers in the Removal of the Tonsils

In the *Medical Record* for March 6, 1909, F. C. Ard of Plainfield, N. J., names two sources of danger after tonsillotomy— hæmorrhage and sepsis. That hæmorrhage is not without danger is shown by the number of reported cases of severe hæmorrhage after the operation. When constitutional it arises from anemia, exophthalmic goitre, hæmoyhilia, valvular disease of the heart, and operating at the menstrual period. When local it arises from abnormal distribution of the vessels, incomplete operation, or the presence of acute inflammation. The tonsillar artery is the source of arterial hæmorrhage. Injury of the posterior pharyngeal pillar is another cause. It may occur as long as fifteen days after the operation. Persistent spraying with dioxygen or adrenalin will aid in adenoid hæmorrhage. After tonsillotomy the connection of the anterior and posterior pillars by a ligature with a tampon placed between is valuable. A rash has been observed a day or two after tonsillotomy in some cases. Rheumatism and septic diseases have followed it. Middle ear inflammation also occurs. The author gives brief accounts of a large number of reported cases of hæmorrhage after tonsillotomy. The tonsil is worthy of more painstaking study. Technique in its removal should receive greater care, and tonsillotomy should be a hospital operation.

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Nephrectomy

In the same journal, under date March 20, George E. Brewer, of New York, contributes some observations on Nephrectomy, with a report of fifty-three personal operations. He finds that the results of kidney surgery have improved since this operation began to be done, and now the

mortality is much lower than formerly. Up to January, 1909, the author performed fifty-three nephrectomies; of these patients fifty-one recovered, a mortality of 3.8 per cent. Every patient who recovered left the bed with a perfectly healed wound, an actively functionating kidney on the opposite side, and has been able to resume ordinary work or household duties. There were seven new growths, eight tuberculoses, eighteen pyonephroses, nineteen calculus cases, nine septic infections, four hydronephroses, three pyelonephritis cases, one of hæmorrhage, and one of necrosis with twisted pedicle. The author gives particulars of these cases. No effort was made to select favorable cases in this series.

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Dysmenorrhœa.

The *British Medical Journal* for April 17, contains an address delivered before the Bath and Bristol branch, British Medical Association, by G. Ernest Herman, consulting physician to the London Hospital, on "Dysmenorrhœa." He upholds the position taken by the late Matthews Duncan as to the nature of this complaint, and criticizes the teaching of present-day text-books. He thinks it remarkable that the characteristically practical teaching of Matthews Duncan has had so small an influence on American practice. The general view at present seems to be that dysmenorrhœa is a symptom which may be produced by many different causes. Herman apologizes for having himself written of different kinds of dysmenorrhœa, and he admits that Duncan speaks of more than one form. He refers to the lecture on this subject in Duncan's *Clinical Lectures on the Diseases of Women*, but states that "in conversation I have heard him say that there was but one true dysmenorrhœa." Experience and study have led Herman to adopt Duncan's view, and he would restrict the use of the term to the painful uterine contractions which accompany menstruation. "Dysmenorrhœa is a different thing from disease, the symptoms of which are worse when the patient menstruates." The term should not be used to cover all the pains of menstruation: many of these are complications of menstruation rather than an inherent fault in the process.

In perhaps thirty per cent. of women, the function is painless; these are happy, healthy women, with good appetites, sound sleepers, not easily tired; they have healthy nervous systems. But in women not so strong, the normal rise in temperature and increase of vasular tension due to the "period" produce more or less discomfort. Some endure it without complaint; others, who are able to do so, find relief by resting, or staying in bed. The neurasthenic may be quite incapacitated for hours or days, and it is a serious matter for many who have to earn their living, or have duties to perform. But these are not cases of dysmenorrhœa: they are cases in which the nervous system is weak, so weak that a normal physiological function disturbs it.

When there is local pelvic disease, as retroversion, prolapse, ovarian or tubal disease, causing pain, this pain is worse during menstruation. But it is not dysmenorrhœa. Similarly in many nervous diseases the symptoms are worse as menstruation approaches, as in neuralgia, chorea, or epilepsy. But this is on account of an unstable nervous system. The belief that these accessions of pain were chiefly due to menstruation, rather than periodical exacerbations of existing disease, led to the abuse of oophorectomy. In few cases is removal of the ovaries justified.

There is no such thing as "obstruction" dysmenorrhœa. The os may be pin-hole in size, as for example in stricture after operation on the cervix and yet menstruation may be painless. In many of the worst cases of dysmenorrhœa a No. 9 bougie may be easily passed, the canal is big enough to let all the blood in the body escape in a few hours.

Neither is "membranous" dysmenorrhœa a correct term. In the majority of women bits of membrane are passed during menstruation without pain, and the bulk of material passed has nothing to do with it, for in a miscarriage the bulk is far greater and there may be no pain. In some of the severest cases, nothing, not even blood, is passed.

Endometritis is not the cause of true dysmenorrhœa: some of the most acute suffering occurs with the first appearance of the catamenia, and endometritis is rare in young girls. The expulsive pains caused by the presence of a fibroid do not constitute true dysmenorrhœa. Matthews Duncan regarded dysmenorrhœa as a neurosis, and he found an analogy between it and spasmodic asthma. Herman's theory of the causation of the disease is that "the centre in the spinal cord "or in the sympathetic system which "should regulate the movements of "the genital canal is imperfectly developed. . . . . In a normal "painless menstruation there are con- "tractions of the body of the uterus, "and dilatation of the cervix, so that "the menstrual flow is expelled with- "out pain or difficulty. My theory is "that in dysmenorrhœa this natural "dilatation of the cervix is absent, "and, in consequence, the contractions "of the uterine body are morbidly "violent and painful."

In his references to treatment, Herman points out that the cure is "to prevent the arrival of the pain." He has had much success with guaiacum.

This will cure *some* cases. "I prescribe 10 grains of guaiacum resin "three times a day, begun a week be- "fore menstruation is expected and "continued until the time at which "the pain usually occurs, is past." It may be given in milk, or in gum-tragacanth or in malt extract or in a cachet.

If drug treatment fails, the next thing is to dilate the cervix. This is best done with metal bougies, and, in young patients, under anæsthesia. Dilatation up to No. 12 is usually sufficient. The operation may have to be repeated in a few months. The natural cure for the disease is pregnancy. But there are many cases in which drugs and dilatation fail. The last resource is oophorectomy.

ECONOMY OF A FIELD AMBULANCE.

By LIEUT.-COLONEL FENTON, A.M.C.

Officer Commanding No. X. Field Ambulance.

(Read before the Association of Medical Officers of the Militia of Canada, Feby., 1909)

MR. Chairman and Gentlemen: The subject of my paper was suggested to me as being a profitable one for discussion, in view of the fact that the officers commanding Field Ambulance Units have been working out their own salvation, each along his own lines, and it was felt that a free interchange of ideas might be the means of bringing about greater uniformity in our methods and prove beneficial to the service.

Without further apology, therefore, I will proceed with a description of the detail of our plan in No. X Field Ambulance and will gladly welcome any criticisms or suggestions you may see fit to make. Though on the Rural Establishment of the Militia, Field Ambulances have their headquarters and are recruited in, cities, as a rule. Furthermore, they are technical units and go to camp not only for training, but for service as well, and they are expected to render efficient technical service from the first day of their training. Being separate units of the force, like other technical branches of the service they have not only routine military administration, drill, etc., to carry out, but their own special professional and technical work to perform, with the special routine administrative duties connected therewith.

These matters have a very great influence on the plan of organization and training of a Field Ambulance Unit.

Everyone here is familiar with the establishment of a Field Ambulance as laid down in regulations, (G.O. 67, 1908) which provides for a Bearer Division consisting of three officers, three sergeants, and thirty-eight rank and file; a Tent Division, consisting of five officers, eight sergeants, and twenty-five rank and file; and a Transport Section consisting of eight rank and file.

This is, but for a few extra officers and sergeants, practically one-third, or a section, of a Field Ambulance under war establishment. I take it that the most successful arrangement of the internal economy of a Field Ambulance is that which, while it serves to maintain the Unit in a state of efficiency on a peace footing, will admit of expansion to war strength without disorganization.

The fact that the A.M.C. is on the Rural Establishment and consequently that Field Ambulances are sent each year to camp for their training, has been found by me and my officers one of the main difficulties in maintaining the Unit at full strength, a large proportion of the privates objecting to spending their holidays year after year in the same place and in such a way.

Being a technical corps from whom more is expected than from the non-technical branches of the service, and because serious illness or injury is as liable to arise on the first as on the last day of camp, it is necessary that we be ready for the test on the first day of camp, or the first hour for that matter, else some unfortunate may suffer in life or limb and the Government in treasure, consequently training must be done at headquarters of the Unit and that to as great an extent, at least, as the City Battalions are accustomed to do.

The necessity for such work at headquarters while it leads to greater efficiency and I might say greater interest on the part of the enthusiastic members is apt to have the opposite effect upon those who do not make their Unit a hobby, and as it is difficult to get ninety men together who are sufficiently interested in A.M.C. work to induce them to spend their holidays year after year in camp and devote one evening a week for the greater part of the balance of the year, an Officer Commanding must be content to attain a lower degree of efficiency or expect many changes in personnel among rank and file.

Recruiting becomes therefore one of our most constant and pressing needs and various means have been tried to secure desirable men. The medical students, of whom Toronto has some seven or eight hundred, have proved in but one or two instances, failures, for reasons which I will not detail here.

The plan which we have been following of late and which gives promise of being satisfactory is to look to each Corporal to fill his squad with his own friends. By this means we secure men with references and the principle of having friends together in the ranks is maintained.

If a Medical Unit is to appeal to the young men of the city or town, its military aspect must be kept well to the front; unless we are able to do creditably what infantry, engineers, etc., can do on the street and parade ground, the men of best physical proportions at any rate, will shortly disappear from the ranks, and the Unit will present such a poor appearance that none but undersized men will present themselves for enlistment.

The infantry drill must therefore be well in hand, and since there are two companies or divisions to the Unit, some battalion drill must be included. The Unit is virtually a two-company battalion. Whenever we appear on parade with other arms or even by ourselves on the street, we must move as infantry, and since this is of not infrequent occurrence, our plan of organization as a medical unit should be such as to be readily adaptable to change from one formation to the other. The division of a Field Ambulance into Tent and Bearer divisions, while doubtless excellent under service conditions, has not in my experience proved satisfactory in peace organization while at headquarters. In the first place the vast majority of the men want to be in the Bearer Division, and if forced to remain in the Tent Division while at headquarters, ere long apply for their discharge and are shortly seen wearing a kilt or steel helmet.

The preponderance of Officers and N.C.O.'s in the Tent Division, which together nearly equal the privates makes it impossible to change from A.M.C. to infantry formation and vice versa by a word of command or a movement applicable to both Divisions, while, except at camp, it is difficult to ascribe duties to so many officers and N.C.O.'s with so few privates under them.

I have therefore divided my unit into two companies, "A" and "B," each with the following personnel:—

1 Captain
2 Lieutenants
1 Color-Sergeant
2 Sergeants
3 Corporals
26 Lance-Corporals and Privates.

The Transport and Supply Section consists of:—

1 Quartermaster
1 Steward or Q.M.S.
1 Sergeant Cook
1 Pack-storeman, (Corporal)

7 Drivers
2 Privates, Assistant Cooks.

The balance of the Unit make up the Staff:—viz.,

1 Officer Commanding
1 Dental Surgeon
1 Sergeant-Major
1 Assistant Wardmaster, (Staff-Sergeant).
1 Sergeant Compounder
1 Corporal Clerk
1 Orderly Room Clerk, Private.
1 Bugler.

The officers and sergeants are made responsible for their respective parts of the Unit, and given a greater interest therein.

The Unit is more symmetrical and readily handled for parade purposes, while at camp it is only necessary to make the required details from the two companies in rotation, thereby avoiding the too close confinement of one lot of men in the hospital wards on the one hand, or excessive drill and fatigue duties on the other, while all receive practical instruction in the work of both Bearer and Tent Divisions.

The arrangement satisfies the rank and file and gives all officers and sergeants specific duties and commands and serves to stimulate a healthy rivalry between squads, sections, half companies and companies. The Quartermaster, not being a Medical Officer and having no duties with a Company is available to act as Adjutant, his ordinary duties except on Marching In and Out days, being of such a nature as to readily permit of that arrangement.

Though the Officers, N.C.O.'s and men of the Companies are posted about as the C.O. desires, at camp the organization is maintained throughout, the details of N. C. O.'s and men being made through the Sergeant-Major and Color-Sergeants. In order that the necessary training of the Unit may be fairly covered, we have found it necessary to divide the year into three periods, viz., spring, camp, and fall terms, and to confine the work of each term to definite limits.

Thus the Spring term begins about the middle of March and is devoted entirely to Infantry Drill (Squad, Company and Battalion) and A.M.C. Drill, including everything except wagon drill and ceremonial. This year I am including Tent-pitching also. At camp the only drill taken up is Wagon Drill and Ceremonial with Battalion work and Field Exercises, the bulk of the time being spent upon hospital and detail camp work, with some lectures and demonstrations in First Aid and Nursing.

During the Fall term First Aid, Nursing and N.C.O.'s classes are conducted, beginning about the first of September and ending about the end of November.

Each parade night a half-hour is usually spent in Infantry Drill.

For the last three years we have conducted our First Aid and Nursing lectures according to the syllabus laid down by The St. John Ambulance Association, and secured their certificates for the successful candidates. By this means we secure for the men a certificate which they all seem anxious to get, while the course as arranged covers very satisfactorily the work we desire to give them.

Having indicated in a general way the scheme we have adopted for the general division of work and responsibility in the Unit and outlined the plan of training, I now pass to the consideration of the special duties of the various members.

QUARTERMASTER:—The Quartermaster is responsible to the O.C. for all clothing and equipment issued to or owned by the Unit, for the drawing

of rations and forage, for the cooking and serving of food, the laying out of the camp, issue and return of camp equipment. He keeps the Government Equipment Ledger showing a record of all clothing and equipment issued to the Unit, and a Unit Clothing and Equipment Ledger containing a detailed account of all articles issued to N.C.O.'s and men. He will be assisted by the Steward, Assistant Ward Master and Pack-Storeman.

COMPANY COMMANDERS:—Company Commanders act as Captains of their respective commands and take over from the Quartermaster the clothing and equipment issued to the N.C.O.'s and men of their commands. In camp the Senior Company Commander is in Medical Charge of the wards and the Junior attends all "Out Patients" and assists the Officer in Charge of Wards.

THE SUBALTERNS assist their respective Company Commanders in all matters pertaining to their Companies and perform such duties as may be assigned to them in camp. They are detailed as orderly and sanitary officers at camp and take charge of the drill.

The N.C.O.'s of a Medical Unit naturally divide themselves into two classes, viz., those in possession of more medical knowledge than can be gotten in First Aid lectures, such as medical students and druggists, and those not in possession of such special knowledge. It is well, I think, that these two classes should be recognized and that there should be one group specially qualified to render useful service in the Wards, and another almost purely military group to take charge of administrative and disciplinary duties more particularly. Each group has before it the possibility of proceeding to Sergeant-Major and a Commission, but by different channels. Thus the technical men can become Senior Ward Orderlies, Compounder, Assistant Wardmaster, Sergeant-Major, and if in possession of the necessary medical degree, Medical Officer. The others can travel by way of Sergeant, Color-Sergeant, or Q.M.S. to Sergeant-Major, and finally become Quartermaster.

DUTIES OF NON-COMMISSIONED OFFICERS:—The Sergeant-Major is under the immediate command of the Officer Commanding. He keeps the roster book and causes all details to be warned for duty. He attends all parades and sees that all N.C.O.'s and men not engaged on other duty are present and properly dressed. He parades the Guard and inspects it before handing it over to Officer of the Day. He acts as drill instructor for the Unit. On Column of Route he sees that horses are properly hitched and that harness is serviceable, and is available for the transmission of orders from the Officer Commanding. He has a general supervision of matters of duties, dress, and discipline of N.C.O.'s and men of Unit, and is especially responsible that the various N.C.O.'s of the Unit each understands and performs his specific duties.

THE ASSISTANT WARDMASTER—He is the N.C.O. in charge of the Hospital Wards including all patients, ward-orderlies and others who may be attached or assigned to the hospital for duty or treatment.

He is responsible for the good order and cleanliness of the wards and for the care, cleanliness and nursing of the sick, and that all orders for patients are promptly and correctly carried out. He takes over from the Quartermaster all ward and hospital equipment and is responsible that it is properly cared for and safely returned at the end of camp. He is the N.C.

O. in charge of all technical equipment, under the Quartermaster.

The STEWARD or QUARTERMASTER'S SERGEANT is responsible for the care of the Armoury with its furniture and equipment. In camp he has charge of stores other than technical stores, and sees that deficiencies in issue of food or forage are at once reported to the Quartermaster.

He issues rations to the cook and forage to drivers, and sees that horses are fed and that mens' food is properly served and not wasted.

The care of clothing and equipment is undertaken by the Q. M. Sergeant who overhauls the clothing every three months and the saddlery and harness twice a year.

In the ten years since the Unit has been in existence no clothing has ever been lost through moths, due to the liberal use of carbolic acid and oil of cedar.

A mixture of about one part of pure carbolic to three of oil of cedar is freely applied to the clothing about to be packed away with a whisk or atomizer after thorough brushing, and the process is repeated two or three times during the course of the year.

It does not stain or injure the clothing in any way and rapidly evaporates on being exposed to the air.

The Saddlery and Harness is carefully cleaned on return from camp and about the middle of December is given a liberal coat of dubbing. As this work makes a very great demand on the Q.M.S.'s time, a special allowance is made to him out of the general fund.

Surgical instruments are carefully cleaned on return from camp and rubbed with vaseline to prevent rust.

The COLOUR SERGEANTS perform in general the same duties for their respective companies that the Sergeant-Major does for the whole Unit, and also act as Company Q.M.S.'s being responsible for the clothing issued to the N.C.O.'s and men of their respective companies. They act as Assistant Instructors and in camp are responsible for the maintenance of discipline amongst the N.C.O.'s and men of their respective companies and for the cleanliness and good order of the tents occupied by them.

No. 10 FIELD AMBULANCE, A.M.C.—1907.

ORDERLY ROOM CLERK.

1.—The Orderly Room Clerk is N. C.O. in charge of the Office under the Officer Commanding and will perform such clerical duties as directed by O. C., Orderly Officer or other Officer acting for O. C.

2.—Patients' names, etc., will be properly and completely entered in books on admission and discharge.

3.—The following returns will be prepared daily, viz., Daily Parade State, on information from S. M., (To be transmitted to P.M.O. by 9 a.m. daily.) Morning Sick Report. Supplementary Sick Reports. (To be sent with M.S.R. to P.M.O. next day.)

4.—The clerk will prepare four copies of the Unit Orders, posting one in Office, another in the Guard Tent, another in the Mens' Mess and the last in the Sergeants' Mess.

These copies of the Orders will be signed by the Officer of the Day.

5.—The Clerk will furnish the Quartermaster each day with a list of the patients admitted and discharged, together with the corps to which they belong, to enable him to prepare the ration indent.

6.—The Clerk will be responsible for the safe custody of all books and stationery.

PACKSTOREMAN:—He will receive over patients' kits on admission after making the entry in the packstore-

book, and on discharge of a patient the packstore keeper will issue the kit on instruction from the Quartermaster.

On taking over his kit the patient must endorse the counterfoil or if he be unable to write, his mark will be witnessed by the N.C.O. sent from his regiment to receive him and by the Wardmaster.

When at headquarters he performs the ordinary duties of a Corporal in Charge of a Squad.

In camp he performs the duty of Corporal of Transport Section, and is also available as assistant to the G. W.S. in addition to packstore duties.

Bugler is under orders of the Sergeant-Major, and will sound all calls as laid down in camp orders. He will be properly dressed from Reveille to Lights Out, and will be on the parade ground ten minutes before sounding "fall in" for all parades. He will report himself to the N.C.O. of the Guard immediately after breakfast and on the Guard turning out will fall in one pace to the right of the commander of the Guard.

Cook, responsible to the Quartermaster and is in charge of the kitchen, and its immediate precints.

Compounder: — The Compounder's duties are self-evident and require no comment.

The routine detail of "duties" in Camp are as follows:—

(*a*) Orderly Officer or Officer of the Day.—This duty is performed by the Subalterns in rotation.

(*b*) Orderly Sergeant, is detailed daily from the Company Sergeants, each Color-Sergeant taking his turn.

(*c*) Orderly Corporal. All the Corporals with the exception of the Clerk and Packstoreman, are detailed in rotation by the Sergeant-Major.

(*d*) Guard, consisting of one corporal and three men, together with a bugler, detailed by Sergeant-Major.

(*e*) Fatigue Squad, consisting of four men, detailed by Sergeant-Major.

(*f*) Senior Ward Orderlies. Two for whole camp detailed by O. C.

(*g*) Ward Orderlies, detailed by Sergeant-Major at rate of one per occupied Hospital Tent.

(*h*) Unit Sanitary Police. Two privates.

(*i*) O. C.'s Orderly or Messenger.

(*j*) Operating Tent Orderly.

The addition of a Sanitary Officer and Squad to the establishment of a Field Ambulance will necessitate the detailing of an Officer, Subaltern, a N. C.O. and three men for Brigade duty in addition to the Unit Sanitary Police mentioned above.

This Sanitary Squad will be detailed for the whole camp. We have found it best to detail all Orderlies and the Unit Sanitary Police for a tour of duty of three days and all other details daily.

The Senior Ward Orderlies are Sergeants or Corporals who are selected for this duty because of their special fitness for the position and are expected to instruct and supervise the work of the orderlies, who as privates are usually green hands. Their tour of duty is from 2.00 p.m. to 2.00 a.m., and from 2 a.m. to 2 p.m. respectively, and they are detailed for the whole camp. This ensures there always being a reliable man in the wards while each has an opportunity to rest for part of the night at any rate, and to secure during the day a few hours off duty.

The Orderlies tour of duty is from 6.00 a.m. to 7 p.m. They thus come on duty in time to serve breakfast and remain on in the evening till supper is over and the wards are straight for the night. One reason for adopting this arrangement was because the night orderly under the old plan of

6.00 to 6.00 duty usually slept all night and expected a "pass" all day.

The Officer of the Day is charged with a general supervision of the "Lines" in every detail during his tour of duty, which is for twenty-four hours.

The Orderly Sergeant, Orderly Corporal, Fatigue Squad and Unit Sanitary Police are under his immediate supervision and direction, and he is available for the duties of any other Officer from Retreat to Reveille. He makes a routine inspection of the encampent, including Latrines, Sink pits, Guard, Kitchen, Mess tents, N.C.O.'s and mess quarters, Hospital tents, and Lines generally, and enforces orders for cleanliness and sanitation, as well as all Standing and Special Orders.

The Orderly Sergeant assists the Officer of the Day. He is especially charged with the maintainance of discipline and good order within the lines.

The Fatigue Squad, under the Orderly Corporal, is responsible for the cleanliness, and neatness of the Camp Lines.

The Sanitary Police are under the Orderly Sergeant and are especially concerned with sink-pits and latrine and the removal and destruction of kitchen waste and garbage.

The O.C.'s Orderly mentioned above is simply an Orderly Room Messenger.

The Operating Tent Orderly assists with dressings, prepares solutions, etc., and is responsible for the proper care of the operating tent and its equipment.

Standing Orders for the various details, such as Guard, Orderly Room, including the Admission and Discharge of Patients, Wards, etc., may with advantage be posted in their respective places for convenient reference by all ranks.

"Orders" should not only be carefully entered in the book for the purpose and read to men on parade, but should be "Posted" where all can have ready access to them. I have been in the habit of posting orders in the Orderly Room, Guard Tent, and Sergeants' and Mens' Messes as well.

The "posting" of Standing Orders and Daily Orders in this way not only secures a more satisfactory carrying out of such Orders, but at the same time is useful from a standpoint of instruction to all ranks, which after all is the main object of our training camps.

On the Line of March these details are assigned other duties.

The Orderly Officer still maintains his general supervision of the Unit and rides in rear of all to prevent straggling.

The Orderly Sergeant and Corporal with the Guard, Fatigue Squad and Sanitary Police become the Baggage Guard.

The Ward Orderlies with the Operating Tent Orderly take charge of the Technical Equipment under the Wardmaster and Compounder.

Prior to marching a Sergeant and two Squads will be detailed as a Steward's party and O.C.'s of Companies will detail one corporal and sufficient men to guard their own stores and equipment during the formation of an encampment. The Cook's and Steward's party take charge of food, forage and messing, and cooking outfit. As soon as a halt is made for an encampment the Baggage Guard, Cook's and Steward's party at once report to the Quartermaster in rear of the Transport corps. He will assign to them their respective duties as Wood, Water, and Fatigue parties, etc., and at once proceeds to the issue of necessary camp equipment.

The remainder of the Unit (having divested itself of all necessary impediments) with the exception of details required by O.C.'s of Companies and the Transport Section, will be available for tent-pitching under the Sergeant-Major. As soon as the Camp is pitched all ranks will be assigned to their tents, all equipment placed under cover in its proper place and the regular details as already referred to posted by the Officer of the Day.

For the striking of Camp the same details are available as for pitching.

When on the move and when striking or pitching Camp, the Dental Surgeon is available as an assistant to the Quartermaster and might well be charged with the supervision of Technical Equipment.

The duties of the Commanding Officer are manifold, but he is chiefly concerned with the not doing of anything that he assigns to another, at the same time being ever on the alert that all details are efficiently carried out. He is the Managing Director of the Unit and he must look to his subordinates to perform the routine duties; at the same time he must be thoroughly familiar with the duties of each.

PROMOTIONS:

It is well that all promotions of N.C.O.'s be made upon merit after definite qualifying tests, rather than by seniority. Except in special instances I maintain four grades, viz., Lance-Corporal, Corporal, Lance-Sergeant, and Sergeant.

For promotion to Lance-Corporal a man must have passed an examination in First Aid to the Injured.

For Corporal's stripes he must in addition have served one year including Camp, and shown himself worthy of promotion.

A Lance-Sergeant must have two years, including camps to his credit, and possess both First Aid and Nursing certificates.

A Sergeant is required to have served three years, hold both certificates referred to and have passed an examination embracing Squad and Company drill (Infantry) and A.M.C. drill as well. His qualifying examination also embraces such things as Dress, Duties and Discipline.

The financial aspect of a Field Ambulance must necessarily vary with local conditions.

As a Bearer Company, under the former plan of organization, when only three days of the Annual Training was done at Camp, we turned all our pay into Company Fund. Later we were sent to Camp for six days and it was felt that it was hardly fair to the men to ask them to go to camp for such a period without drawing anything; eight days pay was funded and the balance drawn by all ranks.

Since the organization of Field Ambulance Units with twelve days at camp, four days pay has been funded and the balance drawn. Where I use the word "pay" in this connection I include "efficiency pay" as well.

This year I propose making a further effort to reduce the amount of the fund and increase the amount drawn by introducing a sliding scale whereby with increased service a greater number of days' pay will be drawn by the N.C.O.'s and men.

Thus the N.C.O. or man who goes to camp with us for the first time, whether a 1st, 2nd, or 3rd year man in the Militia, will be assessed four days pay, on his second occasion three days pay and on the third and thereafter two days pay.

All officers contribute two days pay.

In addition to amounts turned into the Fund by the personnel of the Unit, allowances for Rations, Forage, Bag-

gage Transport, Care of Arms, etc., are also added.

Under this last plan the fund will amount to about three hundred dollars per annum, and if administered with care should prove sufficient for the necessary expenses connected therewith.

The Officers and N.C.O.'s also maintain funds of their own, under conditions arranged by each respectively.

As much of the old Fund was spent in the entertaining of guests of Officers and N.C.O.'s at the Annual Dinners, etc., I hope to find the lessened fund equal to the legitimate demands upon it by insisting upon the Officers and N.C.O.'s entertaining their guests on such occasions at their own expense. The Unit fund will only be chargeable with such things as are necessary to its existence, such as, transport, instruction, stationery, care of equipment and armoury, repairs to clothing, deficiencies, etc.

The following books are kept by or under the direction of the Officer Commanding:

Attestation Book (by Officer Commanding).
Equipment Ledger (by Quartermaster).
Roll Book (by Color-Sergeants and Sergeant-Major).
Defaulter's Book (by Officer Commanding or Adjutant).
Ledger and Cash Book (by O.C. or Adjutant).
Order Book (by O.C. or Adjutant).

The details of each of these are so familiar to you all that I refrain from discussing them, but would like to say one word in reference to the Order Book and that is that it should be a complete history of the Unit. All General, Militia and District of Garrison Orders referring to it or any way connected with it, directly or indirectly, should be copied into "Orders" and all matters of economy should be made the subject of an Order.

In a Technical Unit especially in the piping times of peace there is not a great deal upon which to build up "esprit de corps" and a well kept Order Book may in later years afford interesting reading and serve as a link between the present and past.

While in Camp the Hospital Admission and Discharge Book and Visitors' Book must also be kept by the Orderly Book Clerk.

Time forbids that I should go into the minutiae of "Standing Orders" for the various Officers and N.C.O.'s, and for the Guard, Wards and such details.

Each C.O. will have his own ideas regarding such matters and variations in these things in no way affect the general lines of organization.

I have sought to present to you the Interior Economy of a Field Ambulance, I will not say as it should be, but as we in No. X. Field Ambulance have evolved it. We are ourselves alive to imperfections in our organization and feel that there may be others which we at close range have failed to detect, or from frequent repetition and intimate association have come to regard no longer as faults. As I said in my opening remarks I will gladly welcome criticisms and suggestions and will feel amply repaid for the time spent in the preparation of this paper if it should prove of assistance to any officer or should be the means of rendering any service to the Corps.

EXTRACTS FROM KING'S REGULATIONS AND ORDERS FOR THE MILITIA OF CANADA.

DISCIPLINE:

56.—The notice contained in the King's Regulations together with the sections of the Army Act therein enumerated, will be read over to the whole corps embodied for continuous service, every three months, and at such other times as commanding officers may deem expedient.

57.—Deliberations or discussions by officers or soldiers with the object of conveying praise, censure, or any mark of approbation towards their superiors or any others in the active militia, are prohibited. The publication of laudatory orders on officers quitting a station or relinquishing an appointment is forbidden.

Commanding officers are to refuse to allow subscriptions for testimonials in any shape to superiors on quitting the service or on being removed from their corps.

Every officer will be held responsible should he allow himself to be complimented by officers or soldiers who are serving, or have served under his command, by means of presents of plate, swords, &c., or by any collective expression of their opinion.

58.—Officers are forbidden to forward testimonials relating to their services or character, with any application they may make to headquarters. In event of an officer wishing that the opinions of officers under whom he has served should be brought to notice, he will submit their names, so that, if necessary, they may be referred to.

59.—No officer is at liberty to attend, in uniform, the manoeuvres of a foreign army without permission of the Minister of Militia and Defence.

63.—In a civil court an officer or militiaman will remove his hat, cap, or helmet while the judge or magistrate is present, except when the officer or soldier is on duty under arms with a party or escort inside the court.

64.—If officers, non-commissioned officers or men, have any complaint or accusation to bring against a superior or other officer, such complaint must be forwarded through the complainant's commanding officer, who will transmit the same, with his remarks, through the district officer commanding, for consideration at headquarters if necessary. It cannot be permitted that they shall bring accusations against superiors or comrades before the tribunal of public opinion, either by speeches or letters inserted in any newspaper ; such a proceeding is a glaring violation of the rules of mintary discipline, and in contempt of authority.

65.—Officers are at all times accountable for the maintainance of good order and the rules and discipline of the service; and they are to afford in these respects the utmost aid and support to their commanding officers.

It is their duty to take notice and repress and instantly report any negligence or impropriety of conduct on the part of any non-commissioned officer or man, whether on duty or off duty, although the offender may not belong to their particular corps or not.

66.—A commanding officer should impress upon those under his command, by every means in his power, the propriety of civility and courtesy in their intercourse with all ranks and classes of society and should particularly caution them to pay proper def-

erence and respect to magistrates and all civil authorities.

68.—Officers are always to return a salute, excepting when swords are drawn. Salutes by soldiers will be returned by all officers, and not by the senior only.

68.—Warrant officers, non-commissioned, and men are at all times to offer to commissioned officers, whether in uniform or not, the prescribed salute. When a soldier speaks to an officer he is to stand at attention, having saluted the officer on approaching him. When he appears before an officer in a room he is not to take off his cap. A soldier without his cap is not to salute, but is to stand at attention till the officer passes. The latter rule is to be observed by a soldier who is carrying anything that prevents him from saluting properly.

When officers or men meet a column on the march, they are to salute the commanding officer and colours, if there be any, in passing.

69.—Officers and soldiers are prohibited from publishing or communicating to the public press, without special authority, either directly or indirectly, information relating to military matters. They are not to attempt to prejudice questions under investigation by publication, anonymously or otherwise, of their opinions, nor are they, either by public speeches or writings, to call in question the actions of the government in whose employ they are.

70.—Meetings of officers can be called only by commanding officers who shall be responsible that they shall be for a proper purpose.

71.—Officers, non-commissioned officers and men are forbidden to institute or take part in meetings, demonstrations or processions for party or political purposes, in barracks, or camp; or if in uniform, at any time or place.

72.—The active militia, other than the permanent forces, being composed of officers and men who devote only a portion of their time to military drill and training, it is necessary that officers should maintain at all times that courtesy towards each other which is calculated to perpetuate friendly and social relations between them and create an "esprit de corps."

An officer not in uniform should not comport himself as regards the affairs of his corps, and his intercourse with officers, in any manner different from what he would if he and they were in uniform. If officers act in any other way as private citizens, in respect to their immediate responsibility, discipline cannot be maintained in a satisfactory manner, and the harmonious working of the machinery necessary to keep the organization of a corps in an efficient condition will be endangered.

73.—One of the fundamental and most necessary rules of military discipline is to forbid anything bearing the appearance of combination, to obtain redress or grievances, among individuals composing a military force. If officers or men have any grievance their complaint should be laid before the commanding officer in respectful language, each individual speaking for himself alone. Appeals for redress by "round robins" or by means of any document bearing the signature of more than one complainant, are strictly forbidden.

74.—Officers commanding companies will ascertain before the day of inspection, whether any men wish to see the inspecting officer upon any point; if they do the subject of the inquiry will be put down in writing. As most complaints are about clothing or pay and can be settled by explanation, commanding officers will investigate and endeavour to settle them. If they cannot do so, a return of the names of

the men and the subject of complaint will be laid before the inspecting officer, leaving a column for his remarks.

75.—Anonymous complaints, and publication through the medium of the press of anything calculated to act injuriously on the interest of the service, or to excite discontent in the militia, are strictly prohibited.

125.—Commanding officers will be held responsible that the men borne on the rolls of their units who absent themselves from annual drill are duly proceeded against in the manner prescribed in the Militia Act.

127.—Nothing more essentially tends to the maintainance of regularity and good order than that system or chain of responsibility which should extend from the highest to the lowest grade.

182.—Commanding officers of corps are strictly forbidden to introduce or sanction any unauthorized addition to or deviation from the approved patterns.

183.—No officer or soldier is to wear any unauthorized ornament or emblem when in uniform, unless expressly permitted by his commanding officer to do so.

189.—In order to provide a means of distinguishing those men under the rank of corporal whose conduct has been good, and who have served continuously in their corps for three years, and have re-enlisted therein for a second period of three years of similar service, there will be issued to each a good conduct or service chevron of one bar to be worn when in uniform during the period of his re-enlistment.

190.—An additional chevron of one bar making two bars in all, will be issued to be worn similarly by those who having completed six years service, re-enlist in the same corps for a third period of three years.

191.—An additional chevron of one bar, making three bars in all will be issued to be worn similarly by those who having completed nine years service re-enlist in the same corps for a fourth period of three years.

192.—The badges given by the Canadian Military Rifle League may be worn by militiamen in uniform, on the left arm, under similar regulations as to those which apply to the wearing by militiamen of badges given by the National Rifle Association, Dominion Rifle Association, and Canadian Artillery Association.

193.—The dress, appearance and demeanour of soldiers should, on all occasions and in all situations, be such as to create a respect for the military service.

As a general rule the officer commanding the troops at stations and camps, will fix, at his discretion, and publish in orders, the limits beyond which the non-commissioned officers and soldiers are not permitted to go without permission.

Soldiers are not to go beyond the precincts of their barracks or camp unless properly dressed and they are not to smoke on the streets except during authorized hours.

198—The following directions regarding the growth of hair are to be strictly observed by all ranks.

The hair of the head to be neatly cut and kept short. Moustaches are to be worn and the chin and underlip are to be shaved (except by pioneers who will wear beards).

226.—Non-commissioned officers and men absent without leave, when undergoing training in a camp of instruction, will be dealt with in the manner prescribed by the Army Act and King's Regulations or if more convenient under the Militia Act.

227.—Non-commissioned officers and men refusing or neglecting to attend

a camp of instruction, when lawfully notified to go, will be dealt with under the Militia Act.

228.—No prosecution or action will be instituted against any non-commissioned officer or man without the approval of the officer commanding the unit being previously obtained.

269.—All appointments and promotions of non-commissioned officers except those of the permanent forces, are made by officers commanding corps, and all non-commissioned officers retain their rank during the pleasure of the commanding officer.

273.—Militiamen who change their places of residence, will communicate their new addresses to the officer commanding their squadron, battery or company.

280.—Sergeant-majors and bandmasters of corps of the active militia shall serve a probationary period of three years with acting rank only as such, before appointment to warrant rank.

292.—His Majesty may order officers and men of the active militia ,or any portion thereof, to drill for a period not exceeding 30 days in each year, and for each day's drill of not less than three hours, every officer and man shall receive the pay of his rank.

302.—No officer or man will be permitted to sleep out of camp except by permission of the camp commandant.

304.—The wives, female friends or children of officers or men are not to be lodged within lines of any camp of instruction, nor are dogs to be allowed within the lines.

327.—Nothing in the King's Regulations and Orders for the Army so far as they relate to the establishment of canteens, is to be understood as permitting the sale within the limits of the camp grounds during the annual training of the militia of Canada, of spirituous (to include wine or malt) liquors of any kind; their sale within such limits being strictly prohibited

328.—Officers commanding camps of instruction will be held responsible that the above order is carried out, and they, together with the officers commanding units of the active militia, will in those districts where the law so directs, be liable to prosecution, in respect to any sold in tents or other premises subject to their control, in addition to such penalty as may be inflicted for a breach of military discipline.

842.—Bills incurred at regimental messes will form a first charge upon the pay of the person who incurred them.

EXTRACTS FROM THE MILITIA ACT.

Para. 19.—No officer or man of an Active Militia corps, raised and maintained by voluntary enlistment, shall be permitted to retire therefrom in time of peace, without giving to his commanding officer six months notice of his intention to do so.

Para. 20.—Any person who has voluntarily enlisted, or been called upon to serve in the militia, shall be entitled to be discharged at the expiration of the term of service for which he engaged, unless such expiration occurs at a time of emergency, in which case he shall be liable to serve for a further period of not more than twelve months.

50.—The value of all such articles of public property as have become deficient or damaged, while in possession of any corps, otherwise than through fair wear and tear or unavoidable accident, may be recovered by the Minister, or by any person authorized by him, from the officer in command of such corps; and the officer commanding any corps may recover the value of such articles of public property or property of the corps as may have become deficient or damaged

while in possession of his corps, otherwise than through fair wear and tear or unavoidable accident from the officer, man or men who is or are responsible therefor.

51.—Every man serving in the militia who is about to leave Canada, shall first return to the captain or senior officer of his company all articles of public or corps property which he has in his possession, and shall obtain a written discharge from such officer, which discharge shall also be recorded in the books of the corps; and any person who leaves Canada with any articles of public clothing or other public or corps property in his possession, is guilty of embezzlement, and may be tried therefore at any time; and a record of the books of a corps of his having so received and not having returned any articles of public clothing or other public or corps property, shall be evidence of possession.

52.—No corps and no non-commissioned officer or man shall, at any time appear in uniform or armed or accoutred, except when actually so on parade or drill or target practice, or at reviews or on field days or inspections, or by permission of the officer commanding the corps.

109.—Every officer and man of the militia who refuses or neglects to assist his commanding officer in making any roll or return, or refuses or neglects to obtain or to assist him in obtaining any information which he requires in order to make or correct any roll or return, shall incur a penalty, if an officer not exceeding fifty dollars, and if a man not exceeding twenty-five dollars, for each offence.

110.—Every person who refuses or neglects to give any notice or information necessary for making or correcting the roll of any company, which he is required by this Act to give to the commanding officer of such company or to any officer or non-commissioned officer thereof demanding it, shall incur a penalty of ten dollars for each offence.

111.—Every officer and man of the militia who without lawful excuse, refuses or neglects to attend any parade or drill or training at the place and hour appointed therefor, or who refuses or neglects to obey any lawful order at or concerning such parade, drill or training, shall incur a penalty if an officer of ten dollars, and if a man in the militia of five dollars for each offence; and absence for each day shall be held to be a separate offence.

112.—Every person who interrupts or hinders any portion of the militia at drill, or trespasses on the bounds set out by the proper officer for such drill, shall incur a penalty of five dollars for each offence, and may be taken into custody and detained by any person by order of the commanding officer until such drill is over for the day.

113.—Every officer and man who disobeys any lawful order of his superior officer, or who when on service is guilty of any insolent or disorderly behaviour towards such officer, shall incur a penalty if an officer of twenty-five-dollars, and if a man of ten dollars for each offence.

114.—Every man who fails to keep in order any arms or accoutrements delivered or intrusted to him, or who appears at drill, parade or on any other occasion, with his arms or accoutrements out of proper order, or unserviceable, or deficient in any respect, shall incur a penalty of four dollars for each offence.

115.—Any person who unlawfully disposes or removes any arms, accountrements or other articles belonging to the Crown or corps, or who refuses to deliver them up when lawfully required, or has them in his possession, except for lawful cause,

the proof of which shall lie upon him, shall incur a penalty of twenty dollars for each offence; but nothing in this section shall prevent such offender from being indicted and punished for any greater offence, if the facts amount to such greater offence: and such offender may be arrested by order of the justice of the peace before whom the complaint is made, upon affidavit showing that there is reason to believe that such offender is about to leave Canada, carrying with him any such arms, accoutrements or articles.

116.—Every officer and man of the militia who, when his corps is lawfully called upon to act in aid of the civil power, refuses or neglects to go out with such corps, or to obey any lawful order of his superior officer, shall incur a penalty, if an officer, not exceeding one hundred dollars, and, if a man in the militia, not exceeding twenty dollars, for each offence.

117.—Any person who resists any calling out of any men enlisted or drafted under regulations, or any process ascribed for enforcing enrollment by ballot; or counsels or aids any person to resist any calling out or process as aforesaid, or the performance of any service in relation thereto, or counsels or aids any man enlisted or liable to military service, not to appear at the place of rendevous; or dissuades any man enlisted or liable to military service, from the performance of any service he is required by law or regulation to perform; or does any act to the detriment of any man enlisted or liable to military service, in consequence of having performed such duty; or interferes with the drill or training of any corps or portion thereof; or obstructs any corps or portion thereof, on the march or elsewhere, shall incur a penalty not exceeding one hundred dollars.

118.—Any person who wilfully violates any provision of this Act, shall, when no other penalty is imposed for such violation, incur a penalty not exceeding twenty dollars for each offence; but nothing in this section shall prevent his being indicted and punished for a greater offence if the facts amount to a greater offence.

119.—In case of non-payment of the penalty immediately after conviction, the convicting magistrate may commit the person convicted and making default in payment of such penalty and costs, for a term not exceeding forty days when the penalty does not exceed twenty dollars, and for a term not exceeding sixty days when it exceeds that sum.

120.—Section 2. No prosecution against any man in the militia for any penalty under this Act . . . . shall be brought except on the complaint of the commanding officer or adjutant of the corps, or captain of the company or corps to which such man belongs or belonged; but the officer for the time being commanding the said corps or company may authorize any officer in the militia to make such complaint in his name.

130.—It shall not be necessary that any order or notice under this Act shall be in writing, unless herein required to be so, provided it is communicated to the person who is to obey, or be bound by it, either directly by the officer or person making or giving it, or by some person by his order.

132.—Every order made by the commanding officer of any corps of the militia, other than the permanent corps, shall be held to be sufficiently notified to all persons whom it concerns, by insertion in a newspaper published in the regimental division in which such corps is situated, or, if there is no such newspaper, then by posting a copy in every post office, or in some other public place, in each company division affected by such order.

TRANSLATION OF GENEVA CONVENTION, 1906.

CHAPTER I.

The Wounded and Sick.

ARTICLE I.—Officers and soldiers, and other persons officially attached to armies, shall be respected and taken care of when wounded or sick by the belligerent in whose power they may be, without distinction of nationality. Nevertheless, a belligerent who is compelled to abandon sick or wounded to the enemy shall, as far as military exigencies permit, leave with them a portion of his medical personnel and material to contribute to the care of them.

ARTICLE 2.—Except as regards the treatment to be provided for them in virtue of the preceding article, the wounded and sick of an army who fall into the hands of an enemy are prisoners of war, and the general provisions of international law regarding prisoners are applicable to them. Belligerents are, however, free to arrange with one another such exceptions and mitigations with reference to sick and wounded prisoners as they may judge expedient; in particular they will be at liberty to agree (*a*) To restore to one another the wounded left on the field after a battle. (*b*) To repatriate any wounded or sick whom they do not wish to retain as prisoners, after rendering them fit for removal or after recovery; (*c*) To hand over to a neutral state, with the latter's consent, the enemy's wounded and sick, to be interned by the neutral state till the close of hostilities.

ARTICLE 3.—After each engagement the commander in possession of the field shall take measures to search for the wounded, and to insure protection against pillage and maltreatment both for the wounded and dead. He will arrange that a careful examination of the bodies be made before the dead are buried or cremated .

ARTICLE 4.—As early as possible he shall send to the authorities of the country or army to which they belong the military identification marks or tokens found on the dead, and a nominal roll of the wounded or sick who have been collected by him. The belligerents shall keep each other mutually informed of the interments and changes, as well as of the admissions into hospitals and deaths amongst the wounded and sick in their hands. They shall collect all articles of personal use, valuables, letters, &c., which are found on the field of battle or left by the wounded or sick who have died in the medical establishments or units, in order that such objects may be transmitted to the persons interested by the authorities of their own country.

ARTICLE 5.—A competent military authority may appeal to the charitable inhabitants to collect and take care of, under his direction, the wounded or sick of armies, granting to those who respond to the appeal special protection and certain immunities.

CHAPTER II.

Medical Units and Establishments.

ARTICLE 6.—Mobile medical units (that is to say, those which are intended to accompany armies in the field) and the fixed establishments of the medical service shall be respected and protected by the belligerents.

ARTICLE 7.—The protection to which medical units and establishments are entitled ceases if they are made use of to commit acts harmful to the enemy.

ARTICLE 8.—The following facts are not considered to be of a nature to deprive a medical unit or establishment of the protection guaranteed in Article 6:—1. That the personnel of the unit or establishment is armed, and that it uses its arms for its own defence or for that of the sick and wounded under its charge. 2. That in default of armed orderlies the unit or establishment is guarded by a piquet or by sentinels, furnished with an authority in due form. 3. That weapons and cartridges taken from the wounded and not yet handed over to the proper department are found in the unit or establishment.

CHAPTER III.

PERSONNEL.

ARTICLE 9.—The personnel engaged exclusively in the collection, transport and treatment of the sick, as well as in the administration of medical units and establishments, and the Chaplains attached to armies, shall be protected and respected under all circumstances. If they fall into the hands of the enemy they shall not be treated as prisoners of war.

These provisions apply to the guard of medical units and establishments under the circumstances indicated in Article 8 (2).

ARTICLE 10.—The personnel of Voluntary Aid Societies, duly recognised and authorized by their government, who may be employed in the medical units and establishments of armies, is placed on the same footing as the personnel referred to in the preceding Article, provided always that the first mentioned personnel shall be subject to military law and regulations. Each state shall notify the other, either at the time of peace or at the commencement of or during the course of hostilities, but in every case before actually employing them, the names of the Societies which it has authorised, under its responsibility, to render assistance to the regular medical service of its armies.

ARTICLE 11.—A recognised Society of a neutral country can only afford the assistance of its medical personnel and units to a belligerent with the previous consent of its own government and the authorisation of the belligerent concerned.

A belligerent who accepts such assistance is bound to notify the fact to his adversary before making use of it.

ARTICLE 12.—The persons designated in Articles 9, 10 and 11, after they have fallen into the hands of the enemy, shall continue to carry on their duties under his direction. When their assistance is no longer indispensable, they shall be sent back to their country at such time and by such route as may be compatible with military exigencies. They shall then take with them such effects, instruments, arms and horses, as are their private property.

ARTICLE 13.—The enemy shall secure to the persons mentioned in Article 9, while in his hands, the same allowances and the same pay as are granted to the persons holding the same rank in his own army.

CHAPTER IV.

MATERIAL.

ARTICLE 14.—If mobile medical units fall into the hands of the enemy they shall retain their material, including their teams, irrespective of the means of transport and the drivers employed. Nevertheless, the competent military authority shall be free to use the material for the treatment of the wounded and sick. It shall be restored under the conditions laid down for the medical personnel,

and so far as possible at the same time.

ARTICLE 15.—The buildings and material of fixed establishments remain subject to the laws of war, but may not be diverted from their purpose so long as they are necessary for the wounded and the sick. Nevertheless, the commanders of troops in the field may dispose of them in case of urgent military necessity, provided they make previous arrangement for the welfare of the wounded and sick who are found there.

ARTICLE 16.—The material of Voluntary Aid Societies which are admitted to the privileges of the Convention under the conditions laid down therein is considered private property, and as such to be respected under all circumstances saving only the right of requisition recognized by belligerents in accordance with the laws and customs of war.

CHAPTER V.

CONVOYS OF EVACUATION.

ARTICLE 17.—Convoys of evacuation shall be treated like mobile medical units, subject to the following special provisions:

1. A belligerent intercepting a convoy may break it up if military exigencies demand, provided he takes charge of the sick and wounded who are in it.

2. In this case the obligation to send back the medical personnel provided for in Article 12 shall be extended to the whole of the military personnel detailed for the transport or the protection of the convoy, and furnished with an authority in due form to that effect. The obligation to restore the medical material provided for in Article 14 shall apply to railway trains and boats used in internal navigation, which are specially arranged for evacuations, as well as to the material belonging to the medical service for fitting up ordinary vehicles, trains and boats.

Military vehicles, other than those belonging to the medical service may be captured with their teams.

The civilian personnel and the various means of transport obtained by requisition, including railway material and boats used for convoys, shall be subject to the general rules of international law.

CHAPTER VI.

THE DISTINCTIVE EMBLEM.

ARTICLE 18.—As a compliment to Switzerland, the heraldic emblem of the red cross on a white ground, formed by reversing the Federal Colours, is retained as the emblem and distinctive sign of the medical service of armies.

ARTICLE 19.—With permission of the competent military authority this emblem shall be flown on the flags and armlets (brassards), as well as on all the material belonging to the medical service.

ARTICLE 20.—The personnel protected in pursuance of Articles 9, (paragraph 1), 10, and 11 shall wear, fixed to the left arm, an armlet (brassard) with a red cross on a white ground, delivered and stamped by the competent military authority and accompanied by a certificate of identification in the case of persons who are attached to the medical service of armies, but who have not a military uniform.

ARTICLE 21.—The distinctive flag of the convention shall only be hoisted over those medical units and establishments which are entitled to be respected under the convention, and with the consent of the military authorities. It must be accompanied by the national flag of the belligerent to whom the unit or establishment be-

longs. Nevertheless, medical units which have fallen into the hands of the enemy, so long as they are in that situation, shall not fly any other flag than that of the Red Cross.

ARTICLE 22.—The medical units belonging to neutral countries, which may be authorised to afford their services under the conditions laid down in Article 11, shall fly, along with the flag of the Convention, the national flag of the belligerent to whose army they are attached. The provisions of the second paragraph of the preceding Article are applicable to them.

ARTICLE 23.—The emblem of the red cross on a white ground and the words "Red Cross" or "Geneva Cross" shall not be used, either in time of peace or war, except to protect or to indicate the medical units and establishments and the personnel and material protected by the Convention.

CHAPTER VII.

APPLICATION AND CARRYING OUT OF THE CONVENTION.

ARTICLE 24.—The provisions of the present Convention are only binding upon the Contracting Powers in the case of war between two or more of them. These provisions shall cease to be binding from the moment when one of the belligerent powers is not a part to the Convention.

ARTICLE 25.—The Commanders-in-chief of belligerent armies shall arrange the details for carrying out the preceding Articles, as well as for cases not provided for, in accordance with the instructions of their respective Governments and in conformity with the general principles of the present Convention.

ARTICLE 26.—The Signatory Governments will take the necessary measures to instruct their troops, especially the personnel protected, in the provisions of the present Convention, and to bring them to the notice of the civil population.

CHAPTER VIII.

PREVENTION OF ABUSES AND INFRACTIONS.

ARTICLE 27.—The Signatory Governments, in countries the legislation of which is not at present adequate for the purpose, undertake to adopt or to propose to their legislative bodies such measures as may be necessary to prevent at all times the employment of the emblem or the name of Red Cross or Geneva Cross by private individuals or by societies other than those which are entitled to do so under the present convention, and in particular for commercial purposes as a trade-mark or trading mark. The prohibition of the employment of the emblem or the names in question shall come into operation from the date fixed by each legislature, and at the latest five years after the present Convention comes into force. From that date it shall no longer be lawful to adopt a trade-mark or trading-mark contrary to this prohibition.

ARTICLE 28.—The Signatory Governments also undertake to adopt, or to propose to their legislative bodies, should their military law be insufficient for the purpose, the measures necessary for the repression in time of war of individual acts of pillage and mal-treatment of the wounded and sick of the armies, as well as for the punishment, as an unlawful employment of military insignia, of the improper use of the Red Cross flag and armlet (brassard) by officers and soldiers or private individuals not protected by the present Convention. They shall communicate to one another, through the Swiss Federal Council, the provisions relative to these measures of repression at the latest

within five years from the date of ratification of the present Convention.

GENERAL PROVISIONS.

ARTICLE 29.—The present Convention shall be ratified as soon as possible.

The ratification shall be deposited at Berne.

When ratification is deposited a proces-verbal shall be drawn up, and a copy thereof certified as correct shall be forwarded through the diplomatic channel to all contracting Powers.

ARTICLE 30.—The present Convention shall come into force for each Power six months after the date of deposit of its ratification.

ARTICLE 31.—The present Convention duly ratified, shall replace the Convention of the 22nd August, 1864, in relations between the Contracting States. The Convention of 1864 remains in force between such parties who signed it who may not likewise ratify the present Convention.

ARTICLE 32.—The present Convention may be signed until the 31st December next by the Powers represented at the Conference which was opened at Geneva on the 11th June, 1906, as also by the Powers not represented at that Conference, which signed the Convention of 1864.

Such of the aforesaid Powers as shall have not signed the present Convention by the 31st December, 1906, shall remain free to accede to it subsequently.

They shall notify their accession by means of a written communication addressed to the Swiss Federal Council, and communicated by the latter to all the Contracting Powers.

Other Powers may apply to accede in the same manner, but their request shall only take effect if within a period of one year from the notification of it to the Federal Council no objection to it reaches the Council from any of the Contracting Powers.

ARTICLE 33.—Each of the Contracting Powers shall be at liberty to denounce the present Convention. The denunciation shall not take effect until after the written notification has reached the Swiss Federal Council. The Council shall immediately communicate the notification to all the other Contracting Parties. The denunciation shall only affect the Power which has notified it. In witness whereof the Plenipotentiaries have signed the present Convention and have affixed thereto their seals. Done at Geneva the 6th July, 1906, in a single copy, which shall be deposited in the archives of the Swiss Confederation, and of which copies certified as correct shall be forwarded to the Contracting Powers through the diplomatic channel .

SOME CONSIDERATIONS CONCERNING THE DEVELOPEMENT OF THE JAWS,

WITH ESPECIAL REFERENCE TO CONDITIONS FOLLOWING AND THOSE RESULTING FROM ARTIFICIAL FEEDING.

(Read before the St. John Medical Society, by J. M. Magee, D. D. S.)

Mr. President and Members of
The Saint John
Medical Society,

LADIES and Gentlemen :—My position here to-night is that of a Suppliant; for while I hope to show the importance of some things which to the unobservant medical practitioner might have seemed trivial, I also crave your assistance for lightening the labours of the members of the dental fraternity.

To the orthodontist the matter of symmetry of features is of prime importance, and in his search for causes of asymmetry he is sometimes at a loss to account for the existing conditions.

It is not my intention to weary you with a rehearsal of the developement of the human jaws during fœtal life, since there is but one condition of faulty developement, namely cleft palate, accompanied sometimes by either single or double hare lip, which occurs during that period of life, and since the cause for its appearance is not settled to the satisfaction of everyone, there does not yet appear any rational preventive treatment. The cause most in accordance with reason is, that just at the time union of the maxillæ should take place, about the tenth to twelfth week of foetal life, some physical derangement, whether from shock, or from an overwrought nervous strain, or lack of nourishment, has lowered the vitality of the mother sufficiently to prevent fusion. Cryer states that the condition may be the result of abnormal mandibular pressure occurring just at this period, since he could attribute the condition of some cases to none of the ordinary supposed causes: but from whatever cause, the condition can be reduced by surgical operative procedure alone.

In order therefore that we have a fair ground on which to stand I shall assume a normal healthy condition at birth.

The moment the infant takes its first nourishment, that very moment marks the most important instant in its whole life. It would be presumption on my part to suggest any line of treatment of the infant at birth, save to point out that the better the start the child has the more quickly will it develope especially as to its jaws. I am given to understand that sometimes the umbilical cord is severed before all the placental blood has been driven to the child. Should this be the case the infant vigour is handicapped until its system has supplied the necessary one or two or perhaps three ounces of blood it should get from the placenta.

The child's first muscular efforts are chiefly directed towards obtaining nourishment, the greater its vigour, from the very first, the more energetic will be its efforts at nursing.

In nursing the tongue rapidly enlarges, and owing to its increased size, pushes the jaws outward in every direction, especially forward. A counteracting influence is exerted by the elastic breast of the mother, forcing

the front part backward. These forces, inside pressing outward, counterbalanced by the backward pressure of the breast and the additional widening action of the muscles retracting the corners of the mouth, all tend to mould the jaws into a beautifully balanced contour. In passing it may be said also that the nose is likewise properly developed, the nasal passages are compelled to assume proportions which will admit of the free passage of any volume of air which the lungs may demand, while the fauces are rounded and full enough to meet any emergency.

The more exercise the tongue receives the greater the developement of the hyoid bone, and so all along the line.

The more vigorously the infant has to work to secure nourishment, while satisfying its hunger, the greater the developement and strength of all parts involved in the effort, naturally the earlier in the formative period any habit is developed the easier it si for the child to continue in the habit, and the habit once fixed in regard to nursing, makes for the greatest asset the child can have for life.

As physical exercise is necessary to ensure a state of health of the human frame, such as nature intended, so must every subordinate section receive work, which will give it that requisite exercise. To reach the highest state of developement, the jaws must have exercise in chewing. Therefore in order that the ideal condition may be approached, children should be compelled to chew their food.

As the deciduous teeth approach eruption the alveolar process will have been developed proportionately with the needs of the teeth for the work they are expected to do. Nature always provides accurately and adequately. If the deciduous teeth are used properly the permanent successors will have no reason to make their appearance in any but normal order, and and as they grow, the alveolar process is built up about them to continue the same kind of work. Should the deciduous teeth not be given that amount of work which will keep them in perfect condition the on-coming permanent teeth will not prepare themselves for anything different, and this means imperfect developement.

The normal relationship of the teeth in the adult jaw is shown here. The key teeth of the adult dental arch are the first permanent molars antagonizing as shown by the lines marked on both upper and lower. Any variation from this is mal-occlusion. Taking the first molars as our guide you will notice that the anterior buccal cusp of the upper fits into the buccal grove of the lower; the molars behind taking their positions relatively like them. The teeth anterior to the first molar you will notice interdigitate as it were. In fact every upper tooth except the third molar antagonizes with two lower teeth, and every lower tooth except the central incisor antagonizes with two upper teeth in normal occlusion. The deciduous teeth must have been in perfectly harmonious relationship to have permitted the first molar to assume its proper place in the arch. The loss of a single deciduous tooth or caries progressing so as to affect their proximate relationship may be the cause of a malposition of the first permanent molar, which erupts as you know somewhere about the sixth year directly behind the deciduous second molar. Nature always makes an effort to close gaps. Should a tooth be lost, or should caries diminish the antero-posterio diameter of any of them, the effort to

close the gap is immediately begun by the teeth posterior to the space starting to move forward.

It is a fact recognized by Orthodontists that the lower jaw is the one on which the upper is moulded and the reason is not far to seek. The upper jaw is fixed while the lower is moveable. The teeth on the lower jaw antagonize those on the upper in the innumerable thrusts, thrice daily, during mastication, and drive the upper teeth to positions suitable for their comfort. One has only to experiment with two pieces of the same material striking one against the other for a number of times, to convince himself that the argument is correct. While both will be distorted from their original shape, that which strikes will have been distorted less than that which has been struck. So, the jaws will be shaped—that which strikes, will if it be normal, compel the upper to assume a normal position with a normal alveolar process. Recognizing this fact is it not clear that every effort should be made to provide for a perfectly normal set of teeth. I have yet to find a case of malocclusion of the deciduous teeth, except as a result of "thumb-sucking" where the child has been fed at the breast during the first three months of its existence.

Any period of nursing will be beneficial to the child, but of course (up to a limit of about nine or ten months according to conditions) the longer the better.

Drawing prepared food from a bottle requires so little effort that the muscles do not receive that exercise essential to a perfect developement, while the infant fed from a spoon is even more seriously handicapped, for no food can compare with mother's milk, since it contains all the elements necessary for the infant growth, while no artificial food can be prepared which is an absolute substitute. This of course it is scarcely necesary for me to say to you.

Observation covering a number of years has convinced me that the child which has never nursed will always have an abnormal jaw and malocclusion of the permanent teeth.

Mal-occlusion of the permanent teeth of many who have been nursed in infancy may occur as a result of conditions which arise while they are growing, perhaps through caries of the deciduous teeth resulting in their extraction, or by reason of their proximal surfaces breaking down and the spaces closing up thus making a smaller arch, perhaps, consequent on adenoids being present and dwarfing the growth of the maxillæ; perhaps from thumb-sucking, but from whatever cause, if the cause be averted, (and it can be) a normal articulation will be indicated.

Incidentally it may here be remarked that in normal feeding the infant usually gets considerable physical exercise, as is evidenced by a rise in temperature sufficent to produce profuse perspiration. I have not had opportunity to observe very many bottle-fed children, regarding this particular feature, but such spoon-fed children as I have observed, do not exhiibt beads of perspiration on their faces during feeding.

Concomitant with a dwarfed maxilla with its dwarfed sinus, invariably exists a deflected nasal septum, and a disparity of the orbits. Rhinologists and oculists will tell you of the difficulties they cope with in abnormally developed cases.

As a prospective means of livelihood, while it may be early to make calculations, there is the possibility that the new arrival into the world may be blessed with musical talent and

fine vocal cords. No matter how fine the cords are, and no matter how much musical talent may be possessed they will count for very little if the bottle be substituted for the breast.

I will venture this assertion without the least fear of successful contradiction:—Every singer of world-wide repute had been nursed in infancy, and no one fed in infancy exclusively by bottle has ever achieved much more than local reputation.

I might elaborate in other directions upon conditions to which misshapen jaws are related, but I have indicated even with what I have already stated, enough to impress upon you the necessity of assisting every infant to get as good a start in life as possible.

As a result of answers given to questions asked when making diagnoses of cases, I am forced to the unwelcome conclusion that there are physicians in attendance on confinements, who not only tacitly agree to mothers not suckling their infants, but who actually encourage them not to do so. I am quite aware of the fact that sometimes there are cases where natural feeding is out of the question, but I am speaking now of cases where there was no just cause or impediment to prevent them from performing all the functions of motherhood. All sorts of excuses are made by mothers who accidentally have children and who do not wish their social pleasures interfered with in the least degree, and who have no physical disability to offer as a bar to their performing this particular duty, but invariably the doctor was quoted as saying that it would not make a particle of difference to the child, whether it was nursed or bottle fed. When our beloved and lately lamented Queen Victoria, could find time to devote to her very numerous children, (and she nursed every one of them) it does seem as though the excuses of the average woman were rather flat. I trust I have made it plain that it does make a difference. Those who have given this kind of advice *may* be pardoned for the injury they have caused humanity in the past, since I can find nothing bearing on the subject that would be accessible to them, but let me urge you to whose notice the importance of this natural physical action on the part of mother and child, in regard to facial developement, is now pressed, to do a little missionary work in this direction.

Did any of you ever see a healthy normal child brought up at the breast, require one of those articles designated "Comforts" to keep it quiet? I myself have not, but my experience in observing children of this class is very limited since they have few affections calling for my services. I have seen dozens of bottle-fed children who have to be appeased with this damnable article. The expression is not too strong. Let anyone test one in his own mouth sucking for half an hour, and note at the end of that time the feeling of his tongue, his gums, the roof of his mouth, his palate and his fauces, and then let him think what those parts would be like on its daily use for as many hours as children use them. I venture the assertion that damnable is not even strong enough.

I am always interested in the pictures of children printed in magazine advertisements of patent foods for infants, and I have been struck with the facial expression of many of them. One advertisement in particular illustrated twins, with the evident object of eliciting comparison favourable to the patent food fed one. One child was one and a half times as large as the other with deep wrinkles at el-

bows and wrists, a flat stolid looking face with listless eyes, narrow nostrils and mouth open. The other child showed very slight wrinkles at wrists and elbows, had a round moon face with widely dilated nostrils, mouth tightly shut, eyes alert and shining; the whole being exhibiting activity and vigour. To one who knows something of facts such as I have been stating, no stronger argument than this in the form of a picture could be presented in favour of the nursing child.

There is a condition sometimes though fortunately very rarely met, as a result of accident at birth. It occurs only in cases of false presentation, any child coming into the world wrong end to is liable to have its lower jaw slightly displaced by the chin catching on the pelvic bone. The expulsive force of the uterus should it catch, as it usually does is sufficient, if the head be large, to force the coronoid process out of the glenoid fossa sometimes far enough forward to jump over the eminentia articularis. A displacement as great as this would certainly be noticed by the attending physician, but a slighter displacement might not be noticed, and the child grow up with a protruding chin. I wish to draw your attention to the condition which sometimes results so that should you have a confinement case with either a foot or breech presentation you may examine the tempero-maxillary articulation of the infant.

The normal position of the lower jaw at birth is that the ridge shall be just slightly inside the upper. Should it be forward and outside, displacement has occurred during birth.

Use of the forceps may also produce displacement. In passing it may be of interest to note that Dr. Robert H. Ivy of Philadelphia, states that he had not been able to find a record of a single case of mandibular fracture resulting from the use of forceps at birth, save one which came under his own observation.

I shall feel under an obligation to any members of the society who will be good enough to give me an opportunity of seeing any cases coming to their notice which they think will be of interest in connection with any subject in the field of stomatology.

POST-PARTUM HÆMORRHAGE.

THE modern treatment of post-partum hæmorrhage is so firmly established on sound basis that it may seem superfluous to say any thing further on the subject. To empty the uterus of all contents and then apply firm bimanual compression with the closed fist in the uterus and the other hand over the abdomen, inject ergotin into the muscle of the leg or buttock, and when the bleeding is somewhat controlled, give a large intra-uterine douche at 120°F. Such are the means successfully applied and generally taught. My objection is, that the man who bimanually compresses the uterus must use both hands and cannot possible do anything else; that there is every likelihood of his infecting the uterus, as the sudden onset of the hæmorrhage has not given him time to fully prepare his hands and arms; and that he causes unnecessary discomfort both to himself and his patient.

For many years I have been accustomed to use the compression of the aorta practised by Ramsbotham and Baudelocque the younger seventy years ago, and recommended occasionally since, but generally cried down as dangerous, impracticable, etc. It has always succeeded in my cases, can be applied immediately, requires no special appliances or extra help, does not interfere with other forms of treatment and by short-circuiting the circulation will often revive the patient from fainting. I have found it so valuable and so applicable that I, in *all cases* of confinement, when following down the uterus with my left hand, keep slight pressure on the aorta, noting the rapidity and character of the pulse there felt. If on completion of labour the pulse does not come down to something below 100, I gently, but firmly, compress the aorta against the vertebrae and continue to do so, with perhaps slight intermissions, until the pulse slows down indicating that the patient is safe to leave. This method of treating the uterus very much diminishes the after pains of labour which are sometimes so distressing.

As to the method of applying the compression, the main thing is to place the patient flat on her back and then the left hand can be passed between the edges of the opened out recti muscles and down behind the uterus to the vertebrae. The aorta is of course easily recognized by its pulsations, and from this alone, and remembering that the aorta lies to the left of the inferior vena cava, there can be no mistaking what one is pressing upon. Compression is generally below the inferior mesenteric artery and therefore some blood may still find its way to the uterus through the anastomosis of the ovarian and uterine arteries, but only in small amount. The compression may be so complete that in fifteen or twenty minutes the patient may complain of numbness in the feet from the circulation being cut off. If the legs are at the same time elevated to favour the return of venous blood, the heart will be greatly re-enforced and fainting relieved. In a fleshy strong woman pressure with the right hand on the fingers of the left may be necessary to overcome the resistance or to relieve the left hand when tired.

A few illustrative cases may be of interest here:

Mrs. D., aged 28 years, multipara, confined May 13th, 1903. I reached her house at 2 a.m. and found that the child had been born about ten minutes, after only a few hours easy

labour. The placenta was not yet delivered, but on looking at the bed, I found things pretty well saturated with blood. Kneading the uterus with my left hand, contractions soon came on and I was able to express the placenta. A good deal of bleeding continued, and soon the patient, a delicate-looking, thin woman, fainted off. I was now compressing the aorta and its pulsations became very feeble. I had not the comfort of a trained nurse, and therefore no one to give help, and beyond chloroform and forceps no other appliances. Taking away the pillows with my other hand, I maintained compression of the aorta and sent a messenger to my house for my transfusion apparatus. While the messenger was gone the woman in attendance put the kettle of boiling water out of doors to cool. The short-circuiting of the blood-current was soon effectual in reviving the patient, and the uterus toned up, retracting down into a firm ball, and when the messenger returned I was able to relieve the pressure from the aorta. The patient was still in a critical condition, however, with running, thready pulse and gaspy respiration, so I immediately opened the basilic vein at the bend of the right elbow, and allowed a little over two pints of saline to flow in. The effect was magical, the pulse filled up, her respiration became normal, and the noises left her ears, and I left her after another hour or so with a fair, though rapid pulse, and no recurrence of the bleeding.

This was a case of bleeding during the third stage rather than *post partum*, and the bleeding had been probably a continuous flow, not a sudden gush, and occurred mainly before my arrival. The compression of the aorta in her case simply prevented further bleeding, sustained the heart by diminishing its work, and thus tided her over the immediate danger until, by transfusion, her blood-vessels were filled up again. It is noteworthy that though the salt was not ideal, it served the purpose well and gave rise to no subsequent complications.

Mrs. B., multipara, anæmic-looking woman, was confined May, 10th, 1908. A very easy confinement except in third stage, when some difficulty in expressing the placenta and considerable oozing occurred. My left hand compressing the uterus, with the little and ring finger feeling the aorta, noticed that suddenly pulsation became very feeble, and at the same time, the patient went into an anæmic fit. I put firm pressure on the aorta, and with the other hand wrote a note to my friend Dr. Mitchell, asking his immediate help and to bring his transfusion apparatus. He arrived very promptly, but before his arrival the patient had another short anæmic fit, but there was no more bleeding. Dr. Mitchell transfused two pints of saline into the left basilic vein and the patient soon rallied, though she continued anæmic for some time, and required some subsequent treatment of the endometrium for a mild sepsis that delayed her recovery. The amount of blood lost in this case was not at all great, but her previous condition was such that it was relatively a large amount, and her fainting fits were quite alarming.

I have notes of many other similar cases, but there is nothing to be gained by going into them in detail. In some, after tedious labour, or in delicate patients, compression has had to be continued for an hour, the pulse rate running up each time that the pressure would be relieved: but beyond the numbness of the feet sometimes complained of I have never seen any ill consequences, and have never had any difficulty in maintaining the compression.

MILK COMMISSION MEETING.

THE stated meeting of the Milk Commission was held recently in Toronto.

The following members were present: Dr. Hastings, Dr. George Elliott, (Secretary), Dr. J. A. Amyot, Dr. A. McPhedran, Dr. J. H. Elliott, Dr. W. B. Thistle, Dr. J. N. E. Brown, and Dr. Helen MacMurchy.

Mr. John Ross Robertson was present by invitation.

The subject under discussion was that of Pasteurization.

Dr. Hastings presented a memorandum on the subject presenting evidence and authorities in favor of Pasteurization (official) for all milk not officially certified .

Mr. John Ross Robertson then addressed the Commission referring to his investigation in Pasteurization in New York hospitals, the mortality at the Children's Hospital, Toronto, the necessity for pure and clean milk in that institution. It was his determination to at once proceed to the installation of a Pasteurization plant in the Children's Hospital.

Dr. John A. Amyot advocated official Pasteurization, as well as other members of the Commission.

The following resolution was then presented and adopted unanimously:

It must be apparent that it will require time and education to comply with even reasonable safeguards, and it is equally evident that the number of dairy farms now in a position to live up to sanitary requirements, will supply but a small proportion of the population of the city. Until this can be accomplished the Commission strongly recommends that all milk not officially certified, be Pasteurized.

A vote of thanks was tendered Mr. Ross Robertson for his address as well as for his offer to send two or three members of the Commission to New York, at his expense, to investigate the subject of Pasteurization.

GEORGE ELLIOT,
General Secretary:
Secretary to the Milk Commision.

MEDICAL SOCIETY OF NOVA SCOTIA.

The Annual Meeting of the Medical Society of Nova Scotia will be held this year in Sydney, C. B., on Wednesday, July 7, under the presidency of Dr. Arthur S. Kendall, M.L.A. We hope the meeting may be a large one, and we may rest assured it will have a cordial welcome, for Cape Breton hospitality is proverbial. Apart from the interest and value of the numerous papers to be read, the meeting should be well attended, for a pleasanter holiday cannot be had in June than to spend a few days in Cape Breton. The varied forms of industrial life, notably the coal mines, which have the largest output of any in the world, and the Steel Works, where the most modern methods of iron-working may be seen, will interest many.

Then, within a few hours by rail, we may visit the historic ground of Louisburg, with its memories of Wolfe and Dundonald, and of our ancient and gallant foes, now our fellow-citizens. And, in the Mira, the Bras D'Or, Baddeck, and Whycocomagh, the lover of fine scenery will find a storehouse of beauty.

Addresses in Medicine and Surgery are expected from leading colleagues in Montreal and Toronto, and formal notice of all details will soon be sent out by the Secretary, Dr. J. R. Corston, 337 Brunswick Street, Halifax, N. S., to whom all communications should be addressed.

OBITUARY.

IN our last issue we noted the death of Dr. A. C. Smith.

A St. John correspondent writes to a Montreal newspaper regarding him:

There died last week in Tracadie, the bleakest and most lonesome place on the New Brunswick coast, one of those men who, though not living in a cloister, devote their lives to the good of their fellow men. The dead man was Dr. A. C. Smith, head of the medical department of the Canadian Leper Asylum.

He had given his life to the care of these unfortunates and to trying to find a cure for the dread disease; and when he died he had the satisfaction of knowing that he had managed to strike upon one compound that would cure the disease in the early stages and would alleviate the sufferings and prolong the life in the advanced ones.

To prolong life for a leper seems almost cruelty, but the lepers themselves do not think so.

Dr. Smith used to tell your correspondent that lepers clung as tenaciously to life as the cleanest of mortals, and were as afraid of dying of consumption or some other ailment as if they were not already doomed to die from the disease that kept them isolated from mankind.

'Some day or other,' he said, 'you'll hear that I have shut myself up in that place,' pointing to the lazaretto, 'and if you do hear that such is the case I want you to promise that you will write me every month.' The promise was given and kept.

He probably died as so many of the nuns die who act as nurses in the institution. But they do not show the revolting symptoms of the unclean disease; they just waste away and die, only to have other sisters take their places. Dr. Smith himself said that there was not and never had been a satisfactory diagnosis of the cause of death, but he ascribed to the constant inhaling of the fetid air. Not being constantly in the lazaretto he lasted longer. His predecessor died there also in the cause of humanity.

Dr. Smith lived apart from his family for fear of infecting them. His patients, the miserable inmates, worshipped him.

PERSONAL.

Dr. Smith L. Walker, Truro, is back from a four weeks visit to the United States, during which time he was engaged in hospital work, chiefly at Bellevue Hospital and College, and studied the anti-tuberculosis campaign as carried on in the State of Massachusetts, in Boston and in New York cities.

EDITORIAL

A CONSIDERATION of the Reports of the Public Charities and Hospitals of Nova Scotia at present before us is, upon the whole, very encouraging. Signs are not wanting that there is an increasing appreciation on the part of the public, of the advantages of hospital treatment, and even of the advanced position taken by the government in matters of the Public Health. The great difficulty in all communities, is that of finance, and the people are not yet awake to the importance, even from the financial standpoint, of every effort to conserve health, to restore it when lost and to prevent the spread of disease.

In the sixteenth annual report of the Department of Public Health, Dr. Reid points out the disadvantages under which we labour in the want of correct statistical returns. Without a definite and complete system of vital statistics we cannot ascertain how we stand, or balance our account with the Bank of Public Health. We learn from Dr. Reid's report that there have been severe epidemics of measles and typhoid fever, and that small-pox is widely disseminated.

A consideration of the statistical tables, incomplete as the returns are, shows clearly that the greater part of the mortality is due to preventable disease. First of all comes tuberculosis. A total of 2,119 cases of all varieties has been reported, and the mortality of these is 25.6 per cent. Next in number of cases reported is influenza, 1,792 cases with a mortality of 4.25 per cent., and third in number comes small-pox, 1,740 cases of which were reported with a mortality of .17 per cent.

The most fatal form of disease as shown by the returns is tuberculous meningitis, with a mortality of 90 per cent.

The following table may be interesting:

	Cases Reported	Percentage Mortality
Tuberculous Meningitis	15	90
" Peritonitis	13	70
Pneumonia	786	40
Tuberculosis, all varieties	2119	25.6
Diphtheria, including "Croup" and "Membranous Croup"	431	15.7
Whooping Cough	160	10
Typhoid Fever	260	8.5
Influenza	1792	4.25
Measles	471	about 3.8
Scarlet Fever	317	
Chicken Pox	269	2.6
Small Pox	1740	.17

We have two or three remarks to offer on these figures. In the first place the mortality from tuberculous peritonitis seems unnecessarily high when we reflect that the surgical treatment of this disease claims to cure from 50 to 80 per cent. of cases.

The second note we wish to make is that the true mortality of zymotic diseases cannot be learned from a consideration of any one year: the mortality percentage of influenza, and of scarlet fever for instance, has been often very much higher than appears in this table. As for that of diphtheria, we believe the general verdict of the profession is that the use of antitoxin has converted this disease from being one of the most fatal of scourges, into a comparatively mild ailment, as well as greatly restricting its incidence, by its protective effect.

Perhaps the most striking fact in these percentages is the relation between small-pox and chicken-pox. It seems absurd that the mortality of chicken-pox should be 15 times as great as that of small-pox. We cannot wonder at the attitude of the anti-vaccinationists among us when they can point to this trifling mortality. One wonders if some of the "chicken-

pox" reported may not have been small-pox. Be that as it may, there can be no doubt that the widespread epidemic of small-pox which has existed in Canada and the United States for the past few years is one of unprecedented mildness; so mild indeed that many have doubted the diagnosis. But it appears undeniable that vaccination protects in this disease. The explanation of its mildness would seem to lie in the fact that in spite of the opposition of a small section of the community, vaccination has been very general for many years, and the general average of the population is fairly proof against small-pox. But the history of epidemic disease shows that from time to time there are exacerbations of virulence. It is already being observed in the United States that this mild form is giving place in some districts to a severer type. We firmly believe that if vaccination falls into disuse the apparent immunity of our people to small-pox will disappear, and we cannot but regret that so many intelligent and well-meaning people have become prejudiced against vaccination.

Accompanying the report of the Provincial Health Officer is that of the Provincial bacteriologist. It is of interest as showing an increased appreciation of the value of the laboratory. It is quite evident that the work cannot be carried on without increasing the facilities of the laboratory. In addition to the histological examination of tumours, and tests of throat cultures in suspected cases of diphtheria, nearly 500 examinations were made for tubercle bacilli, 175 specimens of blood were examined for the Widal reaction, and nearly 300 complete chemical and microscopical examinations of urine were made. Blood counts, the chemical examination of stomach contents and blood cultures are proceedings requiring much time, and in addition Dr. Murray now undertakes the preparation of material for vaccine therapy.

We always turn with interest and pleasure to the Annual Report of the Government Inspector of Humane and Penal Institutions. Dr. Sinclair's devotion to his duty, his kindly interest in the suffering poor, his cheerful and hearty commendation of deserving officials, and his frankness and firmness when matters are not as they should be, endear him to us all. He is the ideal man for his difficult and delicate task. His report on the condition of the jails, poor houses and hospitals shows that there is steady improvement. In many places wholesome new buildings have taken the place of insanitary and dilapidated houses: but we note that there is still room for improvement in some districts. In most cases the difficulty is the niggardly provision made for the housing and care of the poor, the feeble-minded and the criminal, by municipal authorities who should know better, and who would save public money in the long run by a judicious increase of expenditure now. As regards the condition of the jail the County of Guysboro' is the chief defaulter.

We note that there are only four jails in the Province in which work is provided for the prisoners. This is a matter which should be put right. Theer is nothing worse for health or morals than idleness, and whatever objections may be raised on economic grounds to the employment of prisoners, work ought to be compulsory.

Our Reformatories are the Home of the Good Shepherd, St. Patrick's Industrial School, and the Protestant Industrial School, all situated in

Halifax. We are glad to see that Dr. Sinclair has high praise for the work done in each of these.

Our largest public charity is the Nova Scotia Hospital for the insane. which should celebrate its jubilee this year. We learn from the Report of the Superintendent, Dr. W. H. Hattie, that the number of admissions during 1908, viz., 170, was the greatest since the Hospital was opened in 1859 ,except in 1904-5, when 173 patients were admitted. The total number of patients under treatment during the year was 605, the total on the register on September 30, 1908 was 424, the daily average, 438.1 There were discharged as recovered 63, and as improved 21, and there were 41 deaths, a percentage of 6.7 of the whole number under treatment, and of these deaths 25 per cent. were due to tuberculosis.

Dr. Hattie comments forcibly, and with justice, on the inhuman practice of putting the insane into jails as a temporary lodging while arrangements are being made for their transference to the Hospital.

A notable event in the experience of the hospital was the serious injury by lightning to the chimney, boilers and water mains. As this happened during the depth of winter, and completely upset all arrangements for heating, cooking and water supply, the difficult position can be easily understood.

In his report on the Victoria General Hospital, Dr. Sinclair notes that the accommodation is not equal to the demand, and everything points to the necessity for extension. The urgent and often expressed wish of the Medical Board for the isolation of cases of tuberculosis has not yet been arranged for. And another serious defect is the absence of a proper provision for pathological work. One function of a hospital, especially where there is a medical school, is that of scientific study and teaching. A competent pathologist who would give the whole of his time to the work, and a thorough-going system of Case Reports, should be considered as essential.

A notable departure made by the Government during the past year was the appointments of assistants. These are spoken of in the Report as "physians and surgeons" but the general impression, we believe, is that the five gentlemen named in the Report are all assistant-surgeons. We note also that their exact duties have not so far been defined. The present occasion is not a convenient one for criticising these appointments, which, as is well known have given rise to much discussion. We shall only say here that no hospital can be properly conducted without assistants, that an out-patient department is not the only element calling for assistants, that the only reasonable way of securing a succession of competent physicians and surgeons for a hospital is by means of assistants, and that the sooner the duties ofthe assistants are defined the better for all concerned. New arangements cannot be expected to work smoothly at first, but time works wonders.

From the Report of the Medical Board and from the statistical tables we learn that there were 1,693 patients treated in the Hospital in 1908. the greatest number in the history of the institution. The largest number on any one day was 154 and the smallest 116. The daily average was about 140, of whom five-sevenths were surgical cases. The death- rate was 6.26. The average time of stay in hospital was 32.67 days.

Including gynæcological operations and those in the special departments

there were 607 operations. In the General Surgical Department there were 520 with a mortality of 5.7 per cent.

In looking over the statistical tables a want of careful proof-reading is painfully evident, for some strange and wonderful terms make their appearance. And we confess we do not quite understand the principle on which the diseases are classed. For instance, in the surgical division we find, acute alcoholism, anæmia, progressive muscular atrophy, constipation, "debility from exposure," dyspepsia, senility etc., etc. It would seem too, that there should be a column for the totals in the several divisions.

Also looking over the Record of Operations we are at a loss to know on what principle it is constructed. For example, we find that under the term appendicectomy 31 operations are entered, but we find six other appendicectomies entered as parts of other operations. Such headings as "opening" and "removal" are scarcely definite enough. Under the heading "Laparotomy" we find 15 different kinds of operation, but there are at least 80 operations in the table, beside these in which laparotomy must have been done: all the ventrifixations, oophorectomies and appendicectomies required a laparatomy. And surely such operations as curetting the uterus, perineorrhaphy and dilatation of the cervix should find their place in the gynæcological section.

There is a steady increase in the number of smaller hospitals receiving government aid. There are now at least eight such, in Antigonish, Amherst, New Glasgow, Glace Bay, Pictou, Windsor, Sydney and Sydney Mines.

St. Joseph's Hospital in Glace Bay comes next to the Victoria General Hospital in importance, and we have received its annual report. It was opened in 1902, and its rapid growth may be seen from a comparison of 1903 with 1908. In 1903, there were 432 patients in all under treatment, in 1908, 833. In 1903 there were 185 operations, in 1908, 450. In 1903 the total number of hospital days was 11,904, in 1908, 26,717. During 1908, 773 patients were admitted. of whom 551 wer surgical. The largest number under treatment in any one day was 87, and the smallest, 58: the daily average for the year was 74.6. The average time in hospital was 32 days, and the percentage mortality was 5.8. The number of surgical operations (exclusive of those in the specialists' department) was 400. and the deaths were 12, being a mortality of 3 per cent. The death rate for abdominal operations was 3.3 per cent., and for abdominal operations excluding malignant cases, 2.3 per cent. There are no less than 110 appendicectomies, under that heading. but 38 others are entered as combined with other proceedings, making a total of 148. We shall be glad to hear a discussion at our meeting in Sydney of the cause for the frequency of appendicitis in the city of Glace Bay.

The pioneer among the minor hospitals is the Aberdeen Hospital in New Glasgow, the 12th Annual Report of which is before us. The past year has been the busiest in its history. The admissions during the year were 309 ,of which 220 were surgical, with 172 operations. We find the same difficulty in the statistical tables as in the other hospitals. Under appendectomy we find 29 cases, but there are 7 others combined with other proceedings.

Apart from the extraordinary proportion of cases of appendicitis in the practice of St. Joseph's Hospital,

there are one or two curious facts noticed in going over the operation records of these three hospitals. The Victoria General reports no case of operation for ectopic pregnancy, St. Joseph's has one, and the Aberdeen no less than 5, four of which were successful. Seven hysterectomies (one vaginal) are reported by the Victoria General, there was none from the other two. No cases of prostatectomy occurred at the Victoria General, there was one in each of the others. The paucity of resections and other operations in the alimentary tract point to a lack of readiness on the part of those who send patients to the hospitals to diagnose the conditions requiring such operations, or to a want of knowledge of the benefits which may result from such operations.

NOTES ON SPECIALTIES.

DIAGNOSTIC ACCURACY.

Diagnostic accuracy is a prime factor in medicine, but quite as important is Therapeutic Accuracy. In the treatment of many of the diseases of women such as dysmenorrhœa, amenorrhœa, menorrhægia, metrorrhægia, etc., and where Hayden's Viburnum Compound has been administered, uniformly good results invariably follow its use; but if simply Viburnum Compound is written without specifying "H.V.C.", any one of the many substitutes or imitations of this well known product may be put up by the druggist and decidedly indifferent and unsatisfactory results are the consequence.

For definite results, definitely specify Hayden's Viburnum Compound.

PROPHYLACTIC PRACTICE.

Some think that the therapy of the future will be mainly preventive or prophylactic practice, and adherence to only those remedial agents that have proved particularly efficacious. Sanmetto if kept at hand, and always used upon the slightest manifestation of a threatening enlargement of the prostate gland, will prove prophylactic. It is particularly efficacious in prostatitis and in all inflammatory conditions of the genito-urinary tract.

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WHEELER'S TISSUE PHOSPHATES.

The delicious flavour of Wheeler's Tissue Phosphates is a factor of perhaps hitherto unappreciated importance in cases where the prolonged ex-

hibition of a tonic is desirable. Delicate women and children will take this standard tonic for months, if necessary, not only without repugnance, but with genuine pleasure. Admirable for pregnant women, supplying extra phosphates and being a superb galactagogue. Sample and literature free on application to the T. B. Wheeler, M. D. Company, Montreal, Canada.

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SUMMER-TIME IS SPRAIN-TIME.

Some wit has said that "Summer-time is sprain-time." Golf, tennis, base-ball and the other outdoor sports inaugurate a season of sprains and wrenches, and ankles, knees, wrists, elbows, shoulders, and backs, pay the penalty of a missed drive, an overhand smash or a slide to base. The reluctant conditions, the stretching or tearing of ligaments, contusion of the synovial membrane and damage to vessels and nerves, are best remedied by the use of Antiphlogistine, which markedly aids in the reconstruction of the injured part.

By removing the products of inflammation, through the absorption of the liquid exudate from the swollen tissues, and by permitting free circu-

lation of blood through the seat of the injury, Antiphlogistine acts as Nature's first assistant. The affected cells are stimulated and toned up through endosmosis, and the process of repair is greatly hastened.

Antiphlogistine should always be applied directly to the affected area as hot as can be comfortably borne, and covered with absorbent cotton and a bandage.

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THE NECESSITY OF IRON TO THE PREGNANT WOMAN.

It is universally conceded that the administration of iron in pregnancy is now made expedient by the development of an anæmia which is usually foreign to non-pregnant subjects, and which, at one time, was an uncommon occurrence even in the case of the child-bearing.

During pregnancy, the appetite is invariably immoderately capricious and there is a disposition to gratify the palate by partaking of those foodstuffs which have been rendered fictitiously attractive to the partial, or by the complete, exclusion of the more simple and nutritious viands. While such indulgences must inevitably contribute to the development of anæmia, it was not until the modern table supply, consisting almost wholly of such victuals as hot breads, highly spiced refrigerated meats, artificially colored canned goods and pastries, was made the rule with the masses as well as the classes, that anæmia of pregnancy became the rule and not the exception.

In addition to the inadequate food supply which is now current, the anæmia of pregnancy is rendered more

HALIFAX MEDICAL COLLEGE,

HALIFAX, Nova Scotia

FORTY-FIRST SESSION, 1909-1910

The Forty-First Session will begin on Tuesday, Sept. 7th, 1909, and continue for the eight months following.

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The Victoria General Hospital offers abundant facilities for clinical teaching and with the other institutions students are afforded ample opportunities for clinical work.

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Reciprocity has been established between the General Medical Council of Great Britain and the Provincial Medical Board of Nova Scotia. A graduate of Dalhousie University or the Halifax Medical College, who obtains the license of the Provincial Medical Board, may register in Great Britain or in any country in which registration in Great Britain is accepted.

For information and the Annual Announcement, apply to

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Registrar Halifax Medical College, 65 Morris Street, Halifax.

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EXTRA MURAL LECTURES.

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————————, Lecturer on Botany at Dalhousie College.
————————, Lecturer on Zoology at Dalhousie College.
A. S. MACKENZIE, PH. D., Professor of Physics at Dalhousie College.

widespread by the style of dress imposed by society upon women in all the walks of life. Furthermore, the blood depletion of prospective mothers of the present day is materially increased through their abandonment of outdoor exercise on account of a false sense of modesty.

In view of the fact that the health of a woman in the pregnant state, and the proper development of her unborn, is always directly dependent on a blood stream that is qualitatively and quantitatively sufficient for the exigencies of pregnancy, the administration of iron is made distinctly needful by the artificialities inseparably associated with modern life.

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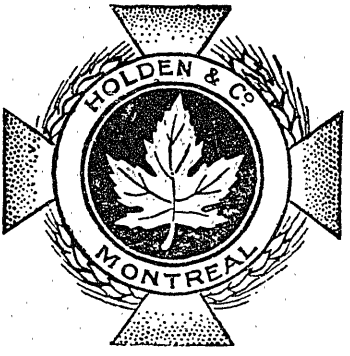

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