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HALIFAX, NOVA SCOTIA, AUGUST, 1901.

No. 8

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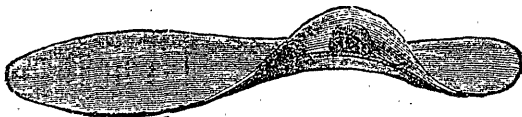
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The entrance examinations of the various Canadian Medical Boards are accepted.

FEES.—The total fees including Laboratory fees and dissecting material, \$125 per session.

Courses.—The **REGULAR COURSE** for the Degree of M. D. C. M. is four sessions of about nine months each.

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ADVANCED COURSES are given to graduates and others desiring to pursue special or research work in the Laboratories of the University, and in the Clinical and Pathological Laboratories of the Royal Victoria and Montreal General Hospitals.

A **POST-GRADUATE COURSE** is given for Practitioners during May and June of each year. This course consists of daily lectures and clinics as well as demonstrations in the recent advances in Medicine and Surgery, and laboratory courses in Clinical Bacteriology, Clinical Chemistry, Microscopy, etc.

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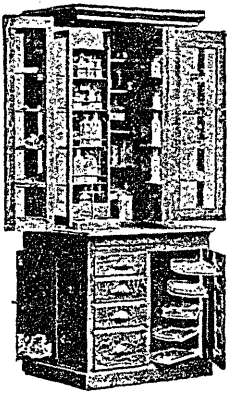
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(Pass Primary M. D., C. M. examination).

3RD YEAR.—Surgery, Medicine, Obstetrics, Medical Jurisprudence, Clinical Surgery, Clinical Medicine, Pathology, Bacteriology, Hospital, Practical Obstetrics, Therapeutics.

(Pass in Medical Jurisprudence and Therapeutics.)

4TH YEAR.—Surgery, Medicine, Gynecology and Diseases of Children, Ophthalmology, Clinical Medicine, Clinical Surgery, Practical Obstetrics, Hospital, Vaccination.

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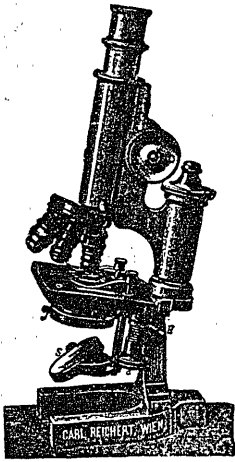
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A MONTHLY JOURNAL OF MEDICINE AND SURGERY.

EDITORS.

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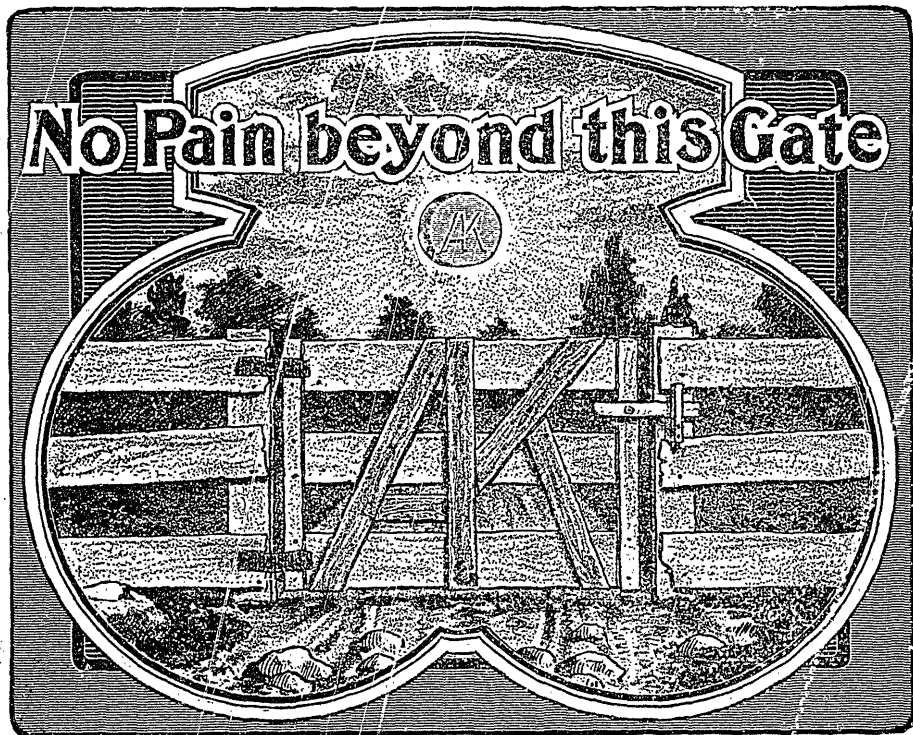
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VOL. XIII.

HALIFAX, N. S., AUGUST, 1901.

No. 8.

Original Communications.

ADDRESS IN SURGERY.*

By A. PRIMROSE, M. B., C. M. Edin., M. R. C. S. Eng, Professor of Anatomy and Associate Professor of Clinical Surgery, University of Toronto.

When asked by your Secretary to deliver the Address in Surgery before the Maritime Medical Association I accepted the honour in ignorance of what it involved. It would have given me infinitely more pleasure had I been permitted to attend your Society meeting in a much humbler capacity; but, as a Nova Scotian by birth, I feel that I am addressing friendly critics who will pardon my shortcomings—and perhaps account for them by considering that they are due to the unfortunate circumstance that I have left my native province and have settled in the West.

The beginning of the new century has brought out many able articles describing the progress of surgery for the past hundred years. The death of our beloved Queen a few months ago has stimulated many British writers to give a retrospect of the progress of our profession during the Victorian era. The historical record has thus been fully written, and it would appear justifiable now to make reference to some of the more recent developments, particularly in connection with certain principles which have been enunciated during the latter part of the nineteenth century and which are at the very foundations of modern scientific surgery, principles forming the foundation which has been laid broad and deep and has stood the

*Delivered before the Maritime Medical Association, Halifax, July 4th, 1901.

stress and strain of the development of a remarkable superstructure in the surgery of to-day.

ANÆSTHESIA.

The practice of surgery before Simpson's time was a cruel task for both operator and patient, and those of us who were not in practice during the pre-anæsthetic days can hardly realise what an untold blessing the introduction of anæsthetics has been in relieving human suffering and in permitting us to extend the field of operative surgery.

There was most unreasonable opposition to the use of anæsthesia shortly after its introduction. For example, in addition to objections on moral and religious grounds, it was supposed that people died of apoplexy as a result of chloroform administration, and other dire calamities were supposed to follow. Simpson in referring to apoplexy speaks of an incident in the life of Lord Loughborough as narrated by John Lord Campbell. The biographer states that when he first travelled from Edinburgh to London in a mail coach the time had been reduced from the former twelve or fourteen days to three nights and two days. "But," he adds, "the new and swift travelling from the Scots to the English Capital was wonderful, and I was gravely advised to stop a day at York, as several persons who had gone through without stopping had died from apoplexy from the rapidity of the motion." "Be assured," says Simpson, "that many of the cases of apoplexy alleged to arise from ether or chloroform have as veritable an etiology as this apoplexy from rapidity of motion." All such absurd objections to the use of anæsthesia have of course long since been removed.

The choice of anæsthetic is to-day, however, a question the importance of which can hardly be exaggerated. In this age of specialism one is inclined to relegate the settlement of it to those who are making a special study of it. It is true that experimental physiologists have so far been of little assistance to us in their attempts to settle this difficult problem. The Hyderabad Commissions have failed to convince the profession as a whole of the infallibility of their conclusions, and we find even that their results are directly challenged by eminent British experimenters, chiefly those of the Cambridge School. In the meantime we are content to watch the "battle royal" from a respectful distance, and to entertain the hope that some definite and incontrovertible evidence may soon be forthcoming from the physiological laboratory regarding the action of chloroform on heart,

respiration, etc. We turn however more hopefully to anæsthetists who are daily administering anæsthetics to their fellows. It is true that here too we find difference of opinion. Visiting Edinburgh recently I found as of old that chloroform was the favorite general anæsthetic; whilst in London one observed that ether is still considered the preferable drug. I am bound to admit that as an Edinburgh man visiting London I always felt convinced that the London men did not know how to give chloroform; and, to be absolutely fair, one might add that in Edinburgh ether is not administered as elegantly and with as much comfort to the patient as in London. I have learned as an operating surgeon to be content to leave the choice of an anæsthetic at my operations to the anæsthetist, provided I have thorough confidence in the administrator. With perfect satisfaction I find that ether preceded by nitrous oxide gas is thoroughly satisfactory, after the manner suggested by F. W. Hewitt of the London Hospital. In the hands of a competent administrator I find that the patient always invariably becomes completely anæsthetized without a struggle in from one and one-half to four minutes, and one may at once proceed with the operation. Whilst this is my experience in Toronto with ether in the hands of a skilled administrator, I find that a colleague of mine, also a skilled anæsthetist but from the Edinburgh school, sticks with the pertinacity of his Scotch preceptors to chloroform, and, I freely admit, with results leaving nothing to be desired. Thus I have come to the conclusion that for the operating surgeon it is rather the choice of an anæsthetist than the choice of an anæsthetic that concerns him. Fortunately fatalities from the administration of anæsthetics are extremely rare. Recently Gurlt produced statistics before the "Deutschen Gelleschaft für Chirurgie" concerning the mortality under anæsthetics as follows:

Chloroform	—	—	—	—	1 death in 2075 administrations.
Ether	—	—	—	—	1 " " 5112 "
Chloroform and Ether	—	—	—	—	1 " " 7613 "
A.C.E. (Billroth's Mixture)	—	—	—	—	1 " " 3370 "

Statistics are however of little value. It seems clear that not infrequently when death occurs the fatal issue is postponed for some hours, so that, particularly in respect to ether, fatal consequences which may be directly traced to the anæsthetic do not occur for twenty-four hours or perhaps several days from the date of administration. However this may be, it is obvious that one of the most important

branches of instruction in our medical schools should always be instruction in the proper method of administering anaesthetics.

Local anaesthesia has of recent years proved a discovery of great importance. The discomfort and danger of the general anaesthetic may often be dispensed with in minor surgical operations under cocaine. In 1894 Dr. Schleich of Tübingen demonstrated a new method of what is called "Infiltrations-anæsthesie." A very weak solution of cocaine (1 per 1000) is used, the solvent being a physiological salt solution of about half the usual concentration. A small spot of skin near the field of operation is rendered insensible by ethyl chloride, and here a few drops of cocaine solution are injected. At the spot of infiltration a bulla immediately rises, which is absolutely without sensation. Pushing the point of the syringe through the area of insensibility Schleich again injects a few drops. Another bulla rises close to the first, and, proceeding from bulla to bulla around the field of operation, the whole is infiltrated and rendered quite anaesthetic. Schleich suggested three different solutions for this purpose of varying strength. In normal healthy skin the cocaine injection is very much weaker than is necessary in inflamed or hyper-sensitive areas. The writer has observed that a two per cent solution of cocaine is all that is necessary in most cases in which local anaesthesia is indicated. One is bound to state from one's experience that the infiltration method is sometimes fraught with danger, being sometimes followed by extensive sloughing of the tissues throughout the area of infiltration. If the operation is too extensive for the use of a two per cent solution of cocaine in the usual way one would prefer a general anaesthetic to Schleich's infiltration method.

Some reference may be made to the introduction of cocaine into the spinal meninges in the lumbar region. This was suggested by Bier of Kiel. It would appear that some years previously Covering of New York in 1885 injected a solution of cocaine as near to the spinal cord as possible and produced insensibility of all the body below the point of injection. The idea of injecting the solution into the lumbar region of the spinal meninges was suggested to Bier when Quincke of Kiel devised the well known means of puncturing the spinal canal in the lumbar region for the purpose of drawing off cerebro-spinal fluid. One cannot speak from any experience of this method, but one is interested in observing cases which have been reported in literature. It has been recently stated that the method

has been used on the Continent about 2000 times, and of these six fatal cases have been placed on record. If this be true, the mortality under this method of producing anæsthesia is about six times as great as that of chloroform, and many more times greater than that of any other anæsthetic. It would therefore appear from this standpoint alone that one should hesitate to employ the method, though one can conceive that certain circumstances might arise in which its employment might be desirable.

ANTISEPTIC AND ASEPTIC SURGERY.

A review of the more recent progress of surgery cannot be complete without inquiring into the present status of our knowledge regarding the guiding principles which underlie the surgical treatment of wounds, known as the antiseptic or aseptic method—a method which we owe to the scientific insight and genius of Lord Lister. The writer is old enough to remember something of the fierce antagonism which many leaders of our profession showed to Lister's methods. Even as late as 1887, one finds a prominent English surgeon writing as follows: "The germ hypothesis has in this country adherents whose opinions are entitled to respect, but it appears to me to be not proven and more likely to be abandoned than to be confirmed." To-day we find that the field is completely abandoned by such sceptics, and Lister has lived long enough to have received something of the gratitude he so well deserves for the inestimable service he has rendered to humanity. It is true he received encouragement very shortly after he had introduced the system from the remarkable results which were at once obtained. In his address before the British Association, after referring to his results in the Glasgow Royal Infirmary, he narrates the following incident: "Equally striking changes were afterwards witnessed in other institutions. Of these I may give one example. In the great Algemeines Krankenhaus of Munich, hospital gangrene became more and more rife from year to year, till at length the dreadful condition was reached that 80 per cent. of all the wounds became infected by it. . . . The institution seemed to have become hopelessly infected, and the city authorities were contemplating its demolition and reconstruction. Under these circumstances Professor Von Nussbaum dispatched his chief assistant to Edinburgh, where I at that time occupied the Chair of Clinical Surgery, to learn the details of the antiseptic system as we then practised it. He remained until he had entirely mastered them, and after his return

" all the cases were on a certain day dressed on our plan. From that day forward not a single case of gangrene occurred in the Krankenhaus. The fearful disease, pyæmia, also disappeared, and erysipelas soon followed its example."

For the past few years Lister has learned something of the gratitude of his fellows by the honours which have been conferred upon him. In Britain he has been created a Peer of the Realm, and in turn President of the British Association for the Advancement of Science, and President of the Royal Society. In foreign countries too, scientists have vied with one another in their efforts to do him honour. One would think, however, that perhaps the greatest satisfaction which he must now enjoy is in being able to write, as he did in the Huxley Lecture, that "the principle that first guided me still retains its full value; and the endeavour to apply that principle so as to ensure the greatest safety with the least attendant disadvantage has been my chief life work."

It is not my intention to say anything in detail regarding the work of Lister. We have all, I am sure, been greatly interested in the delightful sketches he has himself given of his life's work, mainly in two articles, the first as President of the British Medical Association at Liverpool in 1896, and last year in the Huxley Lecture at the Charing Cross Hospital. In the latter paper he speaks of his early work in the physiological laboratory, where he made important observations on the physiology of the blood, the process of clotting, the phenomena of inflammation, the function of cilia, the diffusion of pigment in the cells of the frog's skin, etc.

Lister was essentially practical. He seemed to have the peculiar faculty of getting a fragment of scientific truth and then building upon it so as eventually to evolve deductions of great practical value. For example, Kölliger discovered the fibre cells of involuntary muscles, which he demonstrated as existing along with elastic tissue in the middle coat of the larger arteries. Lister followed up this piece of work by demonstrating muscle in the finest arteries, and thus he settled a difficulty in accounting for the hitherto unknown mechanism of construction of these vessels. Bernard detailed his classical experiment regarding the turgid condition of the rabbit's ear from increased blood supply after section of the cervical sympathetic; Waller showed that extreme pallor was the result of stimulation of its peripheral end; Lister connected the central nervous system with

these processes, and suggested by his experiments on the spinal cord the true mechanism of vasomotor action. Whilst experimenting in order to test the accuracy of Richardson's view that coagulation of the blood was due to the escape of ammonia, Lister not only proved the falsity of Richardson's view, but in doing so he demonstrated the very important influence which injury of the vessel wall has in determining the formation of a clot. But the crowning proof of Lister's remarkable power of assimilating scientific truth and developing it appeared when Pasteur demonstrated that putrefaction was caused by microbes growing in putrescible material, and the falsity of the suggested possibility of spontaneous generation of microbes. It was the application of this truth to scientific surgery which has made Lister the hero in Medicine which we acknowledge him to be to-day.

The time has gone by when the enthusiastic disciple of Lister in an address of this kind finds it necessary to define the principles of antiseptic surgery and then summon evidence from his own practice in support of that doctrine. We have all had experiences now-a-days which prove the truth of these principles, and we are all of one mind on the subject.

The progressive character of Lister is remarkable—in fact he moved far too fast for many of his followers. Witness his remarks at the Berlin Congress in 1890 (eleven years ago)—remarks which almost staggered those who had learned to place absolute confidence in every detail of his antiseptic methods. At that time in Berlin he produced what he stated to be “absolute demonstration of the powerlessness of atmospheric dust in surgical operations.” “This conclusion,” he says in a recent address, “has been justified by subsequent experience. “The irritation of the wound by antiseptic irrigation and washing “may therefore now be avoided, and nature left quite undisturbed to “carry out her best methods of repair, while the surgeon may conduct “the operation as simply as in former days . . . the use of simple “means which will suffice to exclude from the wound the coarser “forms of septic impurity.” This, one observes, is the true basis of modern aseptic surgery.

In attempting to give an address upon the status of modern scientific surgery one has almost involuntarily turned to Lord Lister's work as constituting the basis of it all. Let me before concluding my remarks on Lister's work call attention to the fact that, although, as he remarked himself recently with great regret, advancing years have

made it necessary for him to retire from the active work of his profession as a surgeon, yet one finds that he is still active in his efforts to promote scientific truth of practical value for the profession. Witness his exhaustive papers "On Recent Researches with Regard to the Parasitology of Malaria," delivered to the Royal Society on the 30th November last. He shows the gradual evolution of the mosquito-malarial theory and indicates its true value. Incidentally he gives credit where it is due to the pioneers in this field of research, and, in the words of the writer in the *British Medical Journal*, checks "the somewhat undignified form of scientific piracy of certain continental workers," who have attempted to belittle the work done by others, and to claim credit for themselves.

There is such a thing as riding a hobby too hard, and it is ludicrous to observe how extreme some individuals have become in their efforts to outdo Lister. The late Mr. John Duncan of Edinburgh, in his address on opening the Surgical section of the British Medical Association in 1898, referred to the ridiculous extremes to which some so-called antiseptic surgeons go. The expenditure of money on tiles and glass to such a lavish extent in some hospital theatres is remarkable. He suggests that if some of these extremists would be logical in carrying out all necessary requirements they must cut off the spectators at an operation by an impermeable but transparent screen—the emanations too of the operator and assistants being much more likely to reach the wound than those of the spectators. Mr. Duncan pictured to himself "a time when every one concerned in an operation—patients, surgeons, and assistants—having been rendered from top to toe cutaneously aseptic, shall cover each natural orifice of the body with an antiseptic mask, and clothing themselves in a raiment scientifically pure, shall pass into an atmosphere freed from germs by the air pump and by heat."

There really appears to be a danger that the elaborate measures which are sometimes taught regarding necessary procedure in operative surgery are destined to mask and render obscure the few simple elementary principles regarding micro-organisms and their action on wounds which should be impressed with simple and absolute clearness upon students.

One aspect of the subject is deserving of our best attention at present. The tendency is to lavish all the care possible upon our methods of conducting an operation aseptically. This is prudent—

but too little attention is paid to the subsequent treatment of the wound. The surgical dressing deserves more attention than it gets, and if certain individuals would turn their attention to the dressing and divert their minds for a little from the fixtures and upholstery of the operating theatre they would be rendering more useful service to surgery.

A paper was recently published on "The Dressing from a Physical Point of View," "*Les bases physiques du traitement antiparasitaire des plaies*," by M. le Dr. M. J. Preobajensky of St. Petersburg. The paper is published in the "*Annales de l'Institute Pasteur*," (1). A fact which is now well recognized is stated, to the effect that wounds made under the strictest antiseptic precautions are often not sterile. It has been calculated in fact that only fifteen per cent. of such wounds are sterile, the remaining eighty-five per cent. become contaminated with micro-organisms, often with pyogenic microbes. In spite of this fact a large number of the eighty-five per cent. heal by first intention. The chemical action of the antiseptics on bacteria is no doubt of value in preventing the entrance of bacteria into the organism, but there are other considerations demanding our attention in our efforts to render these bacteria innocuous in wounds. The following considerations are culled from the paper by Preobajensky. The material of the dressing must be porous and permeable. The capacity for absorption varies with different materials, thus undressed hemp absorbs from 2 to 20 per cent. of its own weight of water, whilst charpie, gauze and cotton wadding absorbs 186–312 per cent. of their own weight of water. The nature of the liquid also affects the amount of absorption. Thus a smaller quantity of blood will be absorbed than of water. To these factors must be added the hygroscopic and elastic qualities of the dressing material.

A very pretty experiment is devised to show the direction of the current of fluid through an absorbent dressing under different conditions. A skein of charpie (very narrow thread-like strips of linen, torn off so as to leave fringed edges), or a small roll of gauze is placed in a flask containing water. One end of the skein is immersed in the water in the flask, the other projects some distance beyond the mouth of the flask and externally lies at a point beneath the level of the fluid in the flask. The fluid first rises in the gauze by capillary attraction, and then passing out to the extremity of the skein it courses on by siphon

(1) Tome xi, No. 9—1897, p. 699.

action and drops readily from the free end of the gauze. If at some point in the gauze skein a small fragment of aniline blue (soluble in water) be placed, the part of the skein beyond that point becomes stained as the current carries the dye on. Raise the free end of the skein above the level of the fluid in the flask, then if the rapidity of evaporation is sufficient, e. g. if the air be dry, the blue travels on in the same direction as when there was siphon action. If on the contrary one prevents evaporation by such a simple device as putting a bell jar over the flask, then the current is reversed, and the coloured fluid passes towards the water in the flask. Absorbent cotton gives similar results, but it will be necessary to tease out the free extremity of the wool in order to favour evaporation. It is most interesting to observe that evaporation may further be facilitated by applying various powders which get wet because their molecular attraction for the water is greater than that of the wool, and they add their evaporation to that of their substratum of wool. Iodoform, charcoal, subnitrate of bismuth and other substances have been found to produce this effect.

Osmotic currents were also experimented with by emersing sacs of parchment in a fluid and causing a current into the sac by placing a gauze wick therein which was exposed by a free end to the air and allowed to evaporate.

The nature of the dressing, and the external conditions of humidity and temperature necessarily affect the rapidity of evaporation and the result.

Closed cavities were also experimented with and similar results obtained.

Experiments of a more interesting and suggestive type were conducted on animals to determine the influence of the dressing and other conditions of environment upon the processes of absorption from the surface of the wound into the body of the animal. The influence of the dressing, the effect of the application of various powders to the surface, the action in this regard of aqueous solutions, disinfectants, glycerine and oil; also the influence produced by the surrounding medium. Certain substances were applied to the wound of such a nature that their poisonous effects upon the animal would be

very obvious if they were absorbed. These substances were:—

Strychnine.

Ricin (powdered or an aqueous solution).

Blood decomposed and putrid by exposure to the air.

Pyogenic microbes

Streptococcus of Marmorek.

Experiments with Strychnine.—White mice were used for the purpose, and one hundred and fifty experiments were made. A wound was made by scraping the epidermis off with a razor, or a deeper wound was made into the subcutaneous tissue. A seton or tampon of gauze powdered with strychnine or saturated with a solution of strychnine in excess is applied. If the subsequent dressings permitted of sufficient absorption from the wound into the dressing and also of evaporation from the surface to the surrounding air then the animal recovered, but if the dressings were not absorbent and evaporation were interfered with the animal died with symptoms of strychnine poisoning. The effect of powdered substances on absorption was also observed, and for this purpose coffee, charcoal, chalk, magnesia, talcum powder and iodoform were used for the experiment. The wound was first powdered with strychnine and afterwards with one of these powders. In most instances the animal survived, whilst it was killed if strychnine alone were used. From the variety of substances used it was evident that the beneficial result obtained was due to the absorption and evaporation produced by the powders rather than to their possible antiseptic action. Similarly liquids were experimented with, the ordinary antiseptic fluids being used—carbolic acid five per cent, corrosive sublimate one per cent, zinc chloride five per cent, glycerine, oil, alcohol, ether and water. With carbolic acid and sublimate the exudate is increased, and if allowed to remain stagnant the animal dies of strychnine poisoning. The wound was first scrubbed with the lotion and then the strychnine powdered on. If on the first symptoms of poisoning an absorbent dressing is applied the animal usually recovers, but if a piece of impermeable protective be applied over the same dressing the animal dies of strychnine poisoning. Thus by preventing evaporation by means of the protective one creates conditions favorable to the absorption of toxic substances by the skin. Similar results were obtained by alcohol, which however diminishes exudation; and with glycerine, which prevents the wound from drying. In the case of oil it was found

that if the strychnine were applied before the oil then death occurred but if in the reverse order than the animal recovered. In other words the oil formed an efficient barrier to the entrance of the poison.

As an example of a tox-albumin, ricin (the active principal of castor oil, a vegetable albuminoid) was used, and guinea pigs employed for the purpose. This is a most rapidly fatal poison if absorbed or if injected subcutaneously. The material was powdered on the wound or applied in solution. It was found well to increase the exudation from the wound by appropriate applications and to favor absorption into the dressings and evaporation from the surface by loose dressings and the use of powdered substances. An efficient dressing for the purpose was found to be first a layer of moist gauze over which a layer of dry gauze. If the conditions of the absorbent dressing and evaporation were efficiently realized the animal survived and the wound healed, but death rapidly occurred if these conditions were not fulfilled.

An instructive series of experiments was carried on with blood which had been allowed to become putrid by exposure to the air. Dogs were operated upon in the dissecting room under septic conditions without any attempt to carry out antiseptic details. In the first series of experiments the action of wounds under these conditions was observed, the application of the putrid blood being omitted. An incision 15 to 20 cm. long was made through the skin and the wound allowed to granulate. The only dressing employed was that of placing every day upon the wound a piece of gauze which had been immersed in distilled water, over this dry gauze and a bandage. These wounds healed without suppuration, and it is claimed that they did so because of the physical qualities of the dressings allowing of efficient absorption and evaporation. Putrid blood was now added in the second series of experiments. The toxic quality of this blood is proved by the fact that when injected into the vein of a dog it caused fatal results in twelve hours. The surface of a wound was first washed with water and then covered with the putrid blood. Healing by first intention occurred under a dressing similar to that employed in the first series of cases. If however with exactly the same conditions there be added to the dressings a covering of impermeable protective the animal will die of sepsis, unless indeed it succeeds in tearing the dressing off and in licking the sore.

Virulent cultures of anthrax were used in similar lesions of the

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The above combination cannot but at once appeal to the intelligent practitioner as almost a specific in the treatment of the various kinds of pain incident to the diseases of the female sexual organs so varied in their character and such a drain upon the general health and strength.

In the new preparation of Viburnum now submitted to the profession the unquestionable utility of this agent is greatly enhanced by the addition of remedies possessed of analogous powers. Not only is the value of Viburnum thus promoted in the special field of its therapeutical activities, but a more extended range of powers is thereby secured. In other words, our new preparation possesses all the virtues of Viburnum, and in addition, all of the therapeutic properties of Hydrastis, Pulsatilla, and Piscidia.

Each fluid ounce of this Elixir contains forty grains Viburnum Opulus (Cramp Bark), thirty grains Hydrastis Canadensis (Golden Seal), twenty grains Piscidia Erythrina (Jamaica Dogwood), ten grains Anemone Pulsatilla (Pulsatilla):

DIRECTIONS.—The Elixir being free from irritant qualities may be given before or after meals. It has, indeed, the properties of a stomachic tonic, and will promote, rather than impair, appetite and digestion. The dose for ordinary purposes is a dessert-spoonful three times a day. When the symptoms are acute, or pain is present, it may be taken every three or four hours. In cases of dysmenorrhœa, neuralgic or congestive, the administration should begin a few days before the onset of the expected period. In irritable states of the uterus, in threatened abortion, in menorrhagia, etc., it should be given frequently conjoined with rest and other suitable measures. For the various reflex nervous affections, due to uterine irritation, in which it is indicated, it should be persistently administered three times a day. When the pains are severe or symptoms acute the above dose, a dessert-spoonful, may be increased to a tablespoonful at the discretion of the patient, or advice of the attending physicians.

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It has Gained a Wide Reputation; particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

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The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, FINDS THAT NO TWO OF THEM ARE IDENTICAL, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen, when exposed to light or heat, IN THE PROPERTY OF RETAINING THE STRYCHNINE IN SOLUTION, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing to write "Syr. Hypophos. FELLOWS."

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles; the distinguishing marks which the bottles (and the wrappers surrounding them) bear can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

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skin in guinea pigs. The wounds were spread over with portions of a culture of bacillus of anthrax in bouillon. With non-absorbent dressings the animals succumbed in two or three days. With efficient dressings the animals lived six or eight days, the dressings not having been removed.

The streptococcus pyogenes or Marmorek in its very virulent form was used extensively for experiment. For example lesions in rabbits were treated with gauze steeped in culture of this organism. Two rabbits were placed in a cage in which the air was kept very moist, thus preventing efficient evaporation, and the animals died. Two other rabbits were similarly treated but were placed in a very dry atmosphere, where evaporation from the dressing was free; these animals recovered with but little irritation in the wounds.

The evidence we get from the experimental laboratory is precisely in accord with our every-day experiences. One has insisted frequently on the necessity of changing a dressing the moment it is observed that the discharge has reached the surface. One has taught that under such circumstances there is great danger of septic infection of a wound. One is bound to admit, however, that the explanation offered has not been along the lines of that suggested by the experiments I have just narrated. It is quite obvious that the true explanation is that when the dressings become saturated with the discharge the absorbent quality of the dressings is destroyed and evaporation interfered with. A further lesson we learn is regarding the value of gauze both as a dressing and as a drain. It is of great value for example in draining every cul-de-sac in a case of purulent peritonitis. Recently in a case of this nature, a child with suppurative appendicitis and general purulent peritonitis with profound septic poisoning, I contented myself by opening the abdomen and placing gauze drains in various directions without further interference. The child recovered after a very critical illness. A series of experiments was carried out by Preobajensky in which he proved that the microbes themselves as well as their toxins were carried in osmotic currents by siphonage, by absorption, etc.

I have described these experiments in some detail because they appear to me, as a practical surgeon, to be of considerable importance. They explain many of our difficulties, and incidentally they clear up many of the discordant results which have been obtained by various experimenters who have not taken into account the physical qualities

of the dressing but attributed their results wholly to the action of the antiseptic substance used on the surface of the wound. It is obvious that Lister's protective was a mistake. True, it might not always interfere with the favorable result in a wound produced under antiseptic conditions, but undoubtedly it added an element of danger, and it is now I think pretty generally abandoned. A few weeks ago in operating on a case of empyema I demonstrated to my class the use of a piece of protective arranged in the manner which has been suggested, so as to have a valvular influence in bringing about expansion of the lung. Apart from this being in my opinion quite unnecessary, I satisfied myself that it had a positively pernicious effect. The child's temperature kept up when I looked for a fall, and in the course of a few days it suddenly occurred to me that my protective was the cause of it. I replaced it by an absorbent dressing, and next day the temperature was normal. It is quite obvious that one cannot carry out the conditions necessary to produce a dressing in all instances which is faultless as to its physical properties. It is not claimed that these physical properties are even as important as the antiseptic qualities of our dressing, but we should exercise the utmost care to establish conditions which should favour absorption and evaporation from our wounds.

Undoubtedly of great importance in securing protection of the tissues of the body from the invasion of bacteria is the vital function of the tissue cells in their destructive action on microbes. The story of this discovery forms one of the most romantic pages in the history of modern scientific medicine. In 1884 Metschnikoff first published his researches in connection with an experiment upon the water flea, the *Daphnia*—and its power of dealing with the attempted inroads of a parasite in the form of a single-cell yeast plant (*monospora bicuspadata*). The parasites are apparently swallowed by the *Daphnia*, and the spores of the yeast plant become loose in the stomach and penetrate its walls and thus find their way into the tissues of the animal. Metschnikoff observed that each invading spore became surrounded by blood corpuscles and as a result the spores undergo degeneration and are destroyed. "The blood corpuscles unite to form firmly granular pale plasmodia, which exhibit amoeboid movements and contain the granular remains of the spores. When however too many spores reach the body cavity, or when for some reason the spores remain uninjured, disease occurs, the spores germinate and are carried

all over the body." Metschnikoff subsequently experimented with the anthrax bacilli in frogs and made some early observations in connection with erysipelas in man. Upon the results observed in these experiments he built up the beautiful theory of phagocytosis and its relation to immunity—conclusive proof was soon forthcoming from a host of observers that leucocytes and other cells of the body were thus capable of taking up bacteria into their substance. Contrary to Metschnikoff's early view, however, it became evident that the presence of living microbes in the substance of a cell does not necessarily mean destruction of the microbes; it might on the contrary, and does sometimes mean destruction of the cell by the microbes.

We have not time within the limits of this paper to discuss phagocytosis, or that apparently somewhat correlative condition in connection with tissue activity known as chemotaxis, i. e., the property possessed by certain chemical agents, whether secreted by bacteria or of other origin, of attracting or repelling leucocytes. But a review of our knowledge of the conditions influencing the healing of our wounds would be wholly incomplete if we omitted reference to these phenomena. In these processes we have demonstrated another safeguard against the inroads of bacteria—that furnished by the vital activity of the individual leucocytes and other cells of the body.

Some of us remember how delighted Lister was to learn of the phenomena of phagocytosis because, very early in his experience, he realized the fact that it was exceedingly difficult, often impossible, to get an absolutely sterile wound, and until the doctrine of phagocytosis was propounded he could see no reason why every wound containing microbes should not become septic and permit of unlimited increase of the number of microbes such as would occur in any suitable artificial culture medium. As a fact he found that many of these wounds healed if the dosage or the virulence of the bacteria were not too great. Destruction and disappearance of the bacteria occur in such cases by phagocytosis and healing then takes place by first intention.

It is well observed that the chances of absorption of toxins or of microbes are greater at the time of operation when we have open blood vessels and lymphatics than at any other. This being the case, it has been suggested that we should employ substances in our wounds which provoke the coagulation of the blood. Alkalies and soap, for example, arrest coagulation and should not be brought in

contact with the wound. But the establishment of healthy granulation tissue is a safeguard against absorption, and we therefore recognise that the early treatment of the wound, until such time as granulation has been established, is to be carried on with scrupulous care.

Let me direct your attention for a moment to a recent paper published in *Ziegler's Beiträge* by Dr. Jürgelinas from the laboratory of Prof. Pawlowsky in Kiew, (1) regarding the effect of granulation tissue in preventing the absorption of micro-organisms or their products into the organism. The technique of the experiments carried out was as follows: An aseptic wound was made in the back of an animal of sufficient depth to divide muscular fibre. After checking bleeding the wound is dressed with sterilized gauze and an aseptic bandage applied. No antiseptic fluid is employed. After three to six days when healthy aseptic granulation tissue is formed, a pure culture of a pathogenic microbe is implanted upon the granulation tissue. After a limited period the animal is killed by chloroform, and the condition of the wound and of the internal organs is investigated. Two varieties of dressing were used, one in which a waxed cloth (really comparable to protective) was placed on the surface of the wound and then gauze dressing and a bandage; the other in which loose absorbent gauze was used omitting the waxed cloth. Experiments were conducted with the staphylococcus pyogenes aureus on two guinea pigs with a granulating wound of four days standing, and on a rabbit with a granulating wound of five days standing. A pure bouillon culture of staphylococcus pyogenes aureus was implanted on the granulating surface in each case. After twenty-four hours the animal was killed by chloroform. A rich culture was found on the surface of the wounds but the internal organs of the animal were sterile. Control experiments were carried out at the same time, the staphylococcus being implanted upon perfectly fresh wounds made under similar precautions to the others. In these not only was a rich culture found on the surface of the wounds but the internal organs also gave cultures of staphylococcus aureus and no other important microbes. From this experiment we are forced to believe that

(1) "Ueber die Durchgangigkeit des Granulationsgewebes für pathogene mikroorganismen."—*Beiträge zur Pathologischen Anatomie und zur allgemeinen Pathologie*. XXIX Band Heft. 1, p. 29—1901.

granulation tissue acts to a certain degree as a preventive against the entrance of micro-organisms (staphylococci) into the body.

Similar experiments were conducted on three rabbits and one dog with granulating wounds of from three to five days standing, with bacterium coli commune. Twenty-four hours after implanting the culture the animals were killed and culture found on the wound surface but none in the internal organs. Whilst with control animals with perfectly fresh non-granulating wounds a culture was obtained not only from the wound surface but also from the internal organs. Similar results were obtained in three guinea pigs with the use of the bacillus pyocyaneus. Still more remarkable results were obtained in experimenting with the anthrax bacillus. Here observations were made on the conditions of absorption in a granulating cavity. In a four months old dog the knee was resected and five days after he inserted a culture of anthrax. The dog remained alive whilst the control animal died after five days.

Jürgelinas also conducted a most interesting series of observations on the granulation tissue of infected wounds as studied under the microscope. The fate of the bacteria in the granulation tissue and in the exudate from the wound was observed. Gram-Weigert's method of staining was employed and the tissue examined at intervals of from four to twenty-four hours after inoculation. Bacilli were found in the peripheral portion of the granulations. They stained well and were well formed. In the twenty-four hour preparation the mass of bacilli had diminished. In the exudate the first hour after inoculation the bacilli were normal in form and stained well. In later preparations they stained more feebly. In a sheep, which died of the infection, bacilli were found in all sections of the granulation tissue chiefly in the spaces between the cells and in the blood vessels, the latter being almost blocked with them. Phagocytosis was very feebly noticeable, but it was observed here and there. In more or less immune animals bacilli were present in the superficial part of the granulation tissue, but their number was small. Each bacillus appeared a little swollen, and stained feebly, but there was no marked evidence of degeneration. In the section six days after infection the granulation tissue was wholly devoid of bacilli. On examining the exudate after the first hour the bacilli appeared as in the other animals, but after that they appeared granular, aggregated sometimes and thickened, staining feebly. Phagocytosis is not observed, the

death of the bacilli being apparently determined by extra-cellular processes.

We conclude therefore from this series of experiments that uninjured granulation tissue acts in most cases as a barrier against the inroads of bacteria into the body. The bactericidal property of the cells of granulation tissue and the phagocytic processes also of the leucocytes play a two-fold roll in protecting the animal against infection.

These experiments and observations demand our most careful consideration and should guide us to some extent in our practice. The ideal surgical dressing may not as yet be at hand. My favourite dressing is plain sterilized gauze, and for some years I have first powdered my wound with a powder of acetanilide one part and boracic acid three parts, over this the gauze applied has been wrung out of carbolic acid, aqueous solution 1 in 40, then dry gauze, then a bandage. This dressing seems to fulfil the conditions as to the physical qualities necessary, it combines also the requisite antiseptic precautions and I find that it is very satisfactory.

It is extremely interesting to observe that whilst we are able now-a-days to employ rational methods of treatment on a true scientific basis, good results were often obtained by our predecessors working from a purely empirical standpoint. We speak to-day of the necessity of absorbent dressings and of the value of providing free evaporation; formerly similar effects were produced upon wounds but in a much less efficient manner by the use of a drainage tube, the value of which was recognized over three centuries ago—Ambrose Paré mentions their value in his work published in 1579. It was pure empiricism then however. The comparatively vague ideas he has of the anatomy and physiology of the body, and the entire absence of any scientific basis for the use of the drainage tube may be imagined from his description of a fracture of the skull. After narrating the circumstances which led to the injury, he says, "I trepanned him, and after I had done, some days after, I took out some four splinters of broken bone; and I put in a plain leaden pipe (I insisting the patient over, when I dressed him, to hold down his head, to stop his mouth and his nose, and then strive as much as in him lay to put forth his breath) much sanious matter came forth, other filth which stuck more fast I washed with a detergent decoction and I did so much God blessing my endeavours that he at length recovered." Paré used a pipe of gold,

silver or lead for wounds of the chest and a great sponge steeped in aqua vitæ and wrung out again was laid over the orifice of the tube in order that air might be prevented from entering and that it might help to draw forth the discharge.

The French surgeon, Chassaignac, was the first to use the drainage tube extensively in modern surgical practice. We all know the importance which was placed upon the use of the drainage tube by Lister in the early days of antiseptic surgery. We are only now however, beginning to appreciate its true value, and, as we know, more favourable results are in many instances obtained by securing drainage by other means than through a tube.

The recognition of the principles of anatomy, physiology, pathology bacteriology, and along with these chemistry and physics, is responsible for the great advance in surgery in recent years. In this age we must not be wedded too closely to special methods; we must be prepared to improve these as advances are made in the sciences upon which our treatment must be based. We too slavishly follow authority on many occasions. We learn much by reading history, and if we studied history more we would become convinced that it is sometimes salutary to "kick over the traces." For example we owe the tremendous advance in the knowledge of anatomy in the 16th century to the courage and determination of Vesalius. At that time Galen was still the authority whom no one but Vesalius had the courage to challenge. Galen had drawn his knowledge of anatomy chiefly from dissections of the monkey. Adverse critics attacked Vesalius, his old teacher Sylvius being one of the most bitter. When Sylvius got worsted in the controversy and was at last forced to make admissions that some of the statements of Galen were not in accord with what was found in the human body, he covered his retreat by insisting that the human body had changed since Galen's time "and," he added, "not for the better." "It was deterioration he saw, not improvement, although the standard of excellence chosen by Sylvius was Galen's description of the ape." "History repeats itself"—witness the hostile critics who greeted Simpson in his efforts to champion the use of anæsthetics; and as we have occasion to observe, Lister likewise encountered a fierce and unreasonable antagonism.

Let us therefore endeavor to take every advantage of the advances made in science and never hesitate to employ new methods and abandon old ones when we are convinced that such a course is demanded of us. We cannot do better than follow the advice laid down by Lord Lister in his address before the British Association, "Let the thing tried be that which, according to our best judgment, is the most likely to promote the welfare of the patient. In other words, Do as you would be done by."

PUBLIC HEALTH.*

By A. P. REID, M.D., Middleton, N. S., Secretary of the Provincial Board of Health.

Not very many years ago the question of Public Health received but little attention, as it was quietly assumed that disease like bad weather was quite unavoidable and the best we could do was to put up with it. But when our pathology got reduced to practical lines it became more and more evident that the greater percentages of disease and death were from infectious causes—and as infection was preventable, then also were the disease and death that resulted from it also preventable. As a natural result of this came the question—Why not prevent it? Hence we have the science of PUBLIC HEALTH as it is today.

As time passes on, more and more of the diseases afflicting humanity are transferred from the *general* to the *infectious* class and there is the prospect that in time, as we get increased knowledge, we may get nearly all of them in this class, and as a result at some time in the distant future death and disease may be confined to old age and accident. Hence there is the probability that the physician of the future will be the intelligence which directs the public and as well private life to the end that health will be the common lot of humanity and there need be no diseases to cure. The future thus portrayed is dim and distant, yet it is appreciable, and it is well that we should have the tangible star of perfection to direct us on a course that is beset with many devious and uncertain stretches—and though we may wander, it will still direct us aright.

The science of Hygiene or Public Health is the exponent of the future of the profession and deserves the increased attention it is receiving. Our province is in the procession and though backward in some ways is fairly in line in others, and we must keep pushing ahead. The most difficult problem to solve is the education of the public and it will take time and endeavor before the people will appreciate that which is specially designed for their benefit.

This subject is so extensive that I am at a loss to know where to begin and we may occupy our time in reviewing the past year.

* Read at meeting of the Maritime Medical Association, Halifax, July 4th, 1901.

1st. *School Houses.*—This subject is one about which it is difficult to know where to begin to criticise—as there is a perfect want of system in their construction and it is most desirable that there should be some competent central authority with power to regulate school house construction modified to suit the varying conditions which must necessarily obtain in different parts of the province.

I do not know that I can do better than quote from the report of Dr. John L. Bethune, Health Officer for Victoria County:—

“I inspected school buildings and found the sanitary conditions very imperfect, a few having privies which are not so cleanly kept as they ought to be, but the large majority having no outbuildings of any kind.

“Our school houses (with the necessary outbuildings), where so many hours a day are passed by the children, should be constructed, heated, lighted and ventilated, with water supply and drains in conformity as far as practicable with the principles of sanitary science.

“The protection and preservation of the health of the children should be the aim of the trustees of every school section. The surroundings in which the child passes the first years of its life should conduce to its healthy development and not impede, as is often the case in a number of our schools.”

It is more than likely that ignorance more than parsimony are to blame for these defects, and hence why a central authority should control and as well instruct in school house construction. In the last copy of the Report of Provincial Board of Health (8th for 1909) reference is made to a system of heating and ventilation combined with a system of verandas or sunrooms that not only prevents cold draughts and cold school rooms but also furnishes means of comfortable recreation in wet, cold or disagreeable weather outside of the school room while at the same time not being expensive to construct.

2nd. *Infectious Diseases.*—In all well regulated states it has been found necessary to have a public pathologist or bacteriologist, or chemist and microscopist—all these different names refer to the same individual as all these qualifications are necessary to the study of infectious diseases, finding out their history and best means of handling them. Such an officer is required to assist the various health officers in carrying out their work—for example: Typhoid fever breaks out in a locality, the health officer suspects contaminated drinking water, and there should be a competent analyst to whom

samples may be sent for examination as it needs special conveniences and training to speak authoritatively on this and allied subjects. No health officer even if he has the ability has the time or convenience for such examinations. A similar reasoning applies to each of the infectious diseases. We are much indebted to Dr. W. H. Hattie for the work he has done on these lines for the past years but he is unable to continue these examinations for several reasons.

3rd. *Tuberculosis*.—This subject has received great attention the past few years and yet practical work in this line is only beginning. We are much indebted to the Government for the interest and financial aid ready to be furnished, but the Government has a right to expect from the profession advice and suggestions as to the location and management of the proposed sanatorium upon which no decided action has been so far taken.

The education of the public on this subject is only beginning and it will take time and effort to get such a concensus of public opinion as will command the realization of the knowledge now unhesitatingly accepted by the profession.

Tuberculosis can be stamped out when the public wills that it be so, and the false notions so long prevalent be obliterated, such as heredity tendency, or that it cannot be prevented, or that it is non-contagious. In many countries associations have been formed to enlighten the public in this regard and at the instance of the Dominion Medical Association a conference was held in Ottawa last February at which representatives from the Atlantic to the Pacific, lay and medical, convened to discuss this subject and lay down plans for meeting the difficulties incident to this new departure in public health.

The most notable thing at the conference was the general unanimity of opinion not only as to the pathology of this disease but also to the best way of handling it.

Another similar conference on the same subject with representatives from all the countries and states of North America was held in New York in May last, and similar methods were decided on.

Might it not be well for the Nova Scotia Medical Society also to take some steps in this direction such as the formation of an Association for the Prevention of Tuberculosis, its first work being the education of the public by systematic work, such as the publishing of literature, discussion at public meetings held throughout the

province, getting the assistance of the press, the pulpit and the public schools. In this way every person can be reached and when this occurs the object can be attained.

There is to be an International Conference in London, presided over by King Edward VII, who, as Prince of Wales, has for years been amongst the foremost in dealing with this subject. We in this province should not lag behind in this work, for we are as much punished by this disease as any other country. It robs us of the energy and intelligence of our foremost citizens at an age when they are of the most service to themselves and the community. But this part of my theme is too well known to require further discussion by me. Let us take action by assisting the Government to carry out the only system by which those at present afflicted may be relieved and cured and in the end stamp out the disease.

4th. *Enteric or Typhoid Fever* is very prevalent and as population increases it will also increase but in an expanding ratio, yet ignorance or carelessness (or both) of well known hygienic laws are the factors we have to deal with.

5th. *Diphtheria*.—A disease quite as much under our control is allowed with but little hindrance to run its deadly course.

6th. *Measles, Whooping Cough, Ophthalmia, etc., etc.*, tax severely the health, life and robustness of our rising population and these things need not be.

7th. *Smallpox*.—Though most feared is of much less moment than any of the preceding because it is the only disease I can call to mind over which we have ready and absolute control, because vaccination is a reliable preventative and it is not difficult to render a community quite immune to this malady.

There is a causeless and unjustifiable fear of a possible injury that may be the result of vaccination. All I can say is that for about fifty years in my own experience I cannot recall even one case where any injury resulted from this simple operation. Now and then there may be a sore arm and a few days of constitutional disturbance but no injury of any kind however; even were every case to be as the worst is described there should still be not the shadow of hesitation, in its use, if it would either prevent or mitigate one of the most loathsome, painful, tedious and fatal diseases that inflicts the human family. I know whereof I speak as I have suffered from it, which although in a mild form—thanks to a vaccination many years before—

was yet a punishment I would not desire my worst enemy to suffer.

My own experience no doubt is only to be taken for what it is worth, but, during these fifty years I have been intimately associated with very many members of the profession in many countries on either side of the Atlantic, and I cannot recall a case where any medical man has seen injury result; neither in private conversation nor in medical societies have such cases of injury been referred to. In looking up the literature on the subject a case is now and then mentioned, but it is just as likely to be *post hoc ergo propter hoc*. For in many millions of vaccinations of persons of all ages, classes and conditions of life it would not be a matter of astonishment if some one were to die shortly after being vaccinated—or that in a debilitated constitution a trifling scratch might have an unfavorable result, for it has not infrequently happened that from an accidental pin or needle scratch there has eventuated septicæmia and death. Such cases should not be seriously considered as an argument against vaccination.

The epidemic of smallpox that has been prevalent on this continent the past three or four years has been of a mild type in so far as fatality is concerned, and many cases of walking smallpox would tend to the opinion that either the disease was not genuine smallpox or that there was a changed type. It is likely we may err if we accept either theory, because in the unprotected it will still kill with its accustomed virulence as happened lately in Kentville. And then thanks to the general practice of vaccination in bygone years doubtless there has been a modified immunity amongst the great mass of people, and smallpox is robbed of its fatal virulence. It would be extremely hazardous however to assume this condition as a matter of business, or we may be rather rudely awakened.

Some years ago I can recall an epidemic of smallpox in Halifax in which there was not a death except in three or four cases totally unprotected, and these died of that most malignant form of the disease—the hemorrhagic type or so-called *black smallpox*—where death occurs in the first few days before the papules become prominent. We might have classed this epidemic as being of a mild type were it not that it shewed itself capable of inducing the most malignant form. I can also recall another epidemic (I forget the year) in which every unprotected patient died and no death occurred in any person who had been vaccinated even though years had elapsed. In

conclusion we may say that it is only common prudence to treat every case as smallpox if there be the slightest doubt on the subject.

Vaccination protects—let all be protected. A prudent man does not wait until the town is in a blaze before he insures his property against fire—it may than be too late.

There are several points of interest in the outbreak at Church Point and Kentville but it would take up too much of your time to discuss these at present.

This subject of Hygiene or Public Health is so very extensive, that it can only be treated of in detail, and I will but mention other subjects of pressing moment.

Contaminated Water Courses and Wells.

Parasitic and Tubercular Diseases of Animals Whose Flesh is
Used as Food.

Of Our Milk Supply.

Town and City Drainage, and Removal of Excreta.

Disposal of Excreta.

Public Cleanliness on Our Streets and in Our Habits, and

The Multitudinous Modes by which Tuberculosis is Propagated.



FRACTURE-DISLOCATION OF SPINE.—LYMPHO-SARCOMA OF LUNG.*

By E. D. FARRELL, M. D., Halifax,

CASE ONE—FRACTURE, DISLOCATION OF SPINE.

On the evening of September 29th, 1900, I was called to see a man who was engaged painting a house on Pleasant Street, who had fallen to the ground head foremost a distance of twenty-five feet. He was in a condition of shock and complained of intense pain in the neck and back. I had him removed at once to his home, where on examination I found a marked prominence at the fourth and fifth cervical vertebrae, with complete loss of motion and sensation of the lower two-thirds of the trunk and partial motor paralysis of the upper extremities, more marked in the left arm. His breathing was rapid and irregular, pulse 120, temperature 96. The head was drawn to the right side and he was in intense pain. There was loss of control of bladder and bowels. Given morphine sulphate, quarter of a grain.

On the same night I again saw him accompanied by my father and Mr. Cogswell of the Electric Studio, Barrington St., for the purpose of making a radiograph but found that Mr. Cogswell's apparatus was not sufficiently powerful to outline clearly the spinal column. My father then suggested making forcible extension, with the idea of reducing the dislocation. This was done on the following morning, six men from the establishment where he was employed assisting me. We carried him to the centre of the room and with two men at the feet, hips and upper extremities respectively, and myself at his head, together made a strong forcible extension. The prominence almost entirely disappeared and where previously he had complained of extreme pain on the slightest change of position he was now able to make some movement of the head without pain, and was in fact decidedly more comfortable. On the evening of that day he said he felt a sensation of pins and needles in both legs and I was hopeful of some change for the better. But on the following day, nor afterwards, was there the slightest improvement in the motor or sensory symptoms. He remained in this condition till October 8th, nine days

* Read at meeting of the Maritime Medical Association, Halifax, July 3rd, 1901.

WYETH'S Granular Effervescing

Each Dessertspoonful contains 30 grains of the salt.

SODIUM PHOSPHATE

A Remedy for Constipation, Obesity, Rickets, Jaundice, Etc., Etc.

Sodium Phosphate is Unexcelled:

1. As an Hepatic Stimulant with beneficial effect on the appetite.
 2. As a Treatment for Diabetes.
 3. As a "Nervetone" in cases characterized by Debility, Spermatorrhœa, etc.
 4. As a Purgative in cases of Exanthematous Fevers.
 5. As a cure for Bilioussness, Constipation, Jaundice, Diarrhœa, Dysentery, etc., especially in children.
- Sodium Phosphate has long been the favorite purgative, inasmuch as it acts gently but surely, has little or no taste, and is easily taken by children and delicate persons. In the present form—the effervescent—it is a delightful remedy, constituting a refreshing sparkling draught of bland action.
1. Sodium Phosphate is a mild but certain hepatic stimulant, and relaxes the bowels both by promoting an excretion of bile and by acting directly upon the mucous membrane of the intestines. It does not cause "griping," nor does it derange the stomach or excite nausea; unlike many other purgatives, it has a beneficial effect upon the appetite and digestion, stimulating the flow of gastric juice and increasing assimilation.
 2. Diabetes is treated with decided advantage by means of the Sodium Phosphate. Not only are its cholagogue properties beneficial in this malady, but also its well-known power of arresting the secretion of sugar in the liver.
 3. Phosphorus is a fundamental constituent of nervous matter, the substance of brain, spinal cord and nerves. Hence, the usage of the present compound in diseases characterised by a deficiency of "tone" of the nervous system in Debility, Spermatorrhœa, Impotence, Locomotor Ataxia, Neurasthenia, etc., is strongly to be recommended. In Asthma and the debility of the advanced stages of Phthisis it is serviceable. In such cases it acts as a restorative and respiratory stimulant.
 4. In grave, exanthematous fevers, where a purgative, to be safe, must be simple and efficient, the Sodium Phosphate can be relied on. In such cases its cooling, saline qualities render it grateful and refreshing to the patient.
 5. Sodium Phosphate, causing a marked outflow of bile, whose consistency it renders thinner, is an incomparable remedy for Bilioussness, constipation, and, above all, for Jaundice, especially in children, on account of its absence of taste, and its efficient but unobjectionable properties. Diarrhœa and Dysentery in children are effectively controlled very often by the action of this salt in cleansing the mucous membrane of the lower bowel, and evacuating in a complete and unirritating manner the rectum and large intestine.

DOSE.—For children, to relieve diarrhœa, constipation, etc., a small dose only is necessary, $\frac{1}{2}$ to 1 teaspoonful according to age and effect desired. As a purgative in adults, one or two dessertspoonfuls. As an alternative in gout, obesity, hepatic derangement, etc., one dessertspoonful morning and night. As an excellent substitute for Carlsbad water (which depends largely for its beneficial effect upon the presence of this salt) may be obtained by adding a dose to a tumbler of water and taking it gradually on getting up in the morning. The glass cap on our Effervescing Salt bottle, when filled, is equivalent to one dessertspoonful, and also embodies a time device adjustable to any hour at which the next dose is to be taken.

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IRON & MANGANESE PEPTONATE

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Liq. Mangano—Ferri Peptonatus—Wyeth's.

Iron and Manganese as offered in the shape of numerous inorganic preparations are, at the best, only sparingly absorbed after a long and tedious process.

When combined with Peptone in a neutral organic compound, the result is complete assimilation and absorption, thus deriving the full benefit of the ingredients as tonics and reconstituents, and rendering the remedy invaluable in

Anæmia, Chlorosis, Scrofula and Debility.

The improvement accomplished by the administration of the solution is permanent, as shown by the increase in amount of Hæmoglobin in the blood : i.e. 3 to 8 per cent.

As regards the digestibility and rapid assimilation of the preparation, its aromatic properties and the presence of peptone in it renders it acceptable to the most susceptible stomach.

DOSE.—For an adult, one tablespoonful well diluted with water, milk or sweet wine, three or four times a day ; dose for a child is one to two teaspoonfuls, and for an infant 15 to 60 drops.

Offered in 12 ounce bottles (original package) and in bulk at the following list prices.

Per Demijohn, \$6.25 ; Per five pint, \$4.50 ; Per doz. 12 oz \$11.00.

WRITE FOR LITERATURE.

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after the accident, when he developed bed sores and hypostatic pneumonia and died on October 14th. A post-mortem, although urgently pressed for, was refused.

CASE TWO—LYMPHO-SARCOMA OF LUNG.

A. G., male, was admitted to my wards in the Military Hospital in this city on November 19th 1900, complaining of pain in the back and shoulders. He was worn-out looking, pale and somewhat cyanosed. Temperature 99, pulse 96, poor in quality, easily compressible and irregular, respiration 26.

Previous history.—Patient had been for over a year on detachment duty with the Royal Artillery at George's Island, Halifax Harbour, and gave a history of having for the last nine or ten months, pain in the back and left chest, with gradual loss of flesh and latterly some dyspnoea on exertion. His companions who brought him to the hospital stated that he had been in poor health for some time and had spent much of his leisure in the canteen.

Physical examination of chest revealed complete dullness and flatness over left lung in front, from fourth rib to base with absence of vocal fremitus. Above fourth rib to apex, hyper or skodaic resonance.

Behind, extreme dullness from spine of scapula to base; above impaired resonance. There was complete loss of respiratory murmur and vocal resonance except above fourth rib in front and spine of scapula behind.

Right lung was resonant and respiratory murmur somewhat exaggerated, except at base where there was dullness and an absence of breath sounds.

Heart displaced downwards and inwards, apex beat to right of sternum.

Liver and spleen both slightly enlarged.

Examination of Sputum—No tubercle bacilli. A few pus cells and epithelial elements.

Urine, negative.

Treatment.—Patient given on admission, stimulants—brandy and strychnia. External heat applied and an anodyne at night.

On the following day Major Peeke, R.A.M.C., saw the case with me and we made a diagnosis of pleurisy with effusion, aspirated and withdrew twelve ounces of dark stained fluid. Patient seemed somewhat relieved, but had very severe nausea and vomiting and was

unable to retain any nourishment. He was given beef tea, and strychnia hypodermically but gradually grew weaker and died on the 24th instant, five days after admission.

Post-mortem examination.—Left lung, weight three pounds three and three-fourth ounces. The whole lung with the exception of a small portion of the apex was occupied by a dense fibrous mass, also involving and adhering to the pericardium and heart and invading the left auricle; pleura adherent and yielded sixteen ounces of fluid.

Right lung, weight one pound three ounces, lung healthy, pleura adherent at base, twelve ounces of fluid present.

Heart, weight seven ounces. Left ventricle small, hard and nodular, dotted externally.

Left auricle, lumen contracted by growth from outer wall, occupying three-fourths of its space. The wall inside as felt by finger was very hard and nodular. The heart was bound and adherent to the growth which must have impeded its action and accounts for the displacement; other viscera normal. Microscopical examination showed the growth to be a lympo-sarcoma. The most striking point about this case was the fact that the patient was able to perform the ordinary duties of a soldier to within four or five days of his death.



THE
MARITIME MEDICAL NEWS,

A MONTHLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XIII.

HALIFAX, N. S., AUGUST, 1901.

No. 8.

Editorial.

THE BRITISH CONGRESS ON TUBERCULOSIS.

For months the whole English speaking world, perhaps we should rather say the whole civilized world has been looking forward to the meeting at London, for the study of tuberculosis, of members of our profession who have attained such eminence as to lead to their selection as representatives of great medical associations, or to be the recipients of a special invitation. The meeting has been held, and there gathered from various parts of the globe men mighty in their knowledge of medicine, and renowned for their scientific attainments. Apart from a large number of prominent British physicians, there were present such representative men as Koch and Von Leyden, from Germany; Von Schrötter, from Austria; Gram and Bang, from Denmark; Brouardel, Petit and Lannelongue, from France; Ruata, from Italy; Thomassen, from Holland; Koranyi, from Hungary; Holenboë, from Norway; Cortezo, from Spain; Printzjold, from Sweden; Neumann, from Switzerland; Osler, Janeway, Knop, Stone and Denison, from the United States; and Adams, from Canada. Associated with these were many very eminent laymen, who have taken an intelligent interest in matters pertaining to the public health. It was but natural that from such a gathering of notables, much that could really be termed advance would come.

From the reports which have thus far come to hand, however, it would look as though this great British Congress was much like

similar gatherings held elsewhere at different times, and characterized by the barrenness of result which must follow the simple restatement of an oft told tale. For apart from the pronouncement of Koch that tuberculosis of the lower animals is seldom, if ever, communicable to man, the whole tenor of papers and discussions was monotonously similar to that which we have been accustomed to in the medical press and the medical meetings for some years past. It certainly is a disappointment that from so brilliant a gathering, so little that is novel should be evolved.

It cannot be gainsaid, however, that the Congress has wrought much good, for possibly no more effective way could be devised of attracting the attention of the general public to the problems of tuberculosis than by bringing together such an illustrious company as that which discussed the subject in London last month. For at such assemblies, the discussions are freed as much as is possible of the technical, and the laity are encouraged to interest themselves in the proceedings. In this way the public are reached and the benefits of hygiene are impressed upon them in a manner which cannot fail to be productive of great good. It should be remembered, however, that for the very reason that we make confidants of the public on such occasions, it should be made a rule that, as far as possible, debatable topics should be left untouched, and the endeavour should be made to keep discussions within such bounds that there might be practical agreement upon main points at least.

Koch's contention that tuberculosis is not transmissible from the lower animals to man, while not absolutely new, is so contrary to the teachings of others of the most eminent of the authorities as to be actually revolutionary. We have learned that Koch is not prone to make assertions which he has not abundant evidence to support. His masterly review of the arguments pro and con, when announcing his discovery of the association of the tubercle bacillus with tuberculosis, is but one instance of the thoroughness with which he inquires into a subject before committing himself to an opinion. It is therefore to be assumed that he has thoroughly convinced himself that the commonly accepted opinion of the communicability of tuberculosis from the lower animals to man is an error. And the weight which attaches to his opinion is so great that it is but natural that his utterances at the recent Congress should have excited much interest and elicited much discussion. It is but natural, also, that a

doctrine so opposite to that commonly taught should have led to debate at the time, and that those who have championed the older belief should have stated the grounds upon which they base their faith. There is no reason to suppose, however, that anything savoring of acrimony crept into the debate, and yet the reports of the lay press are not free from the suggestion that professional jealousies and perhaps even a certain degree of malice had something to do with the differences of opinion expressed in the course of the discussion. Less irritating than this implied inference, although more reasonable, is the disposition on the part of some of our brethren of the lay press to twit our profession upon being the cause of great and unnecessary havoc among domestic animals, and of much pecuniary loss to cattle breeders, dairymen and others. A harrowing pen-picture is easily constructed upon a hasty and narrow consideration of Koch's address, and a little colouring, such as the yellow journal dotes upon, puts the profession before the world in a light which is far from favourable.

Admitting, purely for the sake of argument, that we have been in error, our ignorance has still not carried us to the extremes which the lay press would have their readers believe. It is true that the teaching of recent days has led to the destruction of many diseased animals, which, under our older dispensation, would have been permitted to live and which might even have been allowed to pass as fit for food purposes. But the passing of the flesh of diseased animals as food, no matter what the disease, should never be permitted, and has for several years been contrary to law. In this respect, therefore, the teachings with reference to tuberculosis have involved no hardship upon cattle raisers. And on the other hand, the slaughtering of animals infected with this disease is now well recognized as a matter of very definite economic value, as the transmissibility of the disease from animal to animal has been thoroughly established. Consequently, even should it be proved that Koch is correct in his deductions, the strictures which the lay press have shewn a disposition to impose upon our profession are only in part deserved.

It is not possible to avoid the fear that the widespread publicity which has been given to Koch's doctrine may have the effect of lessening the care which has of late years been manifested in the selection of foodstuffs, and particularly of milk and beef. It has been especially through the efforts of sanitarians who have been inspired by the belief that tuberculosis is often transmitted through meat and milk that

many of our best regulations with reference to inspection of foodstuffs have been brought into vogue and if, as a result, of Koch's pronouncement, the passing of tuberculous meat and milk should be permitted, it is easily to be foreseen that other laxities will soon follow.

Koch, however, has not spoken with absolute positiveness. He asks that others should repeat his experiments, in order that his findings may be either confirmed or refuted. It is needless to say that this suggestion will be acted upon by capable investigators everywhere, and we may be sure that ere very long there will be ample evidence upon which to base an intelligent verdict as to whether Koch has spoken correctly or not.

CANADIAN MEDICAL ASSOCIATION WINNIPEG MEETING, AUGUST 28th TO 31st, 1901.

We wish to remind our readers again of the approaching meeting, at Winnipeg, which promises to be a record breaker so far as the programme, both scientifically and socially, is concerned. The titles of some of the papers have been already published in the NEWS as well as a few of the excursions and other forms of entertainment in view. Members from this part of our Dominion may expect a hearty welcome from their brethren in the West as well as learn much that will be profitable in the future.

AMERICAN ASSOCIATION OF OFFICIAL SURGEONS.

The American Association of Official Surgeons will hold its next annual meeting in Chicago, September 18th and 19, 1901. Although quite separate, Prof. Pratt's "Clinic" will be held the same week, beginning September 16th. To those familiar with official methods and their practical application to the cure of chronic diseases, no special appeal need be made, other than to urge their presence or attendance at this meeting, as it promises to be one of the best held since the organization of the Association. Lectures and papers have been promised by some of the most prominent medical men in the country. The discussions will be lively and interesting and one's knowledge of the work will be brightened and widened. To those

who are not familiar with orificial ideas, theories and practices, we can say that there can be no more auspicious time to gain a practical knowledge of orificial surgery than at this meeting of the Association. The whole field will be brought within reach.

Due attention will be given to preparatory work, and fundamental principles thoroughly expounded and illustrated by some of the brightest surgeons of this country. Due attention will be given to after-treatment, therapeutical and otherwise. Papers and discussions will embrace the whole idea and give the sum and substance of more than fifteen years work along lines that have yielded prodigious success to the surgeon and general practitioner. No live man can now afford to ignore orificial surgery or be absent from this meeting.

W. E. BLOYER, Pres.,
Cincinnati, Ohio.

HENRY C. ALDRICH, M. D. Sec'y.,
Minneapolis, Minnesota.

Matters Personal and Impersonal.

Dr. Andrew Halliday has been appointed by the local government of Nova Scotia, Provincial Pathologist and Bacteriologist.

Dr. Thomas Walsh met with a serious accident on the afternoon of the 11th inst. by being thrown from his carriage. It is pleasing to learn that he is improving daily.

Dr. Murray MacLaren, of St. John, recently returned from a trip "across the water." Most of his time was spent at Berne and Paris.

Dr. E. V. Hogan who recently recovered from an attack of typhoid fever has been sojourning at Weymouth.

Dr. E. F. Moore, formerly of the Nova Scotia Hospital Staff, and now practicing at Cheverie, was married on the 7th inst. at Dartmouth to Miss Ella Isabel daughter of Mr. A. M. Beck. The NEWS extends best wishes for long continued happiness and prosperity.

Therapeutic Suggestions.

THE TREATMENT OF CAPILLARY BRONCHITIS, AND PNEUMONIA.—

Dr. Leonard Weber says that in cases of capillary bronchitis and pneumonia he has successfully employed the hot mustard-bath when the patients were at their worst, and has succeeded in relieving the congested lungs and helping the overburdened heart after other remedies had failed. In the hot mustard-bath we have two agents acting upon the surface of the body: first, the mustard, a powerful irritant, attracts blood to the integuments. The hot water, on the other hand, dilating the blood vessels, as it does when applied for a short period of time, helps to increase the amount of blood at the periphery. The surface of the body being large, a correspondingly large amount of blood is thereby drawn towards it, which must in a great measure relieve the obstruction of the pulmonary circulation. The cause of over-distention of the right ventricle of the heart being removed or considerably lessened thereby, the heart itself gets a chance to regain its propelling power and to properly receive and discharge the blood that is brought to it. The bath is also a powerful excitant and stimulant of the central nervous system, especially the vasomotor centre acting reflexly through irritation of the nerves at the periphery. In cases in which Dr. Weber had employed it, camphor and carbonate of ammonia had failed to relieve the comatose condition of the patient, but all alarming cerebral symptoms of the patient were materially improved soon after the first bath. Finally, the bath favors an exchange of the gases of the blood through the capillaries of the skin.

The bath is easily prepared; the materials for it can be easily procured in the households of the poor as well as the rich; its action should be prompt; there is no danger whatever in applying it as often as the urgency of the case may require, and it is a valuable means for fulfilling the vital indication in severe cases of pneumonia in children. Dr. Webber would look, other things being equal, for equally good success with it in the adult.—*Post Graduate*.

INTERNAL HEMORRHOIDS (ANDERSON).

Hydrastin	1
Pulv. alum	1
Cocaine mur	0.5
Butyr. cocæ	q. s.

M. et ft. rectal suppos. No xij

Sig. Insert one into the rectum every night. In bad cases it is often advisable to have the patient one night and morning.—*Amer. Jour. of Surgery and Gynecology*.

LINIMENT FOR SPRAINS.

Ol. terebinthinæ	60
Acidi aceticæ	60
Ol. lavendulæ	5
Vitelli ovi	500
Aq. q. s. ad	500

M. Sig. Apply two or three times daily.—*Maryland Med. Jour.*

LACOTOPEPTINE TABLETS.

Same formula as Lactopeptine Powder. Issued in this form for convenience of patient—who can carry his medicine in his pocket, and so be enabled to take it at regularly prescribed periods without trouble.

“Everything that the science of pharmacy can do for improvement of the manufacture of Pepsin, Pancreatine, and Diastase, has been quietly applied to these ferments as compounded in Lactopeptine.”

—*The Medical Times and Hospital Gazette.*

CAN BE ORDERED THROUGH ANY DRUGGIST. SAMPLES FREE TO MEDICAL MEN.

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Liquid Peptonoids with Creosote

Beef, Milk and Wine Peptonised with Creosote,

Liquid Peptonoids with Creosote is a preparation whereby the therapeutic effects of creosote can be obtained, together with the nutritive and reconstituent virtues of Liquid Peptonoids. Creosote is extensively used as a remedy to check obstinate vomiting. What better vehicle could there be than Liquid Peptonoids, which is both peptonized and peptogenic? It is also indicated in Typhoid Fever, as it furnishes both antiseptic and highly nutritive food, and an efficient antiseptic medicament in an easily digestible and assimilable form.

In the gastro-intestinal diseases of children, it also supplies both the food and the remedy, thereby fulfilling the same indications which exist in Typhoid Fever.

Each tablespoonful contains two minims of pure Beechwood Creosote and one minim of Guaiacol.

Dose.—One to two tablespoonfuls from three to six times a day.

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“BOROLYPTOL”

Is a combination of highly efficient antiseptic remedies in fluid form designed for use as a lotion whenever and wherever A **CLEANSING AND SWEETENING** wash is required. It possesses a delightful balsamic fragrance and pleasant taste, and can be employed with great advantage

AS A CLEANSING LOTION AS A VAGINAL DOUCHE
AS A NASAL DOUCHE AS A MOUTH WASH
AS A FRAGRANT DENTIFRICE.

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Samples sent
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To the Medical Profession :

ABBEY'S EFFERVESCENT SALT is without doubt the most elegant, palatable, and efficient saline laxative and antacid within your reach.

It possesses every requisite that such a salt should have; the slight granulation enables the patient to obtain the fullest benefit of the slower development of the carbonic acid gas; its action upon the bowels is gentle, but positive, and its valuable antacid properties render its use particularly beneficial in many cases where a harsher aperient might prove deleterious.

The use of Abbey's Effervescent Salt is growing daily, and is now regarded as a standard preparation, put up in the most high-class manner, and sold through druggists only.

The preparation is manufactured in the most perfectly appointed laboratory in America, under the supervision of expert chemists, and is in every way guaranteed to meet the many requirements for which its properties render it useful.

Book Reviews.

SAJOUS'S ANNUAL AND ANALYTICAL CYCLOPÆDIA OF PRACTICAL MEDICINE.—

By Chas. E. deM. Sajous, M. D., and one hundred Associate Editors, assisted by corresponding editors, collaborators and correspondents. Volume VI. Rectum and Anus, Diseases of, to Zinc; and General Index. Published by the F. A. Davis Co., Philadelphia.

The publication of Vol VI of Sajous's Cyclopædia marks the completion of the work, and the able editor and his assistants are to be congratulated upon having completed a work of so great magnitude. Much was promised by Dr. Sajous in his introductory to Volume I, but he has been able to do more than he promised and to furnish the medical profession with a quite unique work, dealing with all the diseases ordinarily described in text-books, as well as with many subjects of interest to medical practitioners which are not dealt with in the usual texts. The arrangement of the work has included the more notable journal references to the various conditions described during the past decade, so that, in every respect, the Cyclopædia represents the most modern thought upon the condition discussed.

As each volume of the work appeared, we were able to make most favourable comments successfully, and now, with the completion of the series, we can avow anew our admiration of the manner in which Dr. Sajous has planned and accomplished his task, and commend the cyclopædia most heartily to our readers. It is both a text and a work for reference, and so well arranged, so free from non-essentials and yet so complete in essentials that its value to the busy doctor is not easily estimated. Certainly it should have a place in every physician's library.

DIAGNOSTICS OF INTERNAL MEDICINE—A Clinical Treatise upon the Recognized Principles of Medical Diagnosis prepared for the use of Students and Practitioners of Medicine. By Glenworth Reeve Butler, A.M., M.D., New York. Published by D. Appleton & Co., New York.

Works upon Medical Diagnosis have been multiplying somewhat rapidly of late, and each of the numerous treatises which have been offered to the profession possess features which give them each a claim to the consideration of the physician. Dr. Butler's book is one which immediately attracts. It is somewhat unique in its conception, but is especially valuable on account of its conciseness. There is commendable absence of unnecessary verbiage, and yet there is no ambiguity. The book is very fully illustrated, and, in order to secure accuracy of illustration, actual photographs are largely used.

The volume is divided into two parts. Part I deals with the evidences of disease, Part II, with diagnosis, direct and differential. The two parts are really complimentary. Much attention is devoted to physical examination of the chest and abdomen, and the section upon the examination of the nervous system is especially good. The diagrams illustrating nerve supply,

conduction of nervous energy, etc., are exceptionally good. The section upon the blood is also very complete and the methods of examination are fully described. On the other hand, while the significance of changes in the urine receive full consideration, the technique of urinalysis is not dealt with. Examination of sputum, of stomach contents, etc., is discussed in full detail.

The printing, illustrating and binding are all that could be desired, and are worthy of such excellent subject matter. We confidently predict for Dr. Butler's book a very large sale and marked popularity.

SUGGESTIVE THERAPEUTICS AND HYPNOTISM.—Being a special mail course of forty-one lessons on the uses and abuses of suggestion. By Herbert A. Parkyn, M. D., C. M., Principal and Founder of the Chicago School, of Psychology. The first school of its kind established in America. Editor of the monthly magazine *SUGGESTION*. Third edition, Chicago Ill., Suggestion Publishing Co. 1900.

This is a most interesting contribution upon a subject concerning which all medical men should be informed. The day is past when we can dismiss with the single word "Humbug" the extraordinary effects which can be produced by hypnotic suggestion. Some of us who witnessed the experiments recently performed in this city by a public exhibitor, were more than impressed and felt that *suggestion* was an agent which intelligently used might be of the greatest service in the treatment of a large class of diseases.

The opening chapters of Dr. Parkyn's book are devoted to a study of the scientific aspect of the subject and we think he succeeds very well in showing that it has such. He writes well and forcibly. After considering how suggestion acts, the author shows how it can be used to cure disease. There seems no limit to its applicability. All diseases, functional and organic, can be influenced, save with the single exception of epilepsy.

Full directions are given of the way to produce this condition of suggestion and the various grades of hypnosis are also described. The author by the way objects to the use of the word *Hypnosis* in the common way in which it is applied. He thinks *Hypnosis* is only a symptom of a condition not an actual state and recommends that *Suggestion* be employed instead.

The book is graphically illustrated with very perfect photo-gravures which materially assist in making clear the descriptions.

The second part of the work which treats of "Stage Hypnotism," seems to us out of place in a book which really has a distinct scientific value, and we would suggest that in the copy of the work intended for the medical profession it could very well be omitted.

Taken altogether we consider this an exceedingly good exposition of a subject of great interest and recommend that those of our profession who wish to become familiar with an agent which we can readily believe is of much therapeutic value, read the work.

If *suggestion* can do even a part of what the writer of this book claims, it should not be allowed to pass into the hands of charlatans and quacks but should be investigated by scientific men and used as a legitimate agent to cure disease or ameliorate symptoms.

OPERATIVE SURGERY.—By Joseph D. Bryant, M. D., Professor of Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College, etc., etc., Vol. II. Published by D. Appleton & Co., New York.

The first volume of this work, now in its third edition, was reviewed in the *Maritime Medical News* in December, 1899. The second volume bears date 1901, and has just come to hand.

This beautiful and useful book maintains the high standard set in the first volume. The wealth of illustration, the clearness of description, and the judicious criticism of the many operative procedures presented to us, leave nothing to be desired.

There are a few trifling typographical errors as in the spelling of proper names, but after a fairly complete perusal we have found nothing important. On page 1106 and in figure 1298, the word *thyroid* is evidently a mistake for *parotid*.

The book is particularly full and thorough in its account of operations on the viscera connected with the peritoneum, as those now so frequent, and frequently so brilliantly successful, on the stomach and intestines. Here, as in many other departments of surgery, we find frequent reference to the work of that marvellous operator, Kocher, of Bern.

Operations coming within the domain of the gynecologist are not treated of. This we consider a defect, and we see no reason for omitting the uterus or ovaries from among "viscera connected with the peritoneum."

The coloured illustrations of the surgical anatomy are very useful.

THE LADIES' HOME JOURNAL FOR AUGUST.—Evidently no effort has been spared to make The Ladies' Home Journal for August a positive boon to its readers during these warm midsummer days. Its light, readable articles, bright stories, clever poems, charming music, and numerous beautiful illustrations afford the easiest and pleasiest kind of entertainment for leisure hours. Enchanting views of the lovely scenery in the Engadine Valley and among the Swiss and Italian Lakes, as well as such delightful articles as "The Singing Village of Germany" and "What Girl-Life in Italy Means," allure the thoughts to foreign lands, while there are timely suggestions about "The Picnic Basket," "Keeping a House Cool in the Dog Days," and "Sea-Side Toys and How to Make Them." Other thoroughly interesting contributions are "The First White Baby Born in the Northwest," "My Boarding School for Girls," and the usual serial and department articles. By The Curtis Publishing Company, Philadelphia. One dollar a year; ten cents a copy.

Notes.

SUMMER DIARRHŒA.—In the large class of summer diarrhœas of children and adults, with griping in the bowels and flatulence, the use of LISTERINE, in doses varying from ten drops to a teaspoonful (with or without water), has a salutary and pleasing effect.

It can be administered at short intervals after eating, as soon as regurgitation, distension or acidity occurs. Its action in arresting excessive fermentation is prompt, besides it exercises a decided sedative influence on the mucous membrane of the stomach.

The thymol, menthol, and boracic acid which, with the quota of alcohol necessary to

their proper admixture, form the principal elements of LISTERINE, lend to this compound a special value in this class of cases.—*New York Medical Journal.*

SANMETTO IN URETHRAL STRICTURE.—Dr. Jos. Swindell, of West Burlington, Iowa, writing, says: "I have been using Sanmetto for several years. I find nothing that suits me as well in genito-urinary diseases. I am using it right along in conjunction with treatment of urethral stricture. It soothes, checks and prevents smarting and inflammation that is so common after passage of bougie. Its ease of administration and formula should recommend it to the profession."

A LABORATORY FOR POISONS.—It's a wonderful laboratory, this human body. But it can't prevent the formation of deadly poisons within its very being.

Indeed, the alimentary tract may be regarded as one great laboratory for the manufacture of dangerous substances. "Biliousness" is a forcible illustration of the formation and absorption of poisons, due largely to an excessive proteid diet. The nervous symptoms of the dyspeptic are often but the physiological demonstrations of putrefactive alkaloids. Appreciating the importance of the command, "Keep the bowels open," the physician will find in "Laxative Antikamma and Quinine Tablets" a convenient and reliable aid to nature in her efforts to remove poisonous substances from the body. Attention is particularly called to the therapeutics of this tablet. One of its ingredients acts especially by increasing intestinal secretion, another by increasing the flow of bile, another by stimulating peristaltic action, and still another by its special power to unload the colon.

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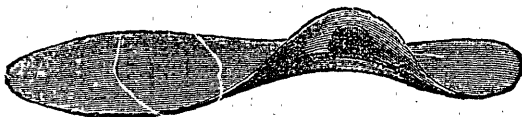
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