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The Northern Lancet.

Cleans from the journals of the World all that is new in Medicine, Surgery and Pharmacy, placing monthly before its readers in a condensed form Medical, Surgical, Obstetrical and Pharmaceutical advances in both hemispheres.

WINNIPEG, SEPTEMBER, 1889.

ANNUAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

BANFF, August 12th, 1889.

The Twenty Second Session was called to order by Dr. Ross at 11 a.m. Dr. Hingston, a Past President, was invited to a seat upon the platform. The following members by invitation were introduced by Dr. Ross: Drs. Whittaker and Wiggling, of Cincinnati; Drs. Bulkley and Gibney, of New York; Dr. Murcey, of Boston; Dr. P. S. Connor, of Cincinnati; Dr. Gordon, of Quincy, Mass; Prof. Baker, of Philadelphia; Dr. Hannon, of Hoosac Falls, Dr. Lathrop of Dover, N. H. Dr. Brett, of Banff, on behalf of the citizens of Banff, presented the following address of welcome:—

“To the President and Members of the Canadian Medical Association.—Gentlemen, we the members of the Citizens' Committee, representing the community of Banff, on this the occasion of your assembling here for the purpose of holding the Twenty-second Annual Meeting of your important Association, desire to express our appreciation of the honor which the gathering of so learned a body implies, and in the absence of a demonstration worthy of the occasion, beg to tender you through this unpretentious address, a sincere and cordial welcome to our midst.

“We venture to assert that the selection of this spot for your place of meeting is singularly felicitous, in as much as you as members of an association distinctively national, could find no more appropriate place in which to conduct the important and useful affairs of your Association than at this little town of Banff, the heart of the Canadian National Park. We hope that your brief stay here may not be altogether without interest to you,

that in the grandeur of the scenery, the extent and diversity of mountain, forest, and river, or in the healthful qualities of the springs which abound in these parts and whose sanative properties are now so well known, you may find something worthy of more than a passing notice, worthy in fact of being treasured, when this short visit is over, among the memories which it shall be a pleasure to recall. Assuring you of our desire to make your sojourn among us as agreeable as possible.”

We have the honor to be,

Yours, &c.,

(Signed) R. G. BRETT,
F. G. BOSWELL,
R. E. C. O'DONOGHUE.

On behalf of the Citizens' Committee
BANFF, August 12th, 1889.

Several gentlemen were next elected permanent members, the president having declared an adjournment of ten minutes to allow the candidates to send in their names and pay the annual fee to the treasurer.

Dr. Wright then read his inaugural address.

The meeting then adjourned until 8 p. m. for discussion of the amendment to the by-laws.

BANFF, August 12th, 1889, 8 p. m.

After a prolonged discussion the By-laws of 1874 were amended as follows:—

Dr. Trenholme, of Montreal, gave the following notice of motion:—

“That the nominating committee shall be appointed by and for each Province by the members present thereof at the annual meeting.”

It was then decided that the by-laws as thus amended above should be brought up for adoption at the next annual meeting. The meeting then adjourned.

BANFF, August 13th, 1889.

The meeting was called to order at 9:30 a. m., Dr. Wright presiding.

The minutes of the previous meeting were read and confirmed.

Mr. Niblock, Asst. Supt. of the Western Division of the Canadian Pacific Railway was introduced by the President, and addressed the meeting on behalf of the

new hospital now being built at Medicine Hat.

Drs. F. W. Campbell and T. A. Rodger, of Montreal, gave information on behalf of the committee on reciprocity of registration.

Dr. Campbell expressed the opinion that it would be impossible to secure reciprocity between England and Canada under existing circumstances.

The committee was continued.

Without dividing into sections, the reading and discussion of papers was proceeded with.

The first paper was read by Dr. A. H. Wright on Hematoma of the Vagina and Vulva.

Discussed by Drs. Jas. Ross, Muir, Marcey, Roddick, Trenholme and Sloan.

Dr. Wright spoke in reply.

Dr. G. A. Kennedy, of McLeod, N. W. T., next read a paper on the climate of South Alberta, with special reference to its advantages to those suffering from pulmonary complaints.

Discussed by Drs. Oldright, McInnis, Præger, Bentley, Henderson, McLellan, and Spencer.

Dr. Whittaker, of Cincinnati, spoke on this subject dealing chiefly with the origin of Tuberculosis.

Dr. Ross reported a case in which he had discovered a gross evidence of tubercular disease in an eight months fetus which died soon after delivery.

Dr. Kennedy replied

Dr. V. P. Gibney, apologised for not having his paper with him, but opened a discussion upon the subject upon which he had intended to write: "The management of hip joint disease." He proposed to call the disease "tubercular osteitis" of the hip joint and recommended absolute immobilization. The American idea of traction with motion had become obsolete. Auxiliary crutches with spica plaster bandage, including p. lvis and calf, or if a splint is desirable, a crutch splint from the perineum.

Discussed by Dr. P. S. Connor, who stated that 95 per cent of all cases of hip joint disease were tubercular. For treatment he recommended in early disease immobilization; in later stages of the disease he recommended artrec-

tomy, excision, or amputation, the essential principle being complete removal of tubercular matter.

Dr. Strange, did not favor excision. He considered traumatism a common cause.

Dr. Roddick, agreed with the previous speakers and suggested traumatism as a special cause in addition to the ordinary cause, tuberculosis. He believed in extension.

Dr. Oldright, related two cases.

Dr. Præger, related a case caused by a blow upon the left hip.

Dr. I. H. Cameron, recommended the American plan of treatment. Recommended Buck's extension until rigidity of the muscles is overcome, then splints and movement.

Dr. Shepherd, drew a distinction between the treatment of hospital cases and those who have the means of resorting to climatic and other hygienic conditions.

Dr. Gibney, replied.

The meeting then adjourned till 2.30 p.m., for lunch.

The first paper after lunch was by Dr. Buller, upon "Preventible Deafness."

Dr. Reeve, spoke upon the desirability of keeping the post nasal and pharyngeal cavities clean and healthy.

Dr. Grissett, read a paper upon Colles' Fracture, dividing the subject into three sections.

(a) Those in which the fracture is complete.

(b) Where there is great displacement which is hard to reduce.

(c) The form occurring in old people.

This was discussed by Drs. Roddick, Sloan, McLellan, Geikie, I. H. Cameron, and Dr. Stockwell.

Dr. Grissett, replied.

Dr. Ross, read a paper upon "Empyema successfully treated by free incisions."

No discussion.

Dr. James Stewart, read a paper upon "Sulphonal."

Dr. Whittaker, corroborated the remarks of Dr. Stewart, in his paper. He considered sulphonal and paraldehyde are the greatest hypnotics we have and are harmless.

Dr. Whittaker, read a paper upon "Varicella."

Discussed by Drs. Geo. Ross and Bulkley.

Dr. Reeve, of Toronto, read a paper on "The relief of pain in eye and ear affections."

Dr. Shepherd, read a paper upon "Nephro-Lithomy."

Discussed by Drs. Connor, Dupuis, Ball, and Roddick.

Dr. Bulkley, read a paper on "The early recognition and treatment of Epithelioma," dealing with the subject from a clinical standpoint. He deprecated the use of mild caustics such as nitrate of silver and recommended soothing and mildly stimulated applications in early cases and in the more advanced cases, either excision, curretting or a cautery, claiming good results from Marsden's paste, which consist of arsenious acid and gum acacia in equal parts by measurement.

Discussed by Drs. Muir, Dupuis, Chamberlain, Wright of Ottawa, Shepherd, Roddick, and Connor.

Dr. Bulkley, replied.

The meeting then adjourned until 8.30 p.m.

The meeting was re-opened at 8.30 p.m., by the reading of a paper by Dr. I. H. Cameron, on "Hernia," in which he gave the views of Mr. Lockwood.

Discussed by Drs. Marcey, Gardner, and H. P. Wright.

Dr. Cameron, replied.

Dr. Praeger, narrated several surgical cases.

The President announced that Dr. Jukes, had withdrawn his paper on the "Endemic fever of the North-West Territories."

Dr. Dupuis, was called upon to read his paper "Some Improvements in Medical and Surgical Instruments." As the hour was late he contented himself with showing and explaining the instruments without reading his paper.

The following papers were then declared read by title, the authors not being present.

Mineral Springs, by Dr. H. P. Small, of Ottawa.

Vertigo, an eye and ear symptom, by Dr. J. W. Stirling, of Montreal.

A common and easily preventible case of retro-displacements, by Dr. A. L. Smith, of Montreal.

A case of Necrosis following a compound fracture, by Dr. John Campbell, Seaforth, Ont.

Dr. Stewart, of Pictou, moved, seconded by Dr. Roddick, that the President nominate a committee to confer with the Provincial and Local Societies and approach the Federal and Local Governments with a view of reducing the tariff on Surgical instruments. Carried.

Dr. P. S. Connor, on behalf of the American visitors in a happy manner thanked the Association for having invited the American delegates.

Cheers were then given for the American delegates.

The Treasurer's report, audited by Drs. Buller and LaChapelle, was received and adopted by motion.

Dr. Stewart, of Pictou, convener, reported on behalf of the Nominating Committee as follows:—

Place of meeting: Toronto.

Officers:—President, Dr. James Ross, Toronto, Ont.; Secretary, Dr. James Bell, Montreal, Que.; Treasurer, Dr. W. H. B. Aikins, Toronto, Ont.

The following Standing Committees were appointed:—

Necrology:—Drs. Hingston, A. H. Wright and Geo. Ross.

Medical Education and Literature:—Drs. Dupuis, Kington; Dr. Cameron, Toronto; Dr. Mullin, Hamilton.

Prize Essays:—Moved by Dr. Bell, seconded by Dr. Stewart, Pictou, that no committee be suggested this year as there are no prizes offered. Carried.

Climatology and Epidemic Diseases:—Drs. Oldright and Bryce, Toronto; Campbell and LaChapelle, Montreal; Parker, Halifax; Jukes, Regina; Robillard, Ottawa; Patterson, Winnipeg; Milne, Victoria; Kennedy, McLeod, N.W.T.

Ethics:—The President and President-elect and the eight Vice-Presidents.

Committee of Arrangements:—Drs. James Ross, W. S. Geikie, Oldright, Graham, Strange, Grissett, A. H. Wright, O'Reilly, and W. H. B. Aikins, Toronto.

Publication Committee:—Dr. A. Morrow, Halifax; Dr. James Stewart, Montreal; Dr. Sheard, Toronto.

The report was adopted and the above named officers and committees declared elected for the ensuing year.

The following resolutions were then proposed, seconded and carried.

Moved by Dr. Buller, seconded by Dr. Chas. O'Reilly:

That this Association has great pleasure in conveying to the Canadian Pacific Railway Company its most cordial acknowledgements, for the facilities that they have been accorded in coming to Banff, and kind attention they have received from all the employees of the Company with whom they have had to deal, as well as for the superb accommodation and the great enjoyment they have derived from their sojourn in the world renowned Banff Springs Hotel.

Taking into consideration the length of the journey, the season of the year, and the unavoidably imperfect information as to the location and numbers of those who formed the main body of the excursion, the arrangement as carried out by the Company have been such as to excite the admiration and grateful recognition of the Association. The thanks of the Association are especially due to Mr. William Whyte, General Superintendent of the road for his exceeding kindness in accompanying them from Winnipeg to Banff and giving his personal supervision in all matters concerning their safety and welfare.

Moved by Dr. Geikie, seconded by Dr. Bruce Smith:

That the cordial thanks of the Association be and are hereby given to the citizens of Banff, for the kindness and courtesy exhibited towards the Association during the Annual Meeting just held and especially for the address of welcome presented by the citizens to the Association at its first session, which contained so many expressions of interest in the Association and of good will towards it.

Moved by Dr. Ross, seconded by Dr. McLellan:

That this Association hereby tenders to His Honor Dr. Schultz, Lieutenant-

Governor of Manitoba, its grateful thanks for his cordial reception of them at the Government House, during their passage through his Province. That they rejoice to observe that the press of political duties has not interfered with the continuance of a keen interest on the part of His Honor in everything calculated to advance the interests of that profession in which he is so proud to number himself amongst its loyal members.

That this Association assures Dr. and Mrs. Schultz, that their generous hospitality in Winnipeg, has been highly appreciated and will in retrospect make one of the brightest memories of an ever memorable meeting.

Moved by Dr. Farley, seconded by Dr. Edwards:

That this Association appreciates and will gratefully remember the Grand Trunk Railway Company for kindly co-operating with the Canadian Pacific Railway in making our trip to Banff a pleasant one.

Moved by Dr. Oldright, seconded by Dr. LaChapelle:

That the Canadian Medical Association do respectfully submit to the Government of the Dominion that it is highly desirable in the public behalf as well as in the interest of medical science that the Profession should be in possession of reliable statistics of the climatic conditions of Banff and other resorts in the North-West Territories, as well as of the chemical composition of the soil and waters of the district, in order that we may act with greater confidence in sending patients to these resorts, and that the Association do further memorialize the Government to establish a signal station at Banff with branches at such other points as may be found necessary. A competent person being appointed to superintend the observation at such station or stations.

The following letter was received from his Honor, the Lieutenant Governor, Dr. Schultz, of Manitoba:

Government House,

WINNIPEG, MAN. August, 12th. '89.

My Dear Sir:—In answer to the wish expressed by the officers and many of the members of the Association, that I would

be present at your Banff meeting, I regret to say that I find other duties will, for a time at least, call me in another direction, though I will make an effort to meet you all, somewhere in British Columbia, before your return. Kindly allow me to say to the Association through you, how gratified I am personally, and how pleased I know the profession here to be, at the choosing of a place in the North-West for the meeting of the Association this year. To my mind, Banff is particularly appropriate, for it is one of our national sanitariums. There are questions of medical and other scientific importance which may be better observed and discussed there than almost anywhere else in Canada. You are on a range of mountains memorable with recollections of several great medical men. Dr. and afterwards Sir John Richardson, followed their course down our mighty Northern River, till their grand heights slowly descended to the flat plain which forms the shore of the Arctic Sea. This worthy companion of the great Arctic voyageur, whose dust is sepulchered in the snows and ice of the Arctic Archipelago, first gave to the world the knowledge of Arctic and sub-Arctic Flora, and much of their knowledge of the animal life of the great northern wilds. Dr. Hector gave most valuable information in the same direction, and of the diseases of the Northern tribes, when with Captain Palliser he explored the Rocky Mountain pass to the South of the one in which your meeting is now being held. Dr. Cheadle, surgeon to Lord Milton's party, wrote that most interesting and valuable book "The North West passage by land," describing one of the passages to the north of where you are now; and I feel sure that so many learned in the profession, to which I am proud to belong, when discussing in council, cannot fail to throw light upon many of the questions which will naturally present themselves for solution; such as, for instance, whether the high temperature of these springs is due to the disintegration of the sulphites and sulphates, or is the result of volcanic action; and whether if from either of these causes, the temperature varies, and the proportion of chemical constituents changes from the pub-

lished analysis. The effect of high altitudes upon the bacilli of phthisis and upon other disease germs and the effect of large areas of non-absorbable granite rocks upon life of such bacteria as may be found at these elevations; and I would ask my learned confreres, when the discussion of more scientific questions shall have been completed to pause and reflect for a moment, that they are where for economic purposes Canada is widest, and no longer a mere arable strip on the banks of the St. Lawrence, where on the east, (and northward from the boundary line), Canada measures thirteen hundred miles of arable and pastoral land, and to the west, nearly an equal north and south width, of one of the richest mineral districts in the world.

I am, dear sir,

Very faithfully yours,

JOHN SCHULTZ.

The Secretary, Canadian Medical Ass'n.

BANFF, N.W.T.

As the meeting had been concluded, it was decided by the President and Secretary, to acknowledge the receipt of the latter and to request the various medical journals, to publish it in full in their next issues.

Moved by Dr. W. S. Muir, Truro, N. S., seconded by Dr. Shepherd, Montreal:

That the Local Provincial Secretaries, be requested to ascertain the feeling of the Medical Societies of their respective Provinces, on the subject of affiliation with the Canadian Medical Association. Vote of thanks to the medical men of Winnipeg.

Moved by Dr. W. S. Muir, of Truro, N. S., seconded by Dr. Geikie.

Moved by Dr. Lachapelle, seconded by Dr. Oldright:

That this Association hereby declares its opinion that it is the duty of all practitioners, to loyally comply with the regulations in force in the different Provinces, and to report cases of contagious disease, to their respective local authorities so as to enable these authorities, to give suitable advice and take such measures, as might be required, in order to prevent the spreading of contagious diseases and prevent epidemics.

Moved by Dr. Strange, seconded by Dr. Henderson:

That the cordial thanks of the Canadian Medical Association, be tendered to the Manitoba and other Clubs, of the City of Winnipeg, for the privilege conferred on its members.

Proposed by Dr. Shepherd, seconded by Dr. Lachapelle:

That the thanks of the Association, be conveyed to Mr. Lalonde, for his great care and attention, and unflinching kindness to the members, during the trip from Banff, to Montreal.

Moved by Dr. Campbell, seconded by Dr. Wright, that the thanks of the meeting, are hereby tendered to the President, for the impartial and business-like way, in which he has conducted the business of the Canadian Medical Association.

Moved by Dr. Campbell, seconded by Dr. Sloan:

That the thanks of the Association, are tendered to Dr. Bell, general secretary, for the able and courteous manner, in which he has performed the large amount of work, which has of necessity fallen to him, in organizing what has been the most remarkable meeting in our history.

THE BRITISH MEDICAL ASSOCIATION.

The fifty-seventh Annual Meeting of British Medical Association, opened at Leeds, on Tuesday, the 13th January. The attendance has been exceptionally large. At the first general meeting, under the presidency of Professor W. T. Gairdner, the Annual Report of the Council was read, which referred to the present position of the Association and the work carried on by its committees during the past year. It was pointed out that when the Association first visited Leeds in 1843, the members numbered a little over 1600; in 1869, when it met again in that city, they were 4095; whilst on the present occasion the roll has reached to more than 12,000 members, and the balance of the assets over the liabilities to £35,617. The adoption of the report was moved by Dr. Holman, treasurer of the Association, seconded by Mr. C. J. Wright; and several reports of committees were presented. Mr. Riving-

ton moved, and it was unanimously resolved, that in the opinion of those present the Members of the Royal College of Surgeons of England should have a voice in the management of the College and in the election of its Council. A vote of thanks was then awarded to Professor Gairdner, for his services during the past year, who, in replying, introduced to the meeting the new President, Mr. C. G. Wheelhouse.

SURGERY.

The proceedings of this section were opened by the President, Mr. Jessop, who introduced a discussion upon the Treatment of Cancer of the Rectum. As regards the treatment of cancer by drugs, his attitude was one of hope and even faith in the future, but absolute distrust in the past. Some Pasteur of the future might yet discover a cure for cancer, but the claims put forward for Chian turpentine or any other drug rested upon the slenderest of foundations. Cancer never yet was cured, although medicines might give great relief. He passed on to operative treatment of cancer of the rectum. Partial removal was rarely advisable and barely scientific. He would deal only with proctectomy, which of late had been forced into prominence by the success of German operators. His own experience was limited to seven cases. One died in a few days; the remaining six obtained a varying amount of relief. All were still alive, one apparently well at the end of twenty-one months; a second equally well at the end of seventeen months; a third had had a speedy return of the disease, which now threatened to end fatally; two others were still well at the end of five months and twenty-six weeks respectively. In four of the cases the results had been almost all that could be desired, and incomparably better than those of the most exceptional colotomy. He had not yet attempted the removal of cancer when beyond the reach of the examining-finger, nor had he advised the operation in any male in whom the disease was seated in the anterior wall of the rectum. In thin wasted patients access might be got to the disease by expanding the sphincter by a modified Weiss's di-

tor, but in stout persons it was necessary to cut from the rectum deeply down to the coccyx. Much of the success of the operation depended on the thorough cleansing of the wound, not only at the time of the operation, but during many subsequent days. In cases in which the disease had originated beyond the reach of the finger, or had crept up to a higher level, he thought the operation unsuitable. He spoke next of colotomy. His opinion was that in cancer of the rectum obstruction was not much to be feared if the disease were in the lower half, but was almost certain where the upper portions of the rectum are involved. Of fifty-four cases of colotomy taken from his notebook, performed for the relief of distress, and not for obstruction, three only died in the first month. Given the diagnosis of cancer high up in the rectum, the duty of the surgeon is to recommend without delay the formation of an artificial anus. As regards cases of disease affecting the middle and lower portions of the rectum, he found that the average duration of life in those who were not operated on was a little over seventeen months, whilst that of those who underwent colotomy was twenty-two months and a half. His experience had gradually raised his estimate of colotomy as a means of prolonging life. As regards relief of suffering, his conclusions were that operation lessened pain, diminished the desire to evacuate, prevented incontinence of faeces, and reduced the number of motions. He had hitherto only performed the lumbar operation, but he was favourably impressed by the evidence in favour of inguinal colotomy.

A demonstration of cases treated by surgeons of the General Infirmary was given on Wednesday afternoon. Some highly interesting cases were presented; among them were the following:—Under the care of Mr. Teale: cholecystotomy. Under the care of Mr. Jessop: pendulous tumour of scalp overlying orbit; excision of upper jaw for sarcoma, operation one year ago; cholecystotomy; two cases of recovery from cancerum oris; pyonephrosis; nephrolithotomy, recovery; enchondroma of ribs, excision; compound comminuted depressed fracture of skull,

hemiplegia and hemianesthesia, trephining, recovery; neuroma of median nerve, excision, nerve-grafting, recovering sensation; suprapubic prostatectomy. Under the care of Mr. McGill: cholecystotomy; senile gangrene; amputation of thigh, recovery; three cases of suprapubic prostatectomy; suprapubic cystotomy for villous growth of bladder; laparotomy for intestinal obstruction, associated with Meckel's diverticulum; as well as numerous other cases, many of them illustrating the treatment of joint-disease. Cases under the care of Mr. Atkinson: chronic intestinal obstruction; intussusception, enterotomy, recovery; two cases of suprapubic prostatectomy; ichthyosis hystrix linguae; lithotomy and prostatectomy at one sitting; double bronchial clefts in a young man; thyroidectomy. Cases under the care of Mr. Mayo Robson—Cases illustrating intracranial surgery: (1) man, aged 44, compound comminuted depressed fracture of skull involving the longitudinal sinus, primary trephining, recovery; (2) man, aged 42, compound depressed fracture of skull, Jacksonian epilepsy, trephining, complete recovery (operation 3 years ago); (3) girl, aged 11, hemiplegia associated with otorrhoea, trephining over motor centres, evacuation of serous fluid from lateral sinus, recovery; (4) boy, aged 17, compound comminuted depressed fracture, protrusion of brain matter, hemiplegia and hemianesthesia, elevation of fragments, recovery; spina bifida in a girl, aged 19, excision, recovery; spinal caries, angular curvature, paraplegia, trephining with removal of spinous process of three dorsal vertebrae; three cases of thyroidectomy; a case of cholecystenterostomy, resulting in a fistulous opening; cholecystenterostomy (May 6th, 1889), complete recovery; two cases of cholecystotomy; two cases of sigmoidostomy; faecal fistula after strangulated hernia, gut sutured and returned, tubercular peritonitis in a girl, aged 15, abdominal section, recovery with great gain of weight; three abscesses, aspirated and injected with iodoform and ether, recovery; gastrostomy (operation 10 weeks ago); several cases of strumous disease of wrist treated by longitudinal dorsal incision;

fracture of olecranon treated by extra-articular pinning, recovery with perfect movements of joint.

THE PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION ON MEDICAL EDUCATION.

Upon the subject of Medical Education in the present, the President spoke as follows: "Year by year and little by little we have been accumulating a burden which, if not absolutely more than the shoulders of the student can bear, is yet heavier than he can possibly carry with credit; and, instead of increasing his opportunities to acquire the strength necessary to bear it, we have curtailed his time, have deprived him of material advantages, and, in accordance with the hurry of the age, have demanded results well-nigh impossible of attainment. The five years of apprenticeship have been swept away, and with them the opportunity to master the groundwork of medical education and to acquire a sound knowledge of the more common forms of ordinary illness has gone also; and in four years, instead of eight, we permit the whole work to be completed. We have determined to ignore the utility of that homely but infinitely useful form of preparation for the higher parts of medical education which apprenticeship or pupilage was pre-eminently calculated to afford; we have determined that from the day on which a boy has been able to pass a very ordinary and limited educational examination he shall be permitted to take his place in a medical school, and we have arranged a curriculum which, if by dint of slavish toil he can master, shall enable him at the early age of twenty-one to enter upon the full responsibilities and duties of practice. We demand of him that he shall pass *at least* four examinations. One in general education; then a preliminary one in his professional subjects at the end of his first year of professional study; a "primary" and a "pass" examination; and, to make this the more easy to him, we permit him, if he wishes to do so, to split up these four examinations into eight or even ten, and, by clearing them off in fragments, we give

him the opportunity to dismiss study after study from his mind with a rapidity which leaves scarcely a trace of them behind, and enables him to forget them, one after another, with a facility which, if the mere capability to pass examinations were the only end and object aimed at, would be commendable enough; until at last there only remains the one final test, at which, by a supreme effort, he may show that he has attained a sufficient amount of theoretical knowledge to satisfy his examiners, and that he has acquired a fair comprehension of the principles which underlie his future work. That even this is impossible, or nearly so, is abundantly proved by the fact that in a large majority of cases men voluntarily, and in many more under the compulsion of failure in the earlier examinations, devote five years instead of four to their education, and find that even then the task has been almost more than their powers could endure. To make up for deficiencies which even to themselves are then only too apparent and too keenly felt, hospital appointments, whether paid or unpaid, are eagerly sought for and accepted; or, failing to obtain these, men seek for themselves assistantships in which they may obtain that practical knowledge which only work under the guidance of experience can give them, and for lack of which they feel and know that they are unfit to cope alone with the responsibilities of practice.

BRITISH MEDICAL ASSOCIATION, LEEDS MEETING, 1889.

DR W. H. FERGUSON'S LETTER.

I am attending a most successful and profitable meeting of the British Medical Association at Leeds, of which now I can boast to be a member.

Before touching upon the work of the Association, allow me to at least mention the various and interesting places I have visited since leaving sunny Winnipeg. Saint Paul, Chicago, Toronto and Montreal, only received a passing glance. In New York, I remained over two weeks, visited the various hospitals, and saw

what I could during that short time. London was my next place of interest. While good surgery is to be seen in this great metropolitan centre I cannot refrain from saying that as a whole "London is surgically asleep." Antisepsis is not always carried out and at their hands I have seen more clumsy work than in any place else I have visited since leaving home. In some special lines, however, great strides are being made. My time in London was spent, now at one hospital, then at another, etc. While in Glasgow, I devoted my whole month to Dr. Macewen, whose company I enjoy here to-day. To give you a fair idea of his special methods would be to write a small book for almost everything he does is Macewenism. After this surgical feast with him I thought of the old saying—"all work and no play make Jack a dull boy," so I hied myself to the Heelands (Highlands) of Auld Scotia. Visited Iona, Staffa, Mull, Oban, Ben Nevis on whose top I stood, then Inverness, Aberdeen and Edinburgh were visited in turn, but for a short time, not forgetting, however, to see an operation, attend a medical meeting, or inspect an hospital, university or college wherever I could. In Edinburgh an old dirty, bloody coat was worn by the operator, similar to the one seen in many London hospitals, which I so abominably detest. The results were good all the same, but I do not think the old consecrated coat should get the credit.

The strictest antiseptic measures and cleanliness were carried out at Aberdeen. I then made my way to Germany via Flushing, passing through Glasgow and London on my journey. While the German surgeons may and frequently do err in matters of diagnosis and judgment, still they all, without a single exception, as far as I have observed, aim at conducting their operations, dressings, etc., according to the most advanced scientific principles and observations as revealed by the bacteriologist. Hamburg was the first place I visited in that country and received every kind attention at the hands of Dr. Schede and particularly Dr. Carl Lanenstein, both specialists in surgery. Schede has no less than 450 surgical beds, allotted to his cases in the

new general hospital built on the college plan. It is the finest hospital I ever saw, and a great deal of surgery is to be seen there. Operations begin every day about 9 a. m., and by about 2 p. m. Some 10 or 12 operations are completed by himself and his 12 assistants. Not unfrequently a major operation (*e. g.* laparotomy) is given to an assistant to perform while he manages a minor one himself. As there are no instructions given to medical students in Hamburg, no university being there, the visitor has the fullest opportunity of seeing every step of the operations. Dr. Carl Lanenstein has some 150 beds between the sailor's and the charity hospitals. He is one of the best men I have met: stands 6 feet 7 inches, straight as a rush, and very powerful; operates exceedingly well, and is quite a linguist.

Berlin was my next place of interest. After visiting the hospitals for about a week I began to work in a practical manner myself. I took Prof. Koch's course on bacteriology and Virchow's course on pathology, two of Germany's ablest men. I am delighted with my work there and am bringing home some 200 specimens of bacilli, micrococci, streptococci, etc. I must say that Berlin surgery is of the highest order indeed. Oh, I must say a word about the Paris surgeons with whom I spent the forenoons of a week. The afternoons being devoted to sight seeing, the exhibition, etc. Prof. Peau, their great surgeon, operates in full dress suit, and not an old one mind you. He operates well and talks all the time, so does Bergman, of Berlin. I visited and fully examined the Pasteur institute, saw 78 cases inoculated in one forenoon. Mesmerism receives the attention of Dr. Lays, with whom I spent a day watching the antics dictated by him of those in the hypnotic state. He claims to cure by this means not merely functional but certain pathological conditions *e. g.* paralysis agitans, paralysis of the insane, insanity in certain forms, epilepsy, catalepsy and locomotor, ataxia. The curing of hysteria is common so he says, but the last fad is the curing of constipation.

By what I have seen I should judge

mesmerism to be of but very little use in effecting a cure. It appears to please the hysterical patients and they come often. It may be of some use in stupefying certain susceptible persons while minor operations are being performed. A cancerous breast has been removed under its influence.

The Paris Exhibition is simply immense. I came here on Monday the 12th inst., which gave me an opportunity to visit the exhibits, etc., before the crowd came. On Tuesday Council meeting: a sermon by the Right Rev. the Lord Bishop of Ripon and in the evening the President Mr. Wheelhouse gave his address.

Wednesday, 14th, Section work began. I of course paid strict attention to the surgical section. The discussion was opened by Mr. Thomas R. Jessop, president of surgical section, subject being Cancer of the rectum. The subject was well put and ably discussed.

To-day we had a host of subjects, so I must say good night. I shall be home about the middle of September.

A. H. FERGUSON.

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THE DISPOSAL OF THE DEAD.

BY JOHN M. PEACOCKE, M.D.

Read before the Medical Society of the County of Kings.
From the Brooklyn Medical Journal.

In primitive times, before men began to multiply on the face of the earth, it is probable that the dead were laid in woods or anywhere above ground where they were exposed to the action of the elements and became a prey to the beasts of the field and the fowls of the air.

Since that remote period mankind has adopted four principal methods for the disposal of the dead—interment, embalment, entombment and incineration.

Strange burial customs are to be found in different countries, and form in many instances distinctive characteristics of the people practising them.

The Ethiopians salted the body to keep it from putrefaction, and then enclosed it in a coffin covered with glass, through which the remains might be seen. The

Parthians, Medes, Iberians and Caspians had such a horror of the decomposition of the body that they rejected all interment and cast the dead into the open fields to be devoured by wild animals.

The Kamtchatdales keep special dogs for the purpose of devouring the dead. The ancient Ichthyophagi, who dwelt on the shores of the Persian Gulf, committed the corpse to the silent depths of the sea. A like form of aquatic burial is still prevalent among some American aborigines, who deposit the dead in a canoe and launch it on a stream or lake remote from human habitations. The Parsees, the modern followers of Zoroaster, erect high towers, called the Towers of Silence, on which are exposed the naked bodies of the dead which become the prey of vultures. The Chaldeans, though worshippers of fire, regarded the burning of the dead as an insult to their deity. The Scythians practised aerial sepulture. The dead body was sewn up in skins of animals and suspended from branches of trees. A similar custom is occasionally observed by some of our Indian tribes, who envelope the corpse in a buffalo hide and place it on an elevated platform. The ancient Mexicans burned the dead, and only consigned to the grave the bodies of those who had been drowned or died of dropsy. The Mussulman regards the grave with feelings of the deepest reverence. He requires it to be of certain size and sufficient depth that he may be able to rise in it to his knees and wrestle with the angel at the last day. The Chinese look upon the funeral as a most important undertaking. There is no object of science or art dearer to the heart of a Chinaman than his coffin. A wealthy man will expend several thousand dollars upon this piece of vanity. A man of limited means will give all he has, and a son is frequently known to sell himself for a slave that the remains of his father may rest in a rich coffin.

The earliest mode of burial was interment. The word *burial* is derived from an old Anglo-Saxon word which means concealment. According to Josephus, the first interment was that of Abel. Cain buried the body to cover his crime. The patriarch Abraham strikes the keynote

of the reason for burial, when, on the death of Sarah, he said to the children of Heth: "Give me possession of a burying-place that I may bury my dead out of my sight." "There they buried Abraham and Sarah his wife; there they buried Isaac and Rebecca his wife; and there I buried Leah."

Moses was buried in a vale in the land of Moab. No man dug his grave, for "the angels of God upturned the sod and laid the dead man there." The Hebrews buried in caves or sepulchres, or in graves in the open fields. They were very exact in all the minutiae relative to the final disposition of the dead. After death the body was well washed, generally with a strong solution of native carbonate of soda, anointed with highly aromatic unguents, and swathed in numerous fold of linen. According to Pliny, earth burial was customary in the early days of Rome. The law of the famous Twelve Tables expressly forbade the burying or burning of the dead within the city, or within sixty feet of any house, without the consent of its owner. Large tracts of land in the suburbs of Rome were donated by the patricians and appropriated to purposes of interment. These were the origin of cemeteries (*places of repose*). The primitive Christians in Rome buried in the catacombs. Many of these subterranean passages are of great antiquity and were connected with quarries hewn long before the Rome of Romulus and Remus was founded. They represent whole cities of the dead and contain in all about 6,000,000 bodies. Burial and not cremation seems to have been the one design and purpose of the catacombs. The early Christians regarded cremation as a pagan rite, entirely antagonistic to their belief in the resurrection of the body. The persecution against the Christian church ceased with the conversion of Constantine in 312.

During his reign Christianity became the imperial faith, and by his memorable edicts of toleration the Christians were allowed to possess land without fear of disturbance, and bury their dead publicly and above ground without danger of molestation. In 509, the Senate gave permission to Pope Marcellus to establish the

first Christian cemetery in Rome. The honor of being buried within the precincts of the Christian sanctuary was first assigned to the Emperor Constantine, whose remains were deposited in the vestibule of the Church of the Holy Apostles at Constantinople. With his death originated the custom of burial in churches. The desire to find a resting place in hallowed ground is not confined to Christianity, even those considered pagan had exalted ideas of the sanctity of the ground surrounding their temples. Pachacamac was the sacred City of the Supreme Divinity of Peru and the Mecca of the land of the Incas centuries before the advent of Pizarro. Here was erected a magnificent temple of the Sun. A distance of two hundred paces from it was considered holy, and no one was allowed to pass within this boundary but with naked feet. Its vicinity seems to have been used as one vast cemetery. Exploration therein has revealed countless number of desiccated bodies, lying tier upon tier, showing how great must have been the concourse of people and how eager the wish to be buried within the shadow of the walls of that once mighty structure dedicated to the Creator of the World.

The almost universal sentiment to bury near the remains of the sainted or illustrious dead is only the expression of an instinctive feeling which awoke very early and acted very powerfully in the Christian church. It is in fact an echo, reverberating through the centuries, of the desire of the old prophet of Bethel that his bones should be laid beside the bones of the man of God from Judah. With the propagation of Christianity, the baneful practice of church burial became more and more popular. Several decrees were issued to stop the evil, but in vain; the canon bearing on the matter was erased, and the law concerning it became a dead letter. The churches could not accommodate all the dead, consequently the majority of the bodies of the faithful were interred in the surrounding enclosures of churchyards. Medical authorities in the eighteenth century pointed out the danger accruing from intramural interment, and the governing powers of civilized countries were appealed to. In England the whole

system of intramural interment was checked by Mr. Chadwick and other sanitary reformers in 1844. Measures were afterwards carried out for closing graveyards in crowded cities and placing interment in cemeteries under sanitary control.

At the present day the custom of burial within cities is on the wane. Cemeteries are to be found in the vicinity of all centres of population both at home and abroad. They are, as a rule, far different from the old churchyards, and are more spacious than formerly. In their location the public health has been considered, and regulations have been adopted as to depth of graves and their distances from dwellings and wells. In thickly settled Europe, where the ground is more or less limited and the population dense, the overcrowded state of churchyards and cemeteries can be readily accounted for; yet in a new country like this, with an almost boundless domain, the incontrovertible fact confronts us that in many burial places, and not very far away either, one grave is not permitted to be set apart for one body.

The late Rev. Dr. Beugless says: "Of the great cemeteries about New York, there is not one, not even Woodlawn or Greenwood, in the public lots of which three or more bodies are not put in one grave, that of John Doe who died from a "bare bodkin" being sandwiched between those of Richard Roe and James Low who were the victims respectively of small-pox and yellow fever."

Few cities are so generously supplied with cemeteries as Brooklyn. They hedge in the city on all sides, occupy nearly two thousand acres of valuable real estate, and include some of the choicest building sites. These burial places are destined to be, in the near future, within the city limits and encompassed by human habitations. Their founders located them far off, as they thought, in the country, remote from chance of municipal encroachment and distant from the hum and the hurry, the haunts and the homes of the living town. The city of New York is extending so rapidly that, as time rolls on and population increases, it would not be improbable for the great metropolis to include within its boundary the whole of

King's County, part of Queens and part of Westchester Counties. Where will the present cemeteries be then? Right in the centre of a teeming population, which in time, from stress of space, will be compelled to build their dwellings upon these beds of pestilence.

In 1794, not one hundred years ago, the population of New York City was 33,000, and then the municipal authorities located the Potter's Field at the corner of Greenwich and Albany roads, or not far from what is now the west end of Chambers Street. There had been pauper burials in the north end of the City Hall Park, and the negro burial ground at that time was on the site of the Stewart Building, at the corner of Broadway and Chambers Street. Nearly all the churches in town were south of this, and each had its own graveyard. In 1801, the city selected, on account of its retired location, the place now known as Washington Square as a Potter's Field. It and other far-off fields were rubbish-grounds where the city authorities dumped the poor dead.

When the cemeteries of Pere la Chaise and Montmartre in Paris were established, they were on hillsides that were at some distance in the country. Now, though they are not in the heart of the city, they are far within the city limits and have a dense population on all sides of them. Pere la Chaise is so overcrowded with decaying bodies that ordinary cadavers are dug up after five years in order to make room for their ghastly successors.

The putrid emanations from these Parisian cemeteries have caused fevers of a typhoid type, diseases of the throat and intestinal canal, to which numbers fall victims every year. The French Academy of Medicine reports that these diseases have been traced to the vitiated air and water in the neighborhood of these burial places. In Naples an unique form of interment prevails. Three hundred and sixty-five pits are dug, one for each day in the year. All who die within twenty-four hours are put into one of these.

Referring to this wholesale burial, Dr. Curtis, of Chicago, has facetiously said: "After enjoying for three hundred and sixty-four and a fraction days 'the sweet

rest of the grave' that poets sing of, the trump (and in this case spades are trumps) bids the dead arise."

The "Potter's Field" of New York City is located at present on Hart's Island. Since 1869 more than 60,000 bodies have been buried there. There are no single interments, the bodies are placed in trenches, dug in regular rows, 45 feet long, 14 feet wide, and 10 feet deep. Each of these pits will hold 150 bodies, which are laid three deep, in six rows of twenty-five each. In 1887, 4158 bodies were buried on Hart's Island; the interments average about thirty per day. In the public or poor quarter of Calvary Cemetery a trench is dug, 7 feet wide, 10 to 12 feet deep, and of indefinite length, in which the coffins are stowed tier upon tier, making a flight of steps, five or more deep, and with not enough earth to hide one from the next.

A positive danger lurks in this form of burial, as when numerous bodies have been interred in a space of limited size and within a comparatively short period of time, the earth becomes so saturated with the foul products of decomposition that it is incapable of further absorption. The modes described of burying the pauper dead in pits of putridity is a disgrace to our vaunted Christianity and a blot on our civilization. If land be too dear to give the dead poor a decent burial, respectful to the departed and innocuous to the living, a thousand times better it would be that their bodies should be burned and their ashes buried.

The proposed incineration of Isaac by Abraham on Mount Moriah appears to have been the first authenticated case of burning the dead. Although not consummated, it undoubtedly had the approval and authorization of Jehovah. In Amos, it is said that Moab burned the bones of the King of Edom into lime; and, in Samuel, that when Saul the King of Israel and his sons fell in honorable warfare with the Philistines, "the valiant men of Israel arose and went by night and took the body of Saul and the bodies of his sons from the wall of Bethshan, and came to Jabesh and burned them there, and they took their bones and buried them under a tree at Jabesh."

The Assyrian tombs discovered on the banks of the Euphrates and Tigris furnish unmistakable evidence of cremation. The Jews practised incineration for sanitary reasons in times of plague and pestilence; the bodies were burned in the vale of Tophet. Cremation was adopted in Asia at a very early period. It was known to the Hindoos from a remote date. From India it extended to the Western world, and was followed there by the Thracians, Celts, Sarmatians, and other nations. Though the last funeral fires expired in the fourth century, yet the Indo-Germanic nations burned their dead until late in the mediæval times. The first mention of incineration in Greek literature occurs in the Iliad, and refers to the funeral of Patroclus and Hector. Homer did not regard the process as an innovation, but rather as the common usage. Many of the notable men of Greece were incinerated—Solon, Alcibiades, Pyrrhus, Plutarch, and others. Cremation was not in general favor among the Romans until towards the termination of the Republic. Sylla, in B. C. 78, was the first patrician who desired to have his remains incinerated. Julius Cæsar, Brutus, Octavius, Augustus, Tacitus, and several other celebrities of that age, were cremated. The funeral rites among the Romans varied according to the means of the deceased. In the latter days of the Republic, and under the earlier emperors, the remains of the rich were washed, anointed with oil, and perfumed by the slaves of the undertakers. Balsams were poured over the corpse, it was enveloped in asbestos, placed on the pyre and covered with cypress boughs. The nearest relative unclosed the eyes of the deceased and, with averted face, applied the torch to the wood. As the flames ascended the favorite animals of the departed were sometimes flung into the fire, as well as costly arms and robes. Various perfumes were added and were rendered necessary by the disgusting odor. The amount of spices, oils, and balsams destroyed at incinerations was enormous. Pliny reports that Nero used up more incense, myrrh, and other aromatics at the cremation of Poppæa than could be produced by the whole of Arabia in one year. When the burning of the body

was completed, the embers were soaked with wine. The bones and ashes of the deceased were gathered by the friends, who sprinkled them with perfumes and placed them in an urn. The urns were of rich design and artistically decorated, and were made of marble, alabaster, or baked clay. When sealed they were deposited in niches called *columbaria*, from the resemblance of their arrangement to a dovecot. Nathaniel Hawthorne was so charmed by the exquisite beauty of some of the urns and columbaria as to lead him to remark that he would not object to be decently pigeonholed in a Roman tomb. During the Trojan war incineration appears to have been adopted that the remains of the dead heroes might be restored to their native land. A very good account of burning the dead as customary among the ancient Romans may be found in Eulwer Iyt on's novel, "The Last Days of Pompeii." The cremation of the rich was attended with such pomp, ceremony, and expenditure of money, that the poorer classes were compelled to resort to interment as being the much cheaper way for the disposal of the dead. This finally led to the re-introduction of earth burial, which strangely enough was coincident with the decline and fall of the Roman Empire. During the time that cremation was customary in Rome the color of the habiliments of mourning was white; when interment was the practice the hue changed to the sombre black.

As Christianity spread, incineration became gradually obsolete, and the dead were consigned to the slow and loathsome process of putrefaction in the grave or tomb. For centuries cremation lay buried in oblivion; it was not entirely forgotten, as efforts at its revival were made at long intervals. These endeavors were brought to a climax in 1868, when cremation was introduced at the Medical International Congress at Florence as a sanitary measure of great importance. A lively enthusiasm was then kindled and an impetus given, resulting in the growth of the movement, despite the determined opposition shown toward it.

The process of cremation, as conducted at Gotha, by means of the Siemen's apparatus, is thus described :

"The body is borne into the chapel and placed in a catafalque which stands in front of the altar. The section of the chapel-floor upon which the body rests constitutes the floor of a lift, or elevator. As the funeral service proceeds the elevator invisibly and noiselessly descends, bearing the body to the basement directly in front of the incinerator, which by means of superheated air, has been raised to a white heat within, at a temperature of about 1500° Fahrenheit. As the door of the incinerator is opened to receive the body, the rushing cold air cools it to a delicate rose tint; and the body, resting on a metallic bed, covered with a cloth of asbestos, or of linen soaked in alum, passes over rollers into this bath of rosy light. Immediately it becomes incandescent, in which condition it remains until incineration is complete. This requires about an hour per hundred pounds of the original weight. There remain only a few handfuls of pure pearly ashes, equivalent to about four per cent. of the original. These are dropped by means of a lever into the ash-chamber below, and are drawn thence into an urn of terra cotta, marble, alabaster, or other suitable material, and returned by means of the elevator to the catafalque. The service or ceremony being now over, the friends of the deceased find the ashes just where they had last seen the body of the departed, and may bear them thence to the columbarium or mortuary chapel, or set them in the border and plant violets, heartsease, and forget-me-nots in them from year to year.

'And from his ashes may be made the violet of his native land.'

"No fuel or flame of foreign substance comes in contact with the body. The process is accompanied with no perceptible sound or smell or smoke absolutely nothing that can offend the sensibilities of the most fastidious. All the smoke and volatile products of combustion are passed through a regenerating furnace before being turned loose into the air, and are absolutely purified. The process is indeed in every way so decorous and so beautiful, as compared with other methods of disposing of the dead, that it is described by those who have witnessed it as 'fas-

inating,' and scarcely an instance is known of any one having witnessed the process, as thus conducted, who has not at once become a pronounced convert to cremation, whatever may have been his pre-existing prejudice."

As a hygienic and economic measure, cremation is recognized as a proper sanitary process it has been endorsed as a sanitary necessity by the Society of Medical Jurisprudence and State Medicine of New York, the American Public Health Association, and the American Medical Association. In England it is now regarded in quite a favorable light, and the *London Times*, which was once so hostile to the movement, has come around and now upholds what some years ago it so vehemently opposed.

Europe has twenty-four crematories, situated at London, Paris, Rome, Brussels, Gotha, Dresden, Florence, Copenhagen, Milan, and other places. About 800 bodies have been incinerated in Germany and about 1200 in Italy.

In the United States there are twenty-two cremation societies and ten crematories; the latter are located at Fresh Pond, L. I., Washington, Pa., Lancaster, Buffalo, Pittsburgh, Cincinnati, Los Angeles, Detroit, St. Louis, and Philadelphia. Crematories are in course of construction in Baltimore, San Francisco, Davenport, San Antonio, and Louisville.

At Fresh Pond, L. I., the first body was incinerated on December 4, 1885. Up to November 25, 1888, 229 cremations have taken place there. The charge for each incineration is \$35. The actual cost to the company for same is \$15.

The three chief impediments that obstruct the advance of cremation are the sentimental, the religious, and the medico-legal.

The late Professor Gross alluded to the sentimental objection in the following words: "If people could see the human body after the process of decomposition sets in, they would not want to be buried, they would be in favor of cremation, and would look upon burning the human body as a beautiful act in comparison with burying it. There is something eminently repulsive to me about the idea of lying a few feet under the ground for a century,

or perhaps two centuries, going through the process of decomposition. When I die I want my body to be burned."

This burning and shining light of the profession further said: "People's prejudice is the only opponent that cremation has." Dr. Buck remarks: "The real objection of most people to the practice of cremation is an emotional phenomenon, and therefore the harder to reach by argument. It is altogether probable that if bodies were usually burned and burial were proposed as a substitute, there would be an outcry of horror at the barbarous suggestion." Only because the putrefactive process is hidden that it is tolerated; should it take place openly and within sight, the whole civilized world would rise indignantly and sweep such a vile custom from the face of the earth.

Many distinguished men among the clergy are opposed to cremation on religious grounds. The Bishop of Lincoln, in Westminster Abbey, July 5, 1874, denounced incineration as barbarous and unnatural, and said, "One of its first fruits would be to undermine the faith of mankind in the doctrine of the resurrection of the body." His Lordship has been pertinently asked, "Can it be supposed to be less possible or less easy for the all-knowing and Almighty God to gather and revivify the material atoms after they have been oxidized and scattered by the agency of the incinerator than after precisely the same result has been accomplished by combustion in the earth." And if, as the Bishop of Lincoln seems to assume, it is impossible for God to raise up the bodies of those who have been burned, what, it is asked, is to become of the many of the noble army of martyrs who were burned at the stake, or devoured by lions and tigers in the arena, or broiled on beds of iron, rather than renounce their holy faith. Does the Bishop really mean to say that there is to be no resurrection of the bodies of Archbishop Craumer and Bishops Latimer and Ridley who went to heaven in chariots of fire. The Bishop of Manchester, referring to the consecration of a cemetery, said in 1880: "I feel convinced that very soon we shall have to face the problem how to bury the dead out of sight with

safety to the living. I hold that the earth was made for the living and not for the dead. No intelligent faith can suppose that any Christian doctrine can be affected by the manner in which, or the time in which, this mortal body crumbles into dust and sees corruption. The question must be met, for cemeteries are becoming not only a difficulty and a great expense, but an actual danger." A Roman Catholic clergyman remarks: "As to the religious aspect of the question, nothing can be more reverent than this mode of disposing of the dead, and the words of the funeral service, 'ashes to ashes,' will possess a reality they never did before; also the beautiful anthem, 'When thou passest through the fire I will be with thee, would find a most touching response."

Canon Liddon said, in a sermon at St. Paul's Cathedral, "The resurrection of a body from its ashes is not a greater miracle than the resurrection of an unburnt body. Each must be purely miraculous"

The medico-legal objection that is strongly urged against cremation is that by the process of incineration all evidences of crime in case of poisoning would be lost. This is certainly a forcible argument against cremation. But, even when the body is not destroyed by fire, vegetable poisons, if administered, are not always discovered by analysis, and are with difficulty detected after death, especially if the body has lain in the grave for any length of time.

Speaking of the mineral poisons, Dr. W. H. Curtis remarks: "Of this class, very rarely are more than two or three used with criminal intent, and these, particularly arsenic, present such plain and unmistakable ante-mortem phenomena as to render the necessity for the disinterment of the body an act of gross carelessness."

Dr. Selmi, the renowned Italian chemist, has shown by protracted experiment, and his results have been confirmed by other investigators, that the common constituents of the body, as the brain, blood, fibrin, etc., perfectly innocuous in health, are rapidly converted by decomposition, under certain conditions of heat and moisture, into deadly poisons similar to the vegetable alkaloids and just as virulent.

Professor Selmi first suggested, in 1875, the name *ptomaines* to designate these cadaveric alkaloids obtained from putrefying organic material. As the ptomaines are true alkaloids, and as such are members of the same chemical group as the vegetable alkaloids, the possibility that one of the former may be mistaken for one of the latter in a chemico-legal examination is obvious. Such errors have actually occurred beyond the shadow of a doubt. Three such cases are well known. Time will only allow allusion to one. General Gibbone died in Rome under circumstances which awakened a suspicion of poisoning. The chemists who analyzed portions of the body after death were of the opinion that death was caused by *delphinine*, an alkaloid of stavesacre. Selmi saved the prisoner from the sentence of death by proving to the satisfaction of the tribunal that the alkaloid obtained from the body of the deceased did not respond to several of the reactions of *delphinine*, that it was not that alkaloid, but a ptomaine. Professor Thompson, an expert in chemistry, says: "As to the difficulty about post-mortem evidences of criminal poisoning, it has been evident in recent times that such evidence, however obtained has not had much weight with juries since they are aware of the liabilities to inaccuracies and uncertainties."

The medico-legal objection to cremation might be further met by a revision of the laws governing the appointment of coroner. At present the investigation of cases where sudden or suspicious death has occurred is sometimes seriously handicapped by the fact that the important office of coroner is often vested in the hands of men, frequently laymen, who are not qualified for such duty.

Undertakers now generally use an embalming solution for the temporary preservation of the body. Arsenic, corrosive sublimate, and other deadly poisons enter into the composition of the solution. In case of suspected poisoning, say by arsenic, if the body had previously been injected by the so-called embalming fluid, the subsequent analysis would be attended with well-nigh insurmountable difficulties. An earlier poisoning could not be distin-

guished with certainty from that effected by the injection used by the undertaker.

We are now living in a practical age, when the question of economy is an important one, and in times when by touching a man's pocket we come in contact with a very sensitive portion of his organization. It is universally conceded that there is useless and extravagant display on funeral occasions. Every year sees families in New York, Brooklyn, and elsewhere, homeless and breadless because of the enormous and unnecessary expense incurred in burying the dead. An evening paper not long since informed its readers that "A millionaire pill doctor named Henry Hillen was buried at Wilmington, Mass, in a \$10,000 coffin which it took two years to make. There was a \$10,000 box to enclose the coffin, the total expenses of the funeral reaching nearly \$25,000." And further that "Mrs. Hillen; widow of the Wilmington, Mass., pill maker, goes to her husband's tomb every day, leaves a bunch of flowers, asks the corpse how he passed the night, and pays a man \$5 a day for visiting the tomb at evening and crying, 'Good night, Dr. Hillen; we hope you will rest well.' She frequently 'tries on' her own coffin, which, like her husband's, cost \$10,000; but when at the pill works she is said to be 'all business.'"

Careful statistics show that the sums expended for funerals in this country exceed all the product of our gold and silver mines, and by actual computation they exceed the amount of all the failures of the business houses of the country. The waste of land is well worthy of consideration. The cemeteries surrounding cities embrace many acres of valuable land. They are all, by law, exempt from taxation. Property in the vicinity of these cemeteries is depreciating and taxes are increasing. Gravediggers, tombstone-cutters, florists, and saloonkeepers are the principal parties attracted to such localities. The cemeteries at Newtown, L.I., cover a very large territory. They contain more than 3,500,000 human remains, and receive annually 30,000 bodies of people dying in New York and Brooklyn.

One principal feature in cremation, looking at it from an economical stand-

point, is its cheapness as compared with interment in cemeteries. The average cost of burial lots in Woodlawn and Greenwood, each containing space for six graves, is about \$450, or \$75 per grave. The cost of single graves in the public lots is about \$25 each. The cost of a modest head and foot stone and their erection will add \$75 more, making a total of \$250 or \$300. Assuming the carriage hire to be the same in either case, the cost of cremation decorously performed, including the case in which the body is carried to the crematorium, should not exceed \$40; add \$5 for a terra-cotta urn and \$10 for a niche in the columbarium, and \$5 for an inscribed tablet under the niche, and we have \$60 as against \$250 or \$300 for earth burial.

Combustion is the means that Nature employs for the destruction of the dead body. It may be prolonged for an indefinite period in the grave. In the retort of the crematorium or the funeral pyre the body is reduced to its constituent elements in a few hours. The final result is the same in each case. The difference lies in the time in which the result takes place. In cremation the end is attained in an hour without any injurious consequences to the living; in earth burial, in an eighth, quarter, or half a century, with more or less menace to health.

"In earth burial the length of time necessary to effect complete decomposition varies according to the character of the ground. It may be accepted as a rule that in favorable soils, porous and well aerated, decomposition will be fully accomplished in from three to four years; and in soils, dense, clayey, or wet, the putrefactive process may be delayed from ten to fifteen years or longer. The remains of the young decompose with greater rapidity than those more advanced in life, those of females more rapidly than of males, and those dying in full health than those whose tissues are wasted by disease. Persons dying from diseases of a malignant nature, or where the fluids were in a depraved condition, decompose with still greater rapidity. When decomposition takes place the parts become soft, change in color, exhale a disgusting odor, diminish in weight, and afford

several products, some of which escape in gaseous form, others pass off in a liquid state, and others again are contained in a fatty or earthy residuum."

Sir Henry Thompson said in 1874: "No dead body is ever placed in the soil without polluting the earth, the air, and the water above and around it." The late Disraeli said, in the House of Lords in 1880: "What is called 'God's acre' is not adapted to the time in which we live, nor to the spirit of the age. The graveyard is an institution very prejudicial to the public health, and the health of the people ought to be one of the first considerations of a statesman. The time has arrived when a safer method for the disposal of the dead should be instituted."

Dr. Buck, in his work on Hygiene, remarks: "It is impossible for any one to say how long the *materies morbi* may continue to live underground. If organic matter can be boiled or frozen without losing its vitality, and seeds three thousand years old will sprout when planted, it would be hardihood to assert that the poison of cholera, or small-pox, or typhus may not for years lie dormant, but not dead, in the moist temperature of the grave." Dr. Parkes said: "If the dead are buried, so great at last is the accumulation of bodies that the whole country round a great city becomes gradually a vast cemetery. After death the buried body returns to its elements; if, instead of being buried, the body is burned, the same process occurs more rapidly. Neither affection nor religion can be outraged by any manner of disposal of the dead which is done with proper solemnity and respect to the earthly dwelling places of our friends. Burying in the ground appears certainly to be the most insanitary plan." Dr. Spencer Wells writes: "When the people know how great are the evils dependent on burial in the earth, even when this is done under the most favorable conditions, public sentiment must favor cremation in place of corruption, and for putrefaction substitute purification." Dr. A. N. Bell says: "Cremation commends itself to many of the foremost sanitarians, church dignitaries, and others distinguished for their intelligence in the most enlightened communities of the present day everywhere."

The Report of a Committee of the American Public Health Association, read at St. Louis, May, 1886, Dr. James M. Kellar of Arkansas, chairman, states: "We believe that the horrid practice of earth burial does more to propagate the germs of disease and death and to spread desolation and pestilence over the human race than does all man's ingenuity and ignorance in every custom or habit. The graveyard must be abandoned. The time has come for us to face squarely the problem how to dispose of the dead with safety to the living. And your committee has an abiding faith that you will earnestly and at once say that the earth was made for the living and not for the dead, and that pure air, pure water, and pure soil are absolutely necessary for perfect health. Only skeptics deny that the dead do poison these three essentials of human life."

It has been ascertained that the plague which broke out in Modena in 1828 was caused by excavations made in the ground where three hundred years before victims of the plague had been buried. A similar occurrence took place a few years ago in Derbyshire, England, and the terrible violence of the cholera in London in 1854 was charged to the upturning of the soil wherein the plague-stricken of 1665 were buried. In 1806 the New York Board of Health advised the removal of all graveyards within the city limits, and recommended that the then existing burial places be converted into public parks. This was done to some extent, and Washington Square, which was then the "Potter's Field" of New York, is one of the fruits of this recommendation. A physician who lived several years on its western border declares it impossible to raise children on the ground floor of houses in that vicinity.

In the Report of the Committee on Hygiene, read before the Medical Society of the County of New York, June 25, 1886, are enumerated the many sources of pollution of the water supply of New York City found to exist in the Croton Valley watershed. Among them are five cemeteries.

Dr. A. N. Bell, speaking of these last-named burial places, remarks: "An enormous mass of putrefying human

remains has evidently accumulated in the five cemeteries referred to, and this is constantly being replenished by not less than four hundred dead bodies annually—and all the excretions and soakage of this loathsome mass of putrefactive material is drained into the Croton! And this, let it be borne in mind, is not surface pollution, or that which is or which can easily be, by common consent, collected and cremated, or purified by combined irrigation and filtration. It is carefully placed beyond these resources, as it is also beyond the most effectual resources of Dame Nature. Deep enough in the earth to be out of the effectual influence of the sun's rays, and, as if by intent, within the most facile scope of the subsoil currents to take up all that is, and as rapidly as it may be soluble, and convey it to the potable supply."

Dr. Bell, having heard that a "hearing" was in progress before the Aqueduct Commissioners of those opposed to the construction of the Quaker Bridge Dam on economic and sanitary principles, says: "We attended the hearing, and imagine our astonishment when, among others, the chief means urged for obtaining an abundant water-supply was to dam the Bronx below Woodlawn Cemetery! This project would conserve the seepage of many thousand human remains daily accumulating, the waste and excreta of about 50,000 people, the drainage of numerous factories,—but why enumerate? The first condition named will surely suffice. No amount of dilution of such graveyard pollution—to say nothing of the rest, as that which even now the Croton water contains—can satisfy the public demand in the face of patent knowledge such as this. There may be chemists who, because they cannot find traces of such impurities as these referred to, deny their existence and claim that the purifying effect of a mass of water thus polluted restores all such matter to its original elements. But the everywhere asserted evidence of prevailing diseases in all communities which use such water is abundantly sufficient to rebut all such mere laboratory researches."

A late report of the New York State Board of Health says: "The fact is abundantly proved that the noxious

qualities of polluted water are not removed by a flow of many miles in an open channel. Even though the water may have become thoroughly clarified by the complete sedimentation of the solids originally held in suspension; and hence, also, that any stream which is defiled with putrescent animal matter, especially such as is derived from human beings, cannot safely be employed as a source of potable water-supply. Both chemical and biological analysis may utterly fail to discover in the water the matter which carries the deadly seeds of epidemic."

On investigating the cause of the outbreak of typhoid fever at Plymouth, Pa., some years ago, it was found that "one of the public water-supplies contained a much greater amount of organic matter than the other, but it was the water chemically purest which carried disease and death." "Modern science has shown that the quantity of putrescible nitrogenous matter in water is not the most important thing, but that the CHARACTER of the matter is the vital point; and since no practicable method has yet been developed of determining, either by chemistry or the microscope, the pathogenic character of the matter contained in large bodies of water, owing to the minuteness of the quantity which may be harmful and its extreme diffusion, we are as yet generally left to deal with indications and probabilities in forming conclusions as to large bodies of water like lakes and important streams."

In the strata of air lying in a prolonged calm above a cemetery. Professor Selmi, of Bologna, discovered an organic corpuscle which poisons the atmosphere to the detriment of the living economy, and which, when injected under the skin of a pigeon, caused a typhus-like disease that ended in death in three days. Dr. Domingo Freire, of Rio Janeiro, asserts that, while investigating the causes of a recent epidemic of yellow fever, he discovered the significant fact that the soil of the cemeteries in which the victims of the outbreak were buried was positively alive with microbial organisms exactly identical with those found in the vomit and blood of those who had died of the disease. Some of this soil was dried, and then placed in a cage with a guinea pig. Previous to the introduction of the earth,

the blood of the animal was examined microscopically and found to contain no bacteria of any kind. The animal became ill and died within a few days. When its tissues were examined after death, they were found to present all the characteristic changes which yellow fever brings about. It is now known that earth-worms are capable of bringing to the surface from the grave myriads of bacilli and bacteria which modern science has shown to be the vital principle (or rather the deadly principle) of all forms of zymotic disease.

(To be Continued.)

CERTIFICATES OF DEATH.

So much has been written and said recently as to the giving and refusal of certificates of the cause of death that it is desirable, in the interest both of medical practitioners and the public, to examine the question closely in all its bearings. Many practitioners are under the impression that they have no option in the matter, that they are bound to give a certificate in the case of every person whom they have attended in his or her last illness, and the wording of the Act which relates to this (37 and 38 Victoria, 1874, chap. 88, sec. 20, sub-sec. 2) would imply such construction. It runs thus: "In case of the death of any person who has been attended during his last illness by a registered medical practitioner, that practitioner shall sign and give to some person required by this Act to give information concerning the death, a certificate stating to the best of his knowledge and belief the cause of death, and such person shall, upon giving information concerning the death, or giving notice of the death, deliver that certificate to the registrar, and the cause of death as stated in that certificate shall be entered in the register together with the name of the certifying medical practitioner." It would appear, reading the above according to the plain meaning of English words, that not only *must* the medical practitioner give a certificate, but also that the registrar *must* enter the cause of death in the register as it is given in the certificate. But it is well known that registrars are under no such compulsion. On the contrary, their in-

structions are to refer every doubtful certificate to the coroner. It is extremely unfortunate that the subsection of Clause 20, quoted above, was drawn up in its present form. Ever since the original Act (of which this is an amendment) was passed in 1837, it has been generally understood that the mere giving of a certificate implied that the death was a natural one, and that all was regular; while, on the other hand, the refusal of a certificate was understood to indicate that it was a case for further inquiry. This feeling still prevails, for recently one coroner's jury censured a medical practitioner for not giving a certificate in a case which proved to be one of death from natural causes; while in another case the medical attendant was severely censured for giving certificates stating natural causes of death in what subsequently proved to be clear cases of arsenical poisoning. In the Maybrick case the coroner's inquest was held in consequence of no certificate of the cause of death being forthcoming. It would be easy to give examples of cases where a certificate either could not be given at all, or only at the risk of causing great mischief or unnecessary delay to an inquiry. Fortunately there is an escape from the difficulty, since one clause of an Act of Parliament must be read with the other clauses. And the penalty clause of this Act (39) runs thus: "And every person who refuses or fails *without reasonable excuse*, to give or send any certificate in accordance with the provisions of the said Acts shall be liable," &c. The fact that the death arose from injury, or was sudden, or accompanied by other circumstances demanding inquiry, would, it is certain, be deemed reasonable excuse for refusing a certificate; hence timid practitioners may take courage, provided they do not pass beyond the bounds of reason. It must also be observed that the Act distinctly refers to cases attended by a medical practitioner during the "last illness." Hence it should not be considered as applying to cases where a practitioner has been hastily called in within a few hours of the death. The powers wielded by the profession in giving or withholding certificates of death are enormous for good or evil, and must not be weakened on the one hand or abused on the other.—*Lancet*.

THE NORTHERN LANCET.

LIVING about the streets some few days ago might have been found a quack production, entitled "The Histogenitic System," by Dr. Eugene Jordans. Doctor of what? As in all literature of this description the author undertakes to cure all and every ill that flesh is heir to. In this nostrum a new departure in the quack line is initiated. To simplify the art of gulling and render it as readily adaptable as possible to the limited understanding of the gulled, an alphabetical system is arranged, so that, if a victim has got toothache he asks for A. B., and if stomach ache, Y. Z. When the curatives (!), nostrums are supplied for a consideration. We were under the impression that this vendor of physic was infringing the Pharmaceutical Act of this Province, and had a conversation with the Registrar of that body on the matter. But it seems that the council of the Pharmaceutical Association is of opinion that their powers are not ample enough to interfere with the quack, inasmuch as his nostrums might come under the category of patent medicines, so that he defies both the power of the College of Physicians and Surgeons of Manitoba and the Pharmaceutical Society, and acts as a physician and pharmacist contrary to the laws which are supposed to be in force but which are so loosely and indefinitely drawn up as to be practically valueless for the protection of the members of these corporations. It is time that the Medical Act for this Province was thoroughly altered, useless clauses blotted out and those additional ones of which it stands in such urgent need be added. The alterations and amendments to the present Act should be considered and assented to by the whole body composing the present college, and that hole and corner medical legislation which has hitherto been in vogue, vide the recent amendment concerning homeopaths, etc., where clauses are sprung on the members of the college after they have become law, which, if placed before them previous to legislation, would have received their most unqualified opposition, should become obsolete. To say

that the College of Physicians and Surgeons of Manitoba as at present constituted is, so far as the profession is concerned, very unsatisfactory is using the very mildest language applicable to it. For the welfare, and well being of the profession it is absolutely useless. Its only executive action being the grabbing of the fees for registration, the application and distinction of which, only the initiated are cognizant of. If in no other way this can be accomplished, a petition to the Legislature, signed by as many members of the college as desire to see it an efficient institution, asking and enquiring into its working and efficiency is open, and it is now a matter in consideration if this journal will not initiate such a movement, unless the authorities of the college develop some energy in the matter. The college grants no degree or license, is not an examining body and its only professional use at present is for the purposes of registration which can be carried out by a far less expensive machinery. The education examination, licensing and conferring of degrees for the medical profession in Manitoba is divided between the faculty of Manitoba Medical College and the University of Manitoba with which the former is affiliated. It would seem as if the College of Physicians and Surgeons of Manitoba is to the profession in the Province of equal value to the fifth wheel to a coach. We have periodical visits from humbugs, quacks, charlatans and nostrum vendors of all kinds, on whom the Dons gaze benignantly, and if they do not encourage they certainly do not interfere with them. While on this subject we may say that the profession are much to blame for the reprehensible practice of prescribing patent medicines. By some practitioners these concoctions are almost exclusively used in their treatment of diseases. Take for example one drug, pepsine, how many compounds of this are placed before the profession and adopted by them to their own injury in many instances. If the preparation happens to suit the patient it is prescribed for. It is recommended to all enquiring friends as a panacea for every infirmity they happen to suffer from and is diligently swallowed by them, to the benefit of the compounder and to

the probable injury to themselves and positive injury to their usual medical attendant. The practitioners who treat disease as a rule by fresh infusive tinctures and extracts arrive at the most satisfactory results. Patent and proprietary medicines should never be prescribed by an orthodox practitioner. It is the boast of our art that nothing of benefit to mankind, which, in our researches is discovered shall be kept secret, on the contrary all discoveries are widely promulgated, so that their value may be accurately ascertained. With few exceptions these patent medicines are alone valuable, not for medicinal purposes, but as a means of enriching their proprietors, who shower them in an enticing form on a too easily gullible public. It is the duty of the medical man to discourage the use of all such remedies and the consumption of all proprietary and quack medicines.

THE Swiss authorities have determined to adhere to their recent regulation, and to compel all persons practising medicine in their Cantons to undergo a local examination. It is not too much to say that the luxuries enjoyed by the Swiss are largely supplied by the money left by travellers in their picturesque land, and that Great Britain furnishes by far the largest number of these, the sum spent annually by English tourists being computed at two million pounds sterling. Rightly or wrongly an Englishman requiring medical aid while in Switzerland does not care to place himself under the local medical practitioner, and prefers one of his own countrymen to attend him. For this practice alone, English medical men have fixed their abode in Switzerland, and to be now called upon to undergo a medical examination before a local board of Swiss examiners is unreasonable and vexatious. If English medical men settled in Switzerland to compete with Swiss practitioners in the treatment of their countrymen it would be another matter, but we opine, securing the Swiss people as patients did not enter into the calculations of those professional men, who as a rule, primarily, for health considerations, have

settled in that country. A simple way to bring these selfish mountaniers to book is for the Alpine climber and tourist to seek other fields, and, in the magnificent ranges of the Rockies is to be found scenery equalling the Swiss Alps; with peaks and glaciers which will try the boldest climber of the Alpine club; and while enjoying all that the mountain tourist eagerly seeks for, he will have the satisfaction of knowing that his money is spent among his own kindred people. It is now in the magnificent ocean steamers a mere pleasure trip across the Atlantic and the land travel in the luxurious Pullman's of the Canadian Pacific Railway, is divested of all fatigue. Let the British travelling public wend their way to the setting sun and enjoy a feast of scenery, which pen cannot adequately describe.

"SIFTINGS" ON DR. KERGAN.

We notice by our exchanges that this medical charlatan, has been hauled up before the police court on a charge of illegal practice. *Siftings* called attention to this medical side show once or twice before when the medical farce was in Winnipeg, but no notice was taken of the mountebanks, at the same time that if a respectable medical man from England or Ontario attempts to practice here without being registered he is pounced on at once, and brought before the police court. Why is this thus?—*Siftings*.

It is too true. The officials who receive professional monies for the express purpose of guarding the interests of the profession, namely the executive of the College of Physicians and Surgeons of Manitoba, absolutely do nothing from years end to years end beyond collecting fees from legitimate practitioners, and what becomes of these fees when once in their hands, no one outside of their very little coterie knows. One thing is certain not a penny is expended in the general interests of the medical profession; of individual interests we are not in a position to speak. We thank *Siftings* for this notice of the evil.—Ed.

THE CITY'S HEALTH.

The health committee have, for them, made a vast stride in this direction, inasmuch as at one of their recent meetings they agreed that "something" should be done as to the regulation and sale of milk to the citizens of Winnipeg. What this something will be, and when the something will become anything, it is in the womb of the future to unfold. Meanwhile children will languish, sicken and die all for the lack of ordinary hygienic precautions, until in the misty future the collective wisdom of the committee hatch out some scheme for grappling with the evil condition of things which now exist. We also have tidings of joy conveyed to us by the health officer who in his report informs the public that with the assistance of the school officials he has succeeded in stamping out all infectious disease. For the benefit of mankind in general these officials should make public the *modus operandi* by which so desirable a result has been obtained. The medical profession will have to look to themselves if the physical as well as the mental culture of the youth of our city is under the direction of such omniscient power. We can understand their adopting such precautions as to minimize the danger of infection from one child to another attending the same school, but until they render inert the microbes and bacilli; the origin of disease, stamping out contagion is a mere figure of speech. The surroundings of this city are too favorable for the production of disease germs to admit of the employment of any successful means for the stamping out of contagious disease being possible. The milk, the water and the air will first require to have these contagious particles stamped out of them and at present there seems to be but little effort made to keep any of these fluids in an ordinary condition of purity. Infantile diarrhœa which has of late been very rife may reasonably be largely attributed to the cows' milk consumed. There has been little or no growth of grass for the last three months while weeds have been exceptionally luxuriant, hence the cows feeding on this herbage in many cases secrete a fluid irritating in the highest degree to the intestinal tract

of children. No boiling will get rid of this poisonous matter and the wisest way is to abandon cows milk altogether and feed the infant and young child on the best brand of Swiss condensed milk which will be found not only unirritating as food, but wholesome and nourishing. Perfectly healthy milk is never yielded by a cow allowed to roam over the prairie. Dairy cattle should be fed on enclosed land laid down in pasture of clover and grass, free from weeds, and the milk handled with the most scrupulous cleanliness. Until these precautions are carried out milk will continue to form an important factor in the production of infantile disease.

A PLAN FOR RELIEF OF WHOOPING-COUGH SPASMS.

Dr. Nægeli publishes in the *Correspondenzblatt für Schweizer Aerzte*, a paper on whooping-cough, in which he pays particular attention to the convulsive attack of choking, describing the latter as follows: Spasm of the glottis makes every inspiration impossible, tonic convulsions of all laryngeal muscles follow, all muscles of the throat and at last those of the face also share in the attack. Trismus almost always is present during the acme of the convulsion, although the tongue generally protrudes. As soon as it is possible to open the rima glottidis again so far as to admit of sufficient air for respiration, all sensation of choking and congestion of the blood with their sequelæ disappear as by a miracle. Heiberg was the first to observe that the raising of the upper jaw is the best method of making the larynx admit air, and he recommended a plan for that purpose, which Kappeler had mentioned before him, and which Nægeli has modified and described as follows: Standing in front of the child, the nurse lays firm hold with the index and middle finger of the ascending ramus of the lower jaw in front of the ear, places both thumbs against the chin, and by strong but gentle traction and pressure moves the lower jaw forwards and downwards. If the mouth is a little open the jaw may be fixed by placing the thumb or index finger alone behind the

anterior lower incisors and grasping the chin with the rest of the hand, performing traction as above. In all these cases the left hand rests on the forehead of the patient and performs counter-traction. If the nurse is behind the patient, she may place both thumbs close above the angle of the jaw, the index on the zygomatic arch, and the rest of the fingers on the chin, pushing forwards and downwards. Immediately the upper jaw is raised the child must be told to draw a deep breath. The plan may be adopted even if the fit comes on during sleep, and Naegeli says that if so the child does not wake.

THE PROPHYLAXIS OF TUBERCULOSIS.

The New York Board of Health has not lost any time in taking action on the report recently submitted to it on the contagiousness of tuberculous diseases, for it has circulated widely the following rules to be observed for the prevention of consumption, which may be compared with those circulated by M. Chauveau's committee (*vide The Lancet*, Aug. 10th, p. 282). 1. The sputa of suspected consumptives should be received in earthen or glass dishes containing a solution of bichloride of mercury, 1 to 1000. 2. Do not sleep in a room occupied by a person suspected of having consumption. The living rooms of a consumptive patient should have as little furniture as practicable. Hangings should be completely avoided. The use of carpets, rugs, etc., ought always to be avoided. 3. Do not fail to wash thoroughly the eating utensils of a person suspected of having consumption as soon after eating as possible, using boiling water for the purpose. 4. Do not mingle the unwashed clothing of consumptive patients with similar clothing of other persons. 5. Do not fail to catch the bowel discharges of consumptive patients with diarrhoea in a vessel containing corrosive sublimate (1 part) and water (1000 parts). 6. Do not fail to consult the family physician regarding the social relations of persons suffering from suspect-

ed consumption. 7. Do not permit mothers suspected of having consumption to nurse their offspring. 8. Household pets (animals or birds) are quite susceptible to tuberculosis; therefore do not expose them to persons affected with consumption; also do not keep, but destroy at once, all household pets suspected of having consumption, otherwise they may give it to human beings. 9. Do not fail to thoroughly cleanse the floors, walls and ceilings of the living and sleeping rooms of persons suffering from consumption at least once in two weeks. Ten thousand copies of these rules are to be printed for distribution.

LIBRARY TABLE.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. Edited by Charles E. Sajous, M. D. and published by F. A. Davis, Philadelphia.—Five handsome volumes, comprising the annual issue for 1889, have reached us, and with increased pleasure we welcome this admirable work, which, in itself, is a compendium of all that is progressive in the domains of medicine and surgery. To attempt, in the space at our disposal, to give even a brief outline of the various articles contained in the above volumes, is an impossibility. But we can say that the close perusal of the work, from the first page of volume one to the last page of the fifth volume, will amply repay the professional reader in search of instruction and guidance. Numerous improvements have been made in this issue of 1889. Foreign weights and thermometric measurements have been reduced to those generally used in this country. The dates of all journals referred to in the text are given. Each volume contains a separate index independent of the general index at the end of the fifth volume. These improvements, with the addition of two other departments, viz., Examination for Life Insurance and Railway Neurosis, make the Annual of the Universal Medical Sciences the most complete, if not the most valuable annual medical publication for the library of the practising physician.