THE CANADIAN JOURNAL OF MEDICINE AND SURGERY

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

J. J. CASSIDY, M.D., EDITOR.

VOL. XXII.

JULY TO DECEMBER, 1907

BUSINESS MANAGER
W. A. YOUNG, M.D., L.R.C.P. (LOND.),
145 COLLEGE ST., TORONTO, CAN.
1907

INDEX TO VOLUME XXII.

July

ORIGINAL CONTRIBUTIONS.

Goitre and Its Treatment. By Geo. A. Bingham, M.B., Toronto 1
Symposium on Public Health Matters.—The Medico-Legal Aspects. By G. Silverthorn, M.D., Toronto 10
A New Treatment of Fracture of the Neck of the Femur. By W. E. Gallie, M.B., Toronto 21
An Appreciation of the Work of Dr. Henry J. Garrigues in Introducing Asepsis into Obstetric Practice. By Brooks H. Wells, M.D., New York .. 35

EDITORIALS.

Annual Meeting of the Ontario Medical Association 39
American Medical Association at Atlantic City 42
A Successful Treatment of Glanders 45
Editorial Notes 48
Obituary 53

NEWS OF THE MONTH.

The Ontario Society for the Reformation of Inebriates 54
Dr. R. A. Falconer, the New President of the University of Toronto 55
New Professor of Anatomy for the University of Toronto 56
Items of Interest 57

BOOK REVIEWS.

International Clinics. Edited by W. T. Longcope, M.D., Philadelphia, U.S.A. 59
Green's Encyclopedia and Dictionary of Medicine and Surgery 59
Atlas of Applied (Typographical) Human Anatomy. By Dr. Karl von Bardeleben and Prof. Dr. Heinr. Haeckel 60
Sir Nigel. By A. Conan Doyle 60

August

ORIGINAL CONTRIBUTIONS.

The Future of Medical Journalism. By James Evelyn Pilcher, M.D., L.H.D., U.S.A., Carlisle, Penn 63
Higher Standard for Matriculation in Medicine—Is a Degree in Arts Too High? By John Hunter, M.B 71
Anesthesia in Labor. By Frederick Fenton, M.D., Toronto 76
Acute Infectous Suppurative Cholecystitis Following Influenza—Operation and Recovery. By W. H. Pepler, M.D., L.R.C.P. (Lond.), Toronto 80
Ingrowing Nail and Hammer Toe. By B. E. McKenzie, B.A., M.D., Toronto 83

SELECTIONS, ABSTRACTS, ETC.

The Treatment of Inoperable Malignant Tumors—Carcinoma. By J. M. G. Carter, M.D., Sc.D., Ph.D., Waukegan 85
Abstracts 87

EDITORIALS.

The Medical Treatment of Appendicitis .. 93
Dr. Pyne's Retirement From the Position of Registrar 96
Dr. Lucas-Championnière's Explanation of the Role of Nephropexy 97
The Keller Hospital, Ironton, Ohio 99
Editorial Notes 100
Personals 104

OBITUARY.

Dr. J. W. Lesslie Dies Suddenly 105
Death of Mrs. Orr 105
King's Physician Dies in England 105

NEWS OF THE MONTH.

Causes of Degeneracy 106
Canadian Medical Association — Annual Meeting 107
The Formal Opening of High Park Sanitarium 108
The New Registrar of the College of Physicians and Surgeons 109
The Coming Session at McGill 109
The Academy of Medicine, Toronto 110
Isolation Hospital for London 110
Items of Interest 111

BOOK REVIEWS.

Modern Surgery—General and Operative. By J. Chalmers DaCosta, M.D 114
Anesthetics and Their Administration. By Frederick W. Hewitt, M.V.O., M.A., M.D. 115
Rational and Effective Treatment of Hip-Disease. By P. Bruce Bonnie, M.A., M.D., B.S., London 116
Progressive Medicine, Vol. 1, March, 1907. Edited by Hobart Amory Hare, M.D... 116
Precis de Medicine.—Technique Orthopedique. By P. Redard, Paris 117

Chemical Pathology. By H. Gideon Wells, Ph.D., M.D. 118
A Dictionary of Medical Diagnosis. By Henry Lawrence McKisak, M.D., M.R.C.P., London 118
Principles and Application of Local Treatment in Diseases of the Skin. By L. Duncan Bulkley, A.M., M.D., New York 119
American Practice of Surgery 119
Aids to Medical Diagnosis. By Arthur Whiting 120
Post-Operative Treatment. By Nathan Clark Morse, A.B., M.D. 120
Aids to Diseases of Children. By John McCaw 121
International Clinics. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia, U.S.A. 121
Practical Gynecology. By E. E. Montgomery, M.D., LL.D. 122
The Care of the Baby. By J. P. Crozer Griffith, M.D 122
On the Relations of Diseases of the Skin to Internal Disorders. By L. Duncan Bulkley, A.M., M.D., New York 123
The *Medical Era's* Special Editions 123
Physical Diagnosis. By Howard S. Anders, A.M., M.D 123
Annals of Surgery 124
A Text-Book of Embryology. By John C. Heisler, M.D 124
Surgical Diagnosis. By Daniel N. Eisendrath, M.D 125
Medical Jurisprudence, Forensic Medicine and Toxicology. By R. A. Witthaus, A.M., M.D. 125
Atlas and Epitome of Diseases of Children. By Dr. R. Hecker and Dr. J. Trumpp .. 126

September

ORIGINAL CONTRIBUTIONS.

Physical Training as a Therapeutic Agent. By B. E. McKenzie, B.A., M.D., Toronto 127
A Case of Acute Suppuration of the Mastoid—Large Extra-Dural Abscess—Septic Thrombosis of the Lateral Sinus—Operation, including Resection of the Internal Jugular Vein—Recovery. By Perry G. Goldsmith, M.D., Toronto 142
Treatment of Functional Nervous Conditions—With Reference to Cases. By Willis S. Lemon, M.B 147
The Necessity for Isolation Hospitals for Scarlet Fever, Diphtheria and Measles. By J. J. Cassidy, M.D., Toronto 165
The X-rays in Diseases of the Skin. By D. King Smith, M.B., Toronto 181
On the Direct Counting of Bacteria and Their Recovery From Blood. By T. M. Wilson, B.A., M.S., M.D 191
Anesthesia by Hyoscine and Morphine with Cactin. By W. C. Abbott, M.D., Chicago, Ill. 199

EDITORIAL.

The Fortieth Meeting of the Canadian Medical Association 205

NEWS OF THE MONTH.

Items of Interest Relating to the Meeting of the Canadian Medical Association .. 219

October

ORIGINAL CONTRIBUTIONS.

Experimental Production of Arterio-Sclerosis. By Oskar Klotz, M.D 223

PROCEEDINGS OF SOCIETIES

Meeting of Ex-House Staff Association 235
The American Hospital Association Held its Ninth Conference in Chicago 249
The International Congress of Physio-Therapie 251
The Sixth International Dermatological Congress 251

EDITORIALS.

The Value of Atoxyl in the Treatment of Syphilis 253
Thiosinamine as an Agent for Softening Scar Tissue 256
The Montreal Meeting of the Canadian Medical Association 259
Editorial Notes 261
Personals 267

NEWS OF THE MONTH.

King Edward Sanatorium for Consumptives 268
New Maternity Wing Opened at St. Michael's Hospital 271
Committee Which Visited European Asylums Returns Home 272

BOOK REVIEWS.

Surgical Instruments in Greek and Roman Times. By John Stewart Milne, M.A., M.D., Aberd 273

2669

Surgery of the Rectum. By Fred. C. Wallis 273
Diseases of the Rectum. By W. C. Brinkerhoff, Chicago...... 274
International Clinics. By A. O. J. Kelly, A.M., M.D. 274
Inflammation: An Introduction to the Study of Pathology By J. George Adami, M.A., M.D., F.R.S. 275
Surgery of the Genito-Urinary Organs. By J. W. S. Gouley, M.D..... 275
Practical Fever Nursing. By Edward C. Register 276
The Priest. By Harold Begbie 276
Gynecology and Abdominal Surgery. By Howard A. Kelly, M.D., and Charles P. Noble, M.D. 276
The Secret. By E. Phillips Oppenheim... 277
Surgery: Its Principles and Practice. By W. W. Keen, M.D., LL.D. 277
The Practical Medicine Series. Edited by Gustavus P. Head, M.D. 278
The Brass Bowl. By Louis Joseph Vance 279
Diseases of Infancy and Childhood. By Louis Fischer, M.D. 279
New Chronicles of Rebecca. By Kate Douglas Wiggin 280
Modern Methods of Diagnosis in Urinary Surgery. By Edward Deanesly, M.D. 280
Manual of Diseases of the Ear, Nose and Throat. By John Johnson Kyle, B.S., M.D. 280
The Diagnosis and Modern Treatment of Pulmonary Consumption. By Arthur Latham, M.A., M.D. 281
Manual of Diseases of the Eye. By Charles H. May 281
Five Hundred Surgical Suggestions. By Walter M. Frickner, B.S., M.D. 282
A Practitioner's Handbook of Materia Medica and Therapeutics. By Thomas S. Blair, M.D. 282
The Diagnosis of Nervous Diseases. By Purves Stewart, M.A., M.D. 282
Diseases of the Intestines and Peritoneum: By Dr. Hermann Nothnagel 283
A Comparative Study of the Influence of Cod Liver Oil and Cod Liver Oil Emulsion upon the Nutrition of Normal and Tuberculous Pigs. By J. W. Wells, M.D. 283
Green's Encyclopedia and Dictionary of Medicine and Surgery 283
Nephritis. By Seelye W. Little, M.D. 284
Essentials of Chemistry and Toxicology. By R. A. Withaus, A.M., M.D. 284
The Elements of the Science of Nutrition. By Graham Lusk, Ph.D., M.A. 284
Merck's 1907 Index 285
Diseases of the Stomach. By Dr. I. Boas. 285
Treatment of the Diseases of Children. By Charles Gilmore Kerley, M.D 286
The Diagnosis and Treatment of Intussusception. By Charles P. B. Clubbe 286

November

ORIGINAL CONTRIBUTIONS.

Some Problems in Connection with the Suprarenals. By H. D. Rolleston, M.D., F.R.C.P. 287
Some Lamps of Science. By Playfair McMurrich, M.A., Ph.D. 301
President Falconer's Opening Address—University of Toronto 314
The International Congress of School Hygiene. By Helen MacMurchy, M.D., Toronto 321

LARYNGOLOGY, RHINOLOGY AND OTOLOGY.

Mistaken Over-zeal 323
Treatment of Catarrhal Pharyngitis 324
Abstracts 326

EDITORIALS.

Pasteurized Milk for Hand-Raised Infants 327
The Opening Meeting of the Academy of Medicine, Toronto 331
The Laryngeal Mirror and the X-Ray Picture as Aids in the Diagnosis of Aneurysm of the Aorta 333
Editorial Notes 336
Personals 341

NEWS OF THE MONTH.

"The New Homewood," Guelph 342
Varsity's New Science Home 344
Vichy. 349
A New Form for Post-Mortem Reports 351
An Address to Dr. Reeve 351

BOOK REVIEWS.

Animal Therapy: Its Relation to Immunity in the Treatment of Tuberculosis. By Dr. Gilliford B. Sweeny... 358

December

ORIGINAL CONTRIBUTIONS.

Address in Surgery. By Ingersoll Olmsted, M.D., Hamilton, Ont. 359
Feeding in Typhoid Fever. By J. A. Oille, M.D. 367

PROCEEDINGS OF SOCIETIES.

Canadian Medical Association—The New Constitution and By-Laws as Adopted at the Montreal Meeting, September 11th to 13th, 1907 378

EDITORIALS.

Modes of Statement of Cause of Death and Duration of Illness upon Certificate of Death 393
Reciprocal Medical Education in Canada.. 401
A Long Life's Work in Medical Education in Ontario 405
Editorial Notes 409

NEWS OF THE MONTH.

Meeting of Eleventh Territorial Division of the College of Physicians and Surgeons 414
Graduation Exercises at Grace Hospital.. 415
St. Catharines Medical Men Stand Firm.. 41
Assistants at Varsity 417
Teachers to be Medical Examiners 417
Ex-House Staff Association of the Toronto General Hospital 418
Toronto General Hospital Tuberculosis Clinic 419

BOOK REVIEWS.

A Manual of Diseases of the Nose, Throat and Ear. By E. Baldwin Gleason, M.D. 420

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTERESTS OF MEDICINE AND SURGERY

VOL XXII. TORONTO, JULY, 1907 NO. 1.

Original Contributions.

GOITRE AND ITS TREATMENT.*

BY GEO. A. BINGHAM, M.B., TORONTO,
Associate Professor of Clinical Surgery, University of Toronto.

Four years ago at the request of the Committee on Papers I made a report to this Association based upon my experience with 33 cases of goitre operated upon. This year, in casting about for a subject upon which to address you, I thought it might be useful to omit these questions of medical politics which have been so thoroughly threshed out by my predecessors in this chair and to detail very briefly a second report on goitre and its treatment, founded on a series of 82 operations in all.

As pointed out by C. H. Mayo[1] the rapidly increasing number of cases operated upon during quite recent years does not mean that goitre is on the increase, but that nowadays, it is recognized that a comparatively early operation for goitre is, as a rule, followed by results most gratifying to both surgeon and patient and is accompanied by an extremely small mortality rate. Indeed, I would now go so far as to say that in cases where as yet no pressure symptoms have developed, the patient, in view of future development, and even for esthetic reasons, has a perfect right to claim the benefits of an operation which, in careful hands, should be as free from danger as appendicectomy.

The Parathyroids.

The anatomy and functions of the parathyroids and the relations to the thyroid gland have been matters of keen interest to the surgeon of late years and much experimentation has been

* President's Address, Ontario Medical Association.

carried out. But much remains still to be done before the riddle of these curious bodies shall be interpreted aright. First noted by Sandstrom, in 1880, and described by Horsley in 1884, many experimenters have since labored to ascertain their functions. They found that the thyroid and parathyroids were separate and distinct entities; that while complete removal of the thyroid interfered with assimilation and metabolism, producing a chronic condition known as myxedema, on the other hand, complete removal of the parathyroids induced a very acute state of tetany, somewhat resembling the symptoms of Graves's disease, and from which the patient usually succumbed. Roswell Park[2] thus sums up the knowledge so far conveyed to us by the experimenters:

"1. There are two quite different sets of tissues involved in the thyroid and parathyroids.

"2. They are not completely independent of each other, for the removal of either one caused changes in the others.

"3. There is reason to believe that myxedema follows removal of the thyroid and tremors and nervous symptoms, including tachycardia, result from extirpation of the parathyroids.

"4. It would appear, further, that failure of the parathyroids is followed by enlargement of the thyroid. If this be true, Graves's disease seems to be explained, since the former would account for the enlargement of the thyroid sometimes so conspicuous, while the increased secretion afforded by this enlargement will account for the exophthalmos."

This relation of the parathyroids to Graves's disease, however, would appear to be pretty thoroughly disproven by the careful dissections of Benjamens, MacCallum and others who found that the parathyroids were perfectly normal in cases of exophthalmic goitre examined and, therefore, could have nothing to do with the production of the disease. These little ductless glands, which have received so much attention of late (and to the study of which I beg to direct the efforts of my younger scientific friends in the profession), are usually four in number, two upper and two lower, and, as a rule, lie behind the thyroid, often in the neighborhood of the entrance to the gland of the superior and inferior thyroid arteries, from which vessels they receive their blood supply. They have been found most frequently in the areolar tissue behind the gland, sometimes in contact with the gland capsule and rarely within the capsule embedded in the thyroid tissue itself. They are elliptical in shape and homogenous in appearance, and they are much softer in consistence than either thyroid or lymphatic tissue.[3]

Let us now ask ourselves the question—Of what value to the operating surgeon is this somewhat vague and indefinite

knowledge of the situation and function of the parathyroids? Here I think we must all agree that in operations upon the thyroid, we should endeavor to leave intact a part and, if possible, all of the parathyroids, as it has been shown that the severity and danger of the tetanic condition resulting from their extirpation is in direct proportion to the amount of parathyroid tissue removed. The only difference of opinion will be as to how, during an operation, the safety of the parathyroids may be best conserved.

It has been suggested by Park[4] that this end might be most effectually attained by opening up the thyroid capsule and enucleating the gland, thus leaving behind the capsule and, of course, the parathyroids in contact with it. To this method I must object for several reasons, some positive and others negative:

1. The hemorrhage resulting is always severe and makes the operation an unsatisfactory one.
2. In thyroidectomy, I almost invariably leave one lobe intact and, consequently, at least two of the parathyroids are preserved and, in man, it seems fairly certain that two normal parathyroids are sufficient.
3. While the parathyroids in dogs are quite often found within the thyroid capsule, I have never found it so in man, nor, so far as I know, have others of much greater experience and opportunity of observation.
4. It would seem that by exercising care during an operation upon the thyroid, the parathyroids may often be distinguished, avoided and their blood supply preserved.
5. Finally, by working very close to the outer surface of the thyroid capsule and by ligating the vessels at a point as close as possible to the gland, it would appear very probable that the parathyroids would be preserved even though not recognized during the operation.

Graves's Disease.

As has been pointed out by Kocher[5] the term exophthalmic goitre is misleading, inasmuch as the exophthalmos is not, as a rule, present at the beginning of the disease and, indeed, may not develop until the very life of the patient is threatened. Now, as the cure of the patient depends very largely upon an early diagnosis by the physician, it would seem wise to discard the term "exophthalmic," at all events in connection with the earlier symptomatology of the disease. Every surgeon interested in this class of work has encountered cases differing greatly in severity. Kocher[6] classifies these types of varying degrees of intensity as follows:

Class A. Vascular Goitre.—This type develops rather suddenly as a soft and uniform enlargement of the gland. Exophthalmos is absent, but Graefe's sign is probably present. Tachycardia, tremor, enlargement of the vessels of the gland, with bruit and thrill, are nearly always symptoms of this variety of goitre from the beginning.

Class B. Struma gravesiana colloides.—Here an ordinary colloid goitre has existed, perhaps, for years when, suddenly or slowly, symptoms of Graves's disease make their appearance. Exophthalmos is often absent until the disease is well developed. All the other symptoms are present, but are not so severe as in a typical case of Graves's disease. It is suggested that in these cases the colloid material present may, in some way, counteract the toxic effect of the hyper-secretion of the gland upon the sympathetic nervous system.

Class C. Typical Graves's Disease.—In this class, the symptoms of the disease develop slowly or sometimes suddenly, frequently with a history of previous long-continued nerve strain or a severe mental shock. Exophthalmos is present and all the other symptoms are well marked and severe. If this type of the disease be not early recognized and treated, it runs a rapid course and secondary changes soon appear in heart, muscle and vessel walls, which render impossible an operation which, if undertaken at an earlier date, would almost certainly have effected a cure.

Including these three classes of Graves's disease, I have operated upon 13 cases, 4 males and 9 females. Ten of these cases improved steadily after operation, and to-day consider themselves cured. In regard to the three deaths, all belonged to the typical class of Graves's disease. The first was a male in good mental condition prior to operation He died in a severe maniacal condition 72 hours afterwards. In this case the operation was an easy one, the tumor was not large, though deeply placed, and there was but little manipulation of the gland, the smaller lobe being left *in situ,* as has been my custom. I confess that this case has been a complete puzzle to me. The other two cases were females with the disease altogether too far advanced for operation. On neither of them, with my present experience, would I now operate. One of them died in an asylum three and a half months after the operation. There was a rapid recrudescence of the growth in the remaining lobe and she died of exhaustion. The other case died six hours after the operation of heart failure. Now, although thirteen cases of Graves's disease is but a small number from which to make deductions, yet the fact that 77 per cent. of them were cured has quite decided for me the question

of the advisability of operation in these cases. The all-important points are for the physician to make his diagnosis early, put the patient to bed, and make his surroundings such that he will be in a condition of absolute rest, physical and mental. As for medicine, in addition to maintaining strictly the nutrition and functions of the body, I have used phosphate of sodium grs. V. t. i. d. with apparent benefit. Theoretically phosphorus in some form is indicated. Under such treatment some will be cured, others will improve up to a certain point, and the wise physician will soon see when his patient has reached that point and will hand him over to the surgeon long before the disease has advanced to such a stage as will render an operation useless. I believe that every case of Graves's disease, when seen early enough, should be submitted to this rest treatment for two or three weeks before operation.

The operation carried out on my cases, as a rule, has been the removal of the larger lobe and the isthmus, though in two cases when both lobes were equally enlarged, I removed the whole gland with the exception of a small portion of one lobe.

I have had no experience in other methods of operating for Graves's disease, such as ligating the thyroid vessels or sympathectomy. As to the former, if the thyroid veins were included in the ligature, one would expect an immediate increased absorption of the glandular secretion through the lymphatics, and a consequent exaggeration of the symptoms. Again, ligature of the vessels would expose the patient to the dangers of gangrene; and besides, the deliberate exposure and ligaturing of the thyroid vessels would be quite as serious an operation as thyroidectomy itself. As for sympathectomy, I cannot see how the removal of the sympathetic ganglia can possibly cure a condition which (if my experience of 77 per cent. of cures by operation is of any value), must be caused by some abnormal activity of the gland itself.

Whether the disease be due to the secreting by the enlarged gland of some toxic substance other than the normal secretion, as was long ago argued by Horsley; or whether Graves's disease be merely an expression of toxic poisoning by a hyperactivity of the gland and an over-production of its normal secretion is still a debated point. In favor of the latter theory I would point out a fact that is very generally known, viz., that by feeding a healthy subject upon thyroid extract one can produce most of the symptoms of Graves's' disease.

Malignant Goitre.

In this condition complete and early operation offers the only chance for the patient. Unfortunately, a sufficient early diagnosis is not usually made, the neighboring glands being

already involved. Even in such advanced cases the patient may be made fairly comfortable by partial removal, thus relieving pressure and making possible a future tracheotomy.

I have done a thyroidectomy in only three cases of malignant goitre, all females. One who was also suffering from Bright's disease died a week later from uremia. It was at her own earnest solicitation that I operated in this case. The second case, an old lady of 70, died two weeks after operation of exhaustion following a long journey to her home. The third died of recurrence six months after operation.

Simple Goitre.

In a series of 66 cases of simple parenchymatous goitre operated on, I have had three deaths. The cause of these deaths are of interest:

Case 1.—A huge goitre in a girl, aged 17, which was causing very severe pressure symptoms, was easily removed. Twenty-four hours later, when I visited her, I found her extremely lively and clamoring for food. The nurse reported that the patient had been feeling so well all morning that it had been difficult to keep her in bed, and impossible to keep her quiet. Six hours after my visit she suddenly sat up in bed, screamed once and fell back dead. No autopsy was allowed. The cause of death was probably pulmonary embolus. This result impressed me with the wisdom of insisting in all cases and, especially where the operation field has been very large, that the patient shall remain perfectly quiet so far as the head and neck are concerned during the first 48 hours after operation.

Case 2.—Was an aged woman, with the largest goitre I ever saw, weighing 6¾ pounds when removed. The anatomical relations behind the gland were much disturbed and the adhesions were dense. In breaking down some adhesions, the much-displaced and attenuated esophagus was unfortunately torn across and she died three weeks later of inanition. Here, again, the lesson was learned that in all such extreme cases, a stomach tube should be passed and the esophagus carefully outlined before the final steps of the operation are undertaken. Had this been done in Case 2, the accident would not have happened.

Case 3.—Was a man aged 45, from whom the right lobe and isthmus had been removed two and a half years ago for Graves's disease. The remaining lobe had been injured some months ago and increased in size quite rapidly, so that he now returned to have it removed owing to severe pressure symptoms. The operation was difficult, owing to the cicatricial con-

tractions and adhesions, and the extremely vascular nature of the tumor. He did fairly well for 30 hours, with the exception of some difficulty in breathing. At that time he suddenly became cyanosed, respiration quickly failed and he died shortly afterwards. It looked like failure of the respiratory centre, but no autopsy was allowed.

I am aware that this mortality of 4.54 per cent. is too large, but I feel sure that at least two of such deaths would never occur in one's practice a second time.

I should like to detail a few points in the history of the last named case, illustrating the effects of operation on a typical case of Graves's disease. Mr. W., aged 42, presented himself in September, 1904, with a very large goitre, both lobes being involved, the right being the larger. The vessels of the gland were enormous, the thrill and bruit being marked. Exophthalmous and tachycardia were extreme, the pulse rate being 130 to 140. Tremor was very marked. Although a tall man, he weighed about 100 pounds. This man's history dated back for about a year, since when he has lost flesh rapidly and all the symptoms of Graves's disease have developed. His mental condition was bad. There has been a complete change of temperament. He has threatened his wife's life and his own, and was noisy, flighty, and at times vicious in temper. I removed the right lobe and isthmus, and he returned home within two weeks of operation. He returned to me in April, 1907. His weight was 160 pounds, and he had worked steadily since his recovery from the operation. Instead of the wild, excited picture which he had formerly presented, he was now quiet, self-controlled and mentally quite normal. The pulse rate was 82, the exophthalmos and tremor were gone, and he declared that he was in excellent health. Unfortunately, during the previous winter, the left lobe, which had become much reduced in size, had been injured in an accident, since which it had grown rather rapidly, and he returned to have it removed because it was kinking the trachea and thus interfering with his breathing.

Illustrating the class of cases described by Kocher, as thyroidea gravesiana colloides, is the following: Miss B., aged 44, has had a goitre for fifteen years, but paid no attention to it until one and a half years ago, when tachycardia and tremor began to trouble her. Steady loss of flesh ensued and now exophthalmos is quite marked. All the symptoms are more moderate than in the case of Mr. W. just quoted. Left lobe and isthmus were removed. She went home in three weeks and a steady improvement has resulted. Though she had been unable to work for a year previous to operation, she is now, three months after operation, doing light house-work and enjoying life.

The next case quoted clearly belong to the class of vascular goitres. W. J., aged 27, an Englishman, has been troubled with goitre for eight months. It interferes with his breathing, especially when he stoops. As he is a farmer, this prevents him from working. Thrill and bruit present, and pulse rate 102 to 110. Slight tremor and muscular twitching. Exophthalmos is absent, but Kocher's sign is distinct, viz., sudden retraction of the upper eyelid when the patient is made to look steadily at his examiner. Right lobe and isthmus removed. Patient left hospital on ninth day. Four months after operation his physician writes to say that the man is quite well and working every day.

The Anesthetic.

I still use a general anesthetic, preferably chloroform, or a mixture of chloroform and ether, *administered by an expert.* We have always followed the rules mentioned in my former report[7] and in none of my cases have we had any serious difficulty.

The Technique.

The distinguished gentleman who is to open the discussion on Surgery to-day (Dr. Crile, of Cleveland), has done much to aid the surgeon in the carrying out of this operation by his teaching as to blood pressure and the use of adrenalin, while the elevation of the head and shoulders of the patient, especially in operations for Graves's disease, materially reduces the amount of blood in the field and the resulting hemorrhage.

The transverse incision is the one chosen in most cases, and the technique has changed but little during the last four years. There is one change which, perhaps, should be noted. Instead of transfixing and tying off the pedicle (which is usually the junction of the isthmus and the lobe to be left behind), I now tear through this pedicle with a blunt dissector and seize and tie any small vessels which may bleed. This is practically the only operation in which I use silk in ligating the vessels. The possibility of cat-gut ligatures slipping or untieing in a very restless patient and resulting secondary hemorrhage has so far deterred me from using it.

I am thoroughly impressed with the importance of another feature in the technique of thyroidectomy, viz., the avoidance of excessive manipulation of the gland during the removal. In some of the earlier cases where this rule was not carefully observed the convalescence was quite stormy. I am now convinced that this was largely due to hyper-secretion, caused by unnecessary manipulation; this, of course, being followed by undue absorption and the production of a toxic tetany. The

manipulations must be gentle and the various steps of the operation carried out in a precise and clean-cut manner.

In cases of cystic goitre affecting both lobes, my experience has shown me that it is not enough to remove one lobe and the isthmus, as cystic degeneration will continue in the remaining lobe. It would seem to be safer, after having removed the lobe most affected with the isthmus, to incise the capsule of the remaining lobe and enucleate every cyst to be found.

REFERENCES.

1. *Journal American Medical Association,* January 26th, 1907.
2. *Medical Review of Reviews,* July, August, 1906.
3. *McCallum, British Medical Journal,* November 10th, 1906.
4. *Medical Review of Reviews,* July, August, 1906.
5. *British Medical Journal,* May 26th, 1906.
6. Ibid.
7. *Canada Lancet,* July, 1903.

SYMPOSIUM ON PUBLIC HEALTH MA—TTERS.THE MEDICO-LEGAL ASPECTS.

BY G. SILVERTHORN, M.D., TORONTO.

In all civilized countries there is some form of preliminary investigation when there is reason to believe that a deceased person came to his death from violent or unfair means, or by culpable or negligent conduct of himself or others, and not through mere accident or mischance. The necessity of such an investigation is recognized by all and should be held without delay and by competent officers and, if necessary, without anybody being accused and, in fact, it is to afford evidence of the necessity or otherwise of anybody being accused that the investigation is of greatest use.

The mode of conducting such an investigation varies in different countries.

Among English-speaking nations, as a rule, the office of coroner is charged with such. The coroner investigates by interviewing the persons concerned, examining the circumstances and surroundings, etc., and if he then considers an inquest necessary, he makes a declaration in writing as to that necessity, before a justice of the peace, summons a jury of not less than twelve men, swears them, then together they view the body. The coroner then examines witnesses under oath and the jury renders a verdict. There may or may not be a prisoner under arrest. The accused may be indicted on the inquisition without any presentation before the Grand Jury, but practically an independent inquiry is always held before a justice in the ordinary way.

Other Modes of Inquiry.

Neither the coroner nor his jury exists among the continental nations of Europe, and the modes of procedure in the case of bodies found dead by violence or unknown causes, in all continental countries, and in Scotland, agree in the absence of these officials.

In France, the investigation is conducted by two officers, whose functions are entirely distinct, a legal and a medical officer. The former, the procureur de la republique, an officer somewhat analogus to the district attorney, takes the initiative in each case, proceeds to view the dead body, summons witnesses, and takes the evidence. Liberal power is granted to him, and he can seize articles, or papers, connected with

any crime, restrains persons from leaving the premises, and employ experts and detectives, as the case may require. In the latter direction the French system is, beyond question, an unusually efficient mode of procedure.

The other officer, the medical, is selected for his superior training and knowledge, and has charge of the medical examination of the body. Sometimes two medical officers are employed. The medical officer is also still further associated with the subsequent prosecution of suspected parties when the legal officer has decided that a crime has been committed. His report must be signed by a police official and submitted to a magistrate. If the evidence presented to the magistrate is deemed sufficient, an indictment is prepared for the cour d'appel, and a trial may then take place before a jury.

In Scotland the process employed is similar to that of France. The procurator fiscal, who has the investigation in charge, has for his guidance a code of instructions drawn up by the lord advocate. This code also gives detailed directions to the medical men who have the charge of the medical examinations, two medical officers being employed in each case. The reports of these officials are sent to the office of the crown agent at Edinburgh, and by him are transmitted to the advocate deputé. If he decides that there is suspicion of crime, he refers the report back to the procurator fiscal for further investigation. If he is in doubt, he may bring the case before the crown officers. Beyond this, a criminal trial is much the same as in England.

In Germany, there is neither coroner nor any analogous officer, nor a jury, on the preliminary investigation. A judicial officer has charge of the proceedings (Staatsanwalt). His powers are like those of a district attorney. The police are under his control in all matters relating to the investigation of crime. They are also bound on their own part to investigate suspected crimes, cases of sudden or violent death, and no interment is allowed in such cases till after the consent of the district attorney or a competent court is obtained. Medical officers are regularly appointed to make autopsies and medical examinations and report upon them. The German code of regulations as to the modes of procedure in examinations of bodies, both judicial and medical, is very explicit. If the district attorney believes that a crime has been committed he institutes a trial, and if the court believes that sufficient reasons are presented, it orders a preliminary inquiry (gerichtliche Voruntersuchung), before a justice, the result of which is usually decisive. (Law of October 1st, 1879.)

In Russia the law is similar in its provisions to that of France.

In Denmark the system is also very efficient, a judicial officer being appointed who has charge of all cases, which he decides without the intervention of a jury. He refers all medical questions to a medical officer, who is appointed for the purpose and reports to the judge the result of his examination, and autopsy, if one is made. He also makes a similar report to the Royal Bureau of Health. The trial which follows, in case of indictment, is first before the county judge, from whom appeals may be made to higher courts.

United States.—The laws relating to inquests in the United States all bear the marks of English origin, and were evidently introduced by the early settlers, with most of the peculiarities of the English law, though stripped of some of the singular customs of early times. The coroner, the coroner's jury, and the inquest, exist in nearly all of the United States, at the present time, practically in the English form. Massachusetts made a radical change, abolishing the office of coroner, and also the jury, in 1877, since which time inquests have been conducted with greater care and economy, and to the entire satisfaction of the people and of the State (See *Examiner Medical*).

Connecticut and Rhode Island have also recently enacted similar laws of a less radical nature.

In the other States there are certain points of difference, chiefly of minor importance, relating to the functions of the office of coroner, the mode of his election or appointment, his fees, the number of the jury and the employment of medical officers.

In a few States an inquest may be held in the case of a person who is seriously wounded, and in imminent danger of death. In Indiana, the jury was abolished by an act of 1879. In Texas, the inquest is also held without a jury.

After consideration of these various ways, it seems to me that a preliminary investigation by a properly trained medical man, such as a coroner should be, if necessary, followed by a subsequent investigation by him, with power to summon and examine witnesses under oath, together with an intelligent jury, is the best method of procedure. The usual objection to such is that of the inherent incongruity of an office requiring an expert knowledge of law and medicine. To my mind this objection is more than offset by the advantage of having the presiding officer of the court, one accustomed to the character of the evidence, as to the third part of the object of the inquiry, namely—"by what means" the person came to his death. "When" and "where" are not usually such intricate questions as to need great legal acumen. In Ontario we have the coroner's investigation and the coroner's court.

To my mind there is no just or sufficient reason for changing

the system, no cases of corrupt practice, injustice or outstanding incompetence having shown themselves. The results are, as a rule, reliable and trustworthy.

The main facts of the system here in Ontario, to my mind, are, first: The manner of appointment of coroners. Secondly, their inadequate fees. Thirdly, lack of discrimination in the appointment of medical witnesses to perform the post-mortem examination. Fourthly, their inadequate fees. Fifthly, the lack of any central authority who should be entrusted with the compilation, classification, and publication of the returns.

Appointment of Coroners in England.

The name of the office was derived *a corona,* since the coroner was at first a royal officer. For many centuries county coroners have been elective officers. The right of the counties to elect their own coroners is confirmed by the Statute 3, Edward I., 10. Municipal boroughs also elect their own coroners. Certain franchises also have coroners of their own, within whose precincts the county coroner cannot act. In such places the coroner is appointed by the lord of the manor, and in one English franchise the coroner holds office by hereditary right. There are fifty-five franchise coroners, and one hundred and seventy-five coroners acting for counties, or parts of counties. These are very unequally distributed. Middlesex, with about four million inhabitants, including the populous part of London, has five coroners, while the small county of Huntingdon, with less than sixty thousand inhabitants, has also five, and Dorset, also a small county, has eleven.

Every freeholder is entitled to vote in the election of coroner. No professional qualification is required for the office, the only requisite being that the candidate should possess a freehold interest in the county.

For more than fifty years, complaints with reference to ignorance, and culpable neglect in the management of the office have been so common as to direct popular attention to the necessity of reform; and while no comprehensive statute has been enacted with reference to such reform in England, the persistent efforts of prominent medical men have been so far successful that professional men are now usually elected to vacant offices.

A coroner usually holds office for life, but may be removed by the Lord Chancellor for misconduct or incompetence.

The county coroner receives a salary. He may appoint a deputy to act during his absence or illness. This deputy must be either a barrister, a solicitor, or a physician. The coroner is *ex-officio* a justice of the peace, and may, therefore, cause any

one suspected of murder to be arrested, even before the jury has found its verdict.

The modes of election in the different States are quite diverse. In Alabama, Arkansas, Colorado, Georgia, Idaho, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Nebraska, Nevada, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Washington, Wisconsin, and Wyoming the coroner is elected by the inhabitants of the county. In Tennessee he is appointed by the county court. In Virginia a county court appoints a coroner for two years and can appoint more if necessary. In Illinois, Indiana, Maine, and New Hampshire the governor appoints the coroner. In Texas, Vermont, and Utah, the office of coroner is unknown, a justice of the peace acting in all cases in which the presence of such an official is required.

In several cities of the United States, the coroner is a salaried officer, such being the case in New York, Philadelphia, Detroit, St. Louis, Cincinnati, Cleveland, Washington, Charleston, Wilmington (Del.), and other cities, a plan which has obvious advantages.

In Ontario coroners must be specially appointed by the Lieut.-Governor by commission under the Great Seal, unless, indeed, the Chief Justice and the other judges of the Supreme and High Courts in Canada are sovereign coroners *virtute officii,* in a similar manner to the judges of the corresponding courts in England. One or more coroners are first appointed for each county, city and town and for any provisional judicial, temporary judicial, or territorial district, or provisional county, or for any portions of the territory of Ontario not attached to a county for ordinary municipal and judicial purposes. The appointments are generally made upon the recommendation of a member of parliament, or other person possessing influence with the executive.

When one county separates from another the municipal law of Ontario requires the Lieut.-Governor to appoint one or more coroners for the junior county, whose appointments take effect on the day the counties become disunited.

With regard to the number of coroners for any county, city or town in Ontario, there is no regulation. The number not being limited, the appoinments are in part governed by the requirements of the locality, and possibly in part by the energy shown by those seeking the office.

In Ontario, "provincial coroners," for purposes of holding fire investigations, are appointed by the Lieut.-Governor-in-Council under the Great Seal. As to these coroners, see further at p. 29 (Boys on Coroners).

QUALIFICATIONS AND DISQUALIFICATIONS.

Formerly, the office of coroner was of such high repute that no one under the degree of knighthood could aspire to its attainments, and in the reign of Edward the Third a coroner was actually removed from the office because he was a merchant! It has, however, now fallen from such pristine dignity; and though still of great respectability, no qualifications are required beyond being a male of the full age of twenty-one years, of sound mind, and a subject of His Majesty, and possessing the amount of education and mental ability necessary for the proper discharge of the duties.

These qualifications are no more than what all public officers by the common law are supposed, and ought, to possess. The coroner has often a very delicate and very important duty to perform, and it need hardly be said that the proper discharge of that duty depends almost entirely on his personal character and ability. Where these are deficient, scenes sometimes occur at inquests which throw discredit upon the office of coroner.

Coroners in Ontario are not competent or qualified to be justices of the peace during the time they exercise their office. But an exception is made in territorial and temporary judicial districts, where stipendiary magistrates may be appointed coroners for such districts. And provincial coroners appointed in Ontario for holding fire investigations are justices of the peace for every county and part of Ontario by virtue of their office. And a stipendiary magistrate for any territorial or temporary judicial district in Ontario may be a coroner for the district.

Before acting as coroner, the oath of allegiance and the oath of office should be taken, since holding an inquest without taking these oaths would subject the coroner to a penalty, although his acts would probably be legal.

From the above it would appear that in Ontario we must congratulate ourselves that the powers that be have recognized that only medical men should be appointed to the office of coroner. I would, however, suggest that the number should be limited and only those of a legal turn of mind be appointed. This would make for efficiency and be an encouragement for good and thorough work. In Toronto the experiment of appointing a chief coroner is at present being tried. To him are reported all cases, and he determines whether an investigation is to be held, and if so, appoints in rotation a coroner to undertake it. In certain class of cases he is debarred from acting, and then the County Crown Attorney appoints the acting coroner.

It would appear that the fees of a coroner in Ontario are

not adequate for the time consumed and the services rendered. I am informed that an association of coroners is in process of formation, and it is hoped that such representation will be made to the Government as will result in a modification of the existing law in regard to fees.

Appointment of Medical Witnesses to Perform Post-Mortem Examination.

In Ontario, if the coroner finds that the deceased was attended during his last illness or at his death by any legally qualified medical practitioner, he may issue his order for the attendance of such practitioner as a witness at such inquest. Or, if the coroner finds that the deceased was not so attended, he may issue his order for the attendance of any legally qualified medical practitioner, being at the time in actual practice, in or near the place where the death happened; and the coroner may, at any time before the termination of the inquest, direct a post-morten examination by the medical witness summoned to attend at the inquest. (Boys, 249.)

The practitioner chosen to make a post-mortem examination should be the best qualified the neighborhood affords. (Boys, 252.)

A second medical practitioner cannot properly be called by the coroner alone. The majority of the jury must ask for him, and name him to the coroner in writing. (Boys, 251.)

From the above it appears that the coroner has the greatest latitude in choosing who shall perform the post-mortem examination. Prof. Tidy states that if the medical attendant of the deceased is in any way inculpated, or his treatment called in question, or if any accusation regarding the death or treatment of the deceased has been made by a medical man, he should not perform the post-mortem, and that it is not advisable that he should be present at it, but he should be represented and name him to the coroner in writing. (Boys, 251.)

In some of the States in the United States, physicians are regularly appointed to perform the necessary examinations for coroners. If, then, the coroner always exercised his best judgment in the selection of the medical practitioner to perform the post-mortem, it would do much to improve the condition of affairs. The fees allowed the medical witness who performs the post-mortem differs from that of the medical witness without a post-mortem in that the former is allowed five dollars more for the first day at the inquest. In other words, the post-mortem is rated at five dollars. This sum is, in most cases, very inadequate, and when one considers the case of exhumation or a badly decomposed body, the absurdity is striking. Such a

fee is not enough to attract the most capable men, and so the coroner often hesitates to summon the most capable, feeling that he is to some extent, imposing a duty without adequate remuneration. No provision is made for a microscopical examination, which, in many cases, is to be deplored.

While advocating an increase in the fees allowed the coroner and the medical witness who performs the post-mortem examinations, we must not lose sight of the fact that the cost of investigations of this character should not be excessive. In many places this cost is easily ascertained, but in Ontario this is at present almost impossible, owing to the fact that there is no central authority to whom full reports are sent. Here in Ontario the depositions or evidence must be certified and subscribed by the coroner and caused to be delivered without delay, together with the written information, if any, and the inquisition, to the crown attorney for the county. In cases of manslaughter or murder, to a magistrate who will ultimately send them to the crown attorney. The crown attorneys then, all over the Province of Ontario, have in their possession the records, and are no doubt made use of only for legal purposes in each case where further action is taken.

In addition to this, coroners in Ontario are required to return lists of the inquests *super visum corposis* held by them during the preceding year, together with the findings of the juries, to the provincal treasurer, on or before the first day of January in every year. In regard to expenses in Ontario the coroner is supposed to pay them, and he can then present his account to the county treasurer for payment. In practice, however, each person makes out his own account, and after getting it certified as correct by the coroner, leaves it with the clerk of the peace. For an analysis, the coroner must apply to the Attorney-General for his sanction in order to have the amount paid by the Government. The coroner should give the medical witness an order for the payment of his fees on the treasurer of the city or county. In regard to the final payment of these accounts, I understand that the coroner's account is repaid to the municipality by the Government, but the fees for the medical witness is not so repaid. I am informed that in the city of Toronto, the number of cases investigated were, 1904, 3; in 1905, 71; County of York, 1905, 14; in 1906, 12; but whether these were only preliminary investigations or inquests is not stated. From this it is seen that it is not an easy matter to come to any conclusion as to the cost of the necessary work in this regard in Ontario.

To conclude, then, it seems to me that before we are in a position to properly discuss this question further and outline a scheme for the improvement of the conditions prevailing, it

is necessary for us to be in a position to ascertain the number of inquests held, the number of preliminary investigations held, fees paid to coroners, fees paid to medical witnesses, and in addition to have some system whereby the records may be accessible for study and comparison.

Discussion.

W. Arrell (Cayuga).—The present method of paying coroners is very unfair. If a coroner is asked to make an investigation in a case of death by a crown attorney he ought to be paid for this investigation, and if an inquest is held as a result of this investigation he ought to be paid for the inquest held. As the law now is, if a coroner makes an investigation and an inquest is held after, he is paid nothing for the investigation, although he may have spent days and driven many miles.

H. S. Bingham (Cannington).—Dr. Bingham opposed the election system in the appointment of coroners, and further supported the idea of the office of a coroner being filled by a medical man rather than a lawyer, etc., etc.

John Hunter (Toronto).—Would it not be advisable to somewhat widen the scope of the coroner. For instance, a patient may be apparently at least making favorable progress when suddenly a change takes place and death follows. The physician may be very desirous to ascertain the exact cause of death, but the relatives object. Could not some scheme be devised whereby the attending physician in sending out the certificate of death, might make some suggestion that could be acted upon by the coroner, and an autopsy held by a competent physician. The report of these autopsies should be filed, so as to be made use of by medical men. Some such scheme would furnish very much valuable information.

N. A. Powell.—The coroner's office in many States of the American Union is a reward for political services, and the result is what might have been expected. Massachusetts, disgusted with what had been seen, turned to the medical examination system, and it has been such a success that other States are now introducing plans for the investigation of violent deaths. Ontario, by the appointment of medical men only as coroners, and by requiring an oath as to the necessity for an inquest before a warrant is issued, has raised the status of these investigations and given us a system of which we do not need to feel ashamed. Still we could, with the greatest advantage, change to a system, in the main similar to that of Massachusetts, in which a legal expert, such as a junior county judge, investigates each case of suspicious death along lines in which he is capable of doing his best work, while an expert in pathology

investigates its strictly medical aspects, and so the ends of justice are swiftly and inexpensively furthered without undue publicity.

D. D. MacTaggart.—The Coroner's Court is essentially a Court of Record, according to the authorities on Criminal Law, and coroners should legally keep a record of all investigations held either with or without jurors.

The judicial acts and proceedings should be enrolled as a perpetual memorial and testimony. A complete record should be made in every case, and these records deposited in the vault of the nearest court house, and at time of making deposit the coroner should obtain a receipt from the clerk of the peace and crown or other official in charge. These returns should be made every month, so that contents of records may be of use to those requiring them.

I am of the opinion that the position of coroner should be filled by a legal man, who should have associated with him a medical examiner. In cases of violent death or sudden death without medical attendance, the medical examiner would be called and make the necessary examination. If he is satisfied that there is absolutely no evidence of crime, he makes such report to the coroner, who may then dispose of the case. But if, on the other hand, there is the slightest evidence of crime, then the coroner will exercise his judicial functions by calling a jury and witnesses and investigating the case. By this means the legal side is left entirely to lawyers, as it should be, and the medical examiner has only to deal with things medical. If medical men are appointed as coroners, they are often called on to act as judge and witness, and no man can fill the two positions.

My sugestion would be to divide the province into districts and have one coroner for each district, who should have a deputy to assist him and act as the clerk of the court. A chief medical examiner and assistants should be appointed for each district. The appointment of coroners should be made by the Lieut.-Governor-in-Council. Medical examiners should be appointed in the same way and should be selected from men who have had a large experience in autopsy and pathological work in order that correct results may be obtained.

The question of fees should be a secondary one. The first object is to establish a proper system with good appointments, and this having been done, the question of fees could then be taken up. In large centres, like the City of Toronto, a salary might be given, but in other places, where the work is not arduous, a magistrate could fill the position and be paid by fees.

Coroners' Association.—Following the suggestion I have made of separating entirely the legal and medical sides of the

question, I cannot see that a coroners' association would be of any benefit to the medical profession, but would suggest rather the formation of a Medico-Legal Society, the nucleus of such a society to be the Medical Examiners, and that this society either hold a meeting yearly of form a section of the Ontario Medical Association, and not take up homicide only, which is the only investigation that one has to deal with at a coroner's inquest, but take up also insanity, disability following injury and other matters of medico-legal nature, which are continually coming before the civil courts.

Analytical reports of the medical examiners could be compiled and submitted at the annual meeting. By this means a broad view of medico-legal matters is taken, and the results would be of benefit to the profession in general. As medical men, our duty is to find the cause of death—let the lawyers, acting on the side of justice, find out who is responsible for the death.

A NEW TREATMENT OF FRACTURE OF THE NECK OF THE FEMUR.*

BY W. E. GALLIE, M.B. (TOR.),
Associate in Orthopedic Surgery, Hospital for Sick Children, Toronto.

IT requires considerable courage to attack the subject of fracture of the neck of the femur in the face of the countless discussions that have taken place on this topic, and the unanimity of the conclusions arrived at. This fixity of opinion, however, has recently become much unsettled and several of the ancient traditions have been permanently unseated. It was formerly supposed that this particular type of injury was restricted to the feeble, fat and aged. Statistics, however, show that this belief was based on unreliable evidence and that although the injury is admittedly frequent in the old, it often occurs in the young and middle-aged. In Hamilton's cases treated at Bellevue Hospital but 37 per cent. were more than 60 years of age, and 40 per cent. were 50 or less. Whitman, in a paper read before the Johns Hopkins Medical Society in March, 1906, refers to 36 cases occurring in children and adolescents seen by him during the past few years, and Hesse (*Beitrage zur Path. Anat. und zur Allg. Path.*), recently tabulated 46 others.

One explanation of this unjustifiable belief can be found in errors in diagnosis. Of the 36 cases referred to, the majority had not been correctly diagnosed, the symptoms at the time of injury being attributed to contusion, and the disability following, to hip joint disease, coxa vara and other conditions. One case which came under my own observation and which I shall report to-night was first diagnosed hip joint disease. In *The Annals of Surgery*, November, 1902, Whitman reports five cases seen in one year in patients between 25 and 45 years of age, in not one of which had a correct diagnosis been made.

As a result of the conclusive evidence advanced it is now generally accepted that fracture of the neck of the femur is not restricted to the aged, and that it must be remembered in diagnosing the cause of disability arising from injury to the hip joint without respect to the age of the patient.

In consequence of the fact that up till recently the very great majority of fractures of the neck of the femur were seen in the old and feeble, and because it is known that to keep such patients in bed for any length of time in an efficient fixation apparatus is impossible, owing to the constant menace of hypostatic pneumonia,

* Read before the Toronto Medical Society, January, 1907.

efforts to secure the best results in the local condition are usually made secondary to saving the life of the patient.

When the condition is recognized in the young and middle-aged, the importance of obtaining firm union is so strong in the mind of the surgeon that he is willing to accept moderate deformity, loss of symmetry and restriction of the function of the joint, in his efforts to provide stability, and even with this object always in view it is within the experience of every one that non-union is of occasional occurrence.

It has been the frequency with which this latter misfortune occurs, and the number of patients one meets with who are partially crippled in vigorous life as a result of union in an incorrect attitude, that first stimulated Whitman to devise some new method of treatment that would give more satisfactory results.

The explanation of the unfortunate results that have been obtained is readily understood when we consider the pathology and treatment of the various types of fracture. It is customary to divide these fractures into two classes, the complete and the incomplete. This latter is frequently referred to as impacted, or of the greenstick variety. Complete fractures are found most frequently among older patients, while in the young the fracture is nearly always incomplete. It is this circumstance which in all probability accounts for the frequency with which the injury is overlooked in the young, as the impaction is often sufficiently strong to allow the patient to walk within a short time following the accident.

Another classification depends on the location of the fracture. When it is close to the femoral head it is known as intra-capsular, and when close to the junction of the neck with the trochanters, as extra-capsular.

The location of the fracture is of considerable importance from a standpoint of prognosis. When the fracture is intra-capsular it is more frequently complete and several inches of shortening may immediately result. The difficulty of securing correct apposition of the fragments, owing to their small diameters, is at once apparent, and we here have the true explanation of the frequency of non-union following fractures in this locality. It is sometimes claimed that non-union is more likely to occur here than elsewhere, because of certain nutritional disturbances in the smaller fragment resulting from the injury. This must be considered as only a partial explanation when one considers the difficulty of securing apposition and fixation of the parts by the ordinary plans of treatment. When the fracture is extra-capsular it is more frequently of the incomplete variety, and union is in consequence more likely to occur. The large cross-sectional area of the fragments is also in favor of union, even in those cases in which the fracture is complete.

The usual method of dealing with complete fractures is to put the patient to bed and to apply a long side-splint, extending from the axilla to below the foot. Traction of ten pounds or more is applied by means of the ordinary adhesive plaster extension apparatus. The splint is intended to provide fixation of the fragments and the traction to prevent and overcome shortening caused by the upward displacement. It must be apparent, however, that in the absence of antero-posterior support, movement at the seat of fracture must be quite free with every move-

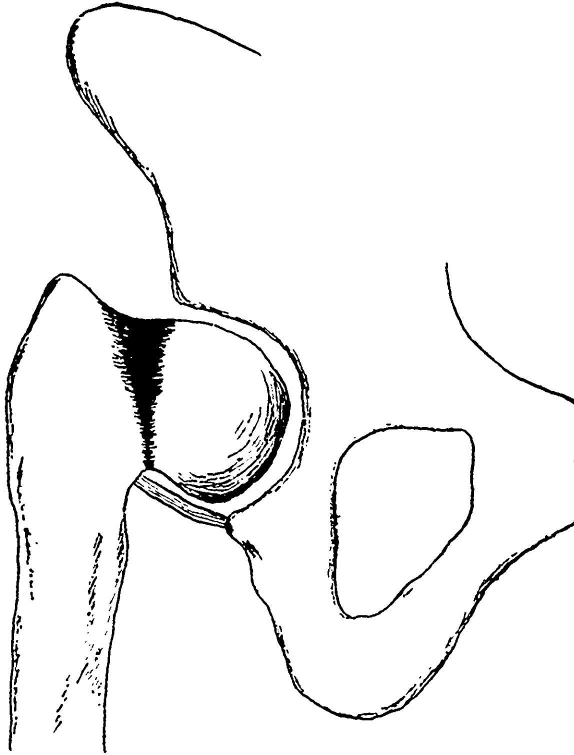


DIAGRAM A.
Illustrating the depression of the neck occurring in impacted fracture.

ment of the body, and in consequence the probability of union lessened. The traction also, in the absence of efficient splinting, and acting as it does upon a limb fastened laterally to a splint, is usually ineffective. This is demonstrated by the frequency with which an inch or more of shortening remains after the employment of this form of treatment. It is at once evident that the persistence of an inch or more of shortening, if the fracture be of the small part of the neck, practically precludes reunion, because in such cases the fragments are not in apposition. In

some instances the Hodgen apparatus is used or sand-bags are employed, but the principle is essentially the same.

If the fracture is of the impacted variety, the rules laid down for treatment are very definite. Practically every authority on fractures advises against disimpaction, the reason being that after such a procedure non-union is a frequent sequela. Thus, the general rule that fractures be treated so as to obtain a restoration of function and normal contour, besides firm union of the fragments, is not observed, and the whole energy of the surgeon is centred on obtaining solidity in the bone. Yet this surely condemns the patient to disability both from the external rotation and shortening that result, and from direct interference with the

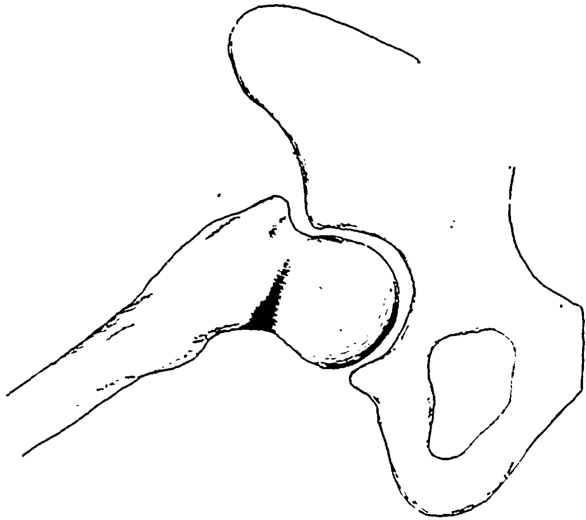


DIAGRAM B.
Illustrating reduction of the impaction by forcible abduction, the tip of the trochanter impinging against the side of the pelvis.

function of the joint. This latter is due, as a reference to Diagram A will show, to the depression of the neck which results from impaction. That is to say, the angle which the neck forms with the shaft of the femur is changed from an obtuse angle to something nearer a right angle, and in severe cases this becomes even less than a right angle. In consequence of this depression of the neck, the normal arc of abduction is greatly lessened, owing to the early locking of the trochanter against the side of the pelvis. Thus it is that slight shortening, combined with limitation of abduction when following an accident, is practically pathognomonic of impacted fracture of the neck of the femur. This limitation of abduction is usually progressive and leads in many instances to persistent flexion and adduction, a deformity

which causes much discomfort and disability. As Whitman puts it: "This distortion is induced primarily by the deformity; it is favored by the attitude assumed by the patient during the stage of weakness and repair, and it is confirmed by the accommodative shortening of the adductor muscles. It is probable also that the greater strain to which the depressed neck is subjected leads to further distortion and induces the nutritive changes of the osteo-arthritic character presented by museum specimens."

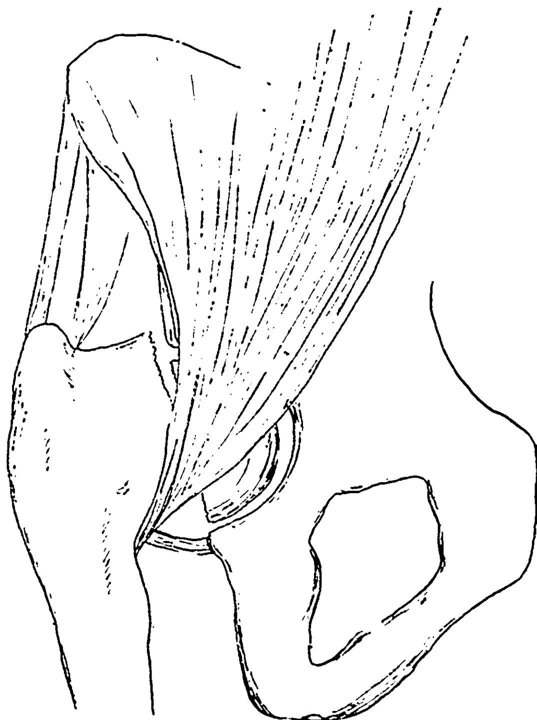


DIAGRAM C.

Illustrating the mechanical obstruction to abduction where union occurs after complete fracture.

These remarks also apply to those cases of complete fracture of the neck where firm union is obtained, for in practically all these cases union takes place with shortening, varying from ¼ to 1 inch, and to a corresponding degree there is depression of the neck of the femur. Besides the limitation of abduction resulting from the change in the angle of the neck with the shaft, there are also quite frequently irregularities in the line of union, as in Diagram C, and in the X-ray photograph, No. 1. It will be seen that any attempt to abduct the limb results in the early locking of

the neck against the upper rim of the acetabulum, quite similarly to what happens in the impacted cases.

The logical remedy for the evils arising from the present treatment of fracture of the neck of the femur would naturally be the restoration of the normal contour of the bones, combined with more efficient fixation. If the normal angle of the neck with the shaft could be restored the limitation of abduction would be removed, and the increased strain resulting from the depression of the neck, which always causes increased deformity, would be eliminated. The procedure by which this may be accomplished was devised by Dr. Royal Whitman, of New York, and the method seems to be a satisfactory solution of the difficulties surrounding the management of the injury.

It will be observed in the case of an impacted fracture, as illustrated in Diagram B, that if the limb be gently abducted,

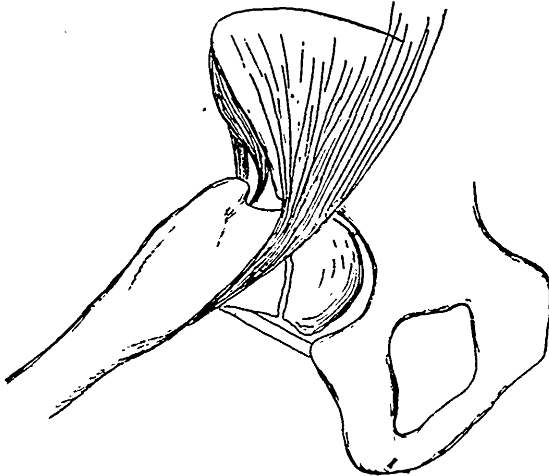


DIAGRAM D.

Illustrating the correction of the deformity by the abduction method. Note the tense inferior capsular ligament.

the trochanter quickly locks against the side of the pelvis. If now the abduction of the limb be forcibly continued, we shall have created a lever, with the fulcrum at the point of contact of the trochanter with the rim of the acetabulum, and by steady pressure we can break up the impaction and restore the normal angle of the neck with the shaft. In the san ~ way in the case of a complete fracture (see Diag. D), if care be first taken to eliminate all shortening by traction, the normal angle can be restored by abducting the leg until the trochanters rest securely on the side of the pelvis. By this procedure also the probability of accurate apposition of the fragments is greatly increased, owing to the fact that the

tension on the inferior part of the capsular ligament when the limb is abducted prevents upward displacement of the outer fragment on the side of the pelvis and directs the neck down into the acetabulum. The possibility of upward displacement is also minimized by pressure exerted in a downward direction by the palm of the hand over the great trochanter. Frequently when this is done, in cases where the fracture is close to the head the outer fragment of the neck can be felt and heard to slip under the rim of the acetabulum with a distinct snap.

At Dr. Whitman's suggestion dissections and observations were made on eight cadavers by Dr. A. S. Taylor, Assistant Instructor in Operative Surgery in the College of Physicians and Surgeons in New York, with a view to determining the exact mechanical features of the operation. The joints were approached through a vertical incision between the tensor vaginæ femoris and the glutei, to the outer side, and the sartorius and rectus femoris muscles to the inner side. The mechanical effects of the soft tissues, therefore, could not have been influenced.

The neck of the femur was divided transversely to its long axis. The level of division in the different cases varied from the junction of the head and neck to the junction of the neck and great trochanter. The difference between the qualities of living tissues and those of the cadaver should be remembered.

The following observations were made:

1. Before dissection the limit of abduction varied from 45 to 55 degrees from the median line.

2. When the neck of the femur was divided the outer fragment underwent a posterior displacement (downward as the subject lay in the dorsal attitude), of ½ to 1 cm., combined with external rotation. In the cadaver there was no upward displacement such as occurs in the living.

3. Abduction to 45 degrees, combined with lifting forward of the upper fragment, produced and maintained good apposition between the fragments and gave the proper relation between the axis of the neck and that of the shaft of the femur. Abduction beyond 45 degrees caused separation of the fragments at the inferior border of the neck.

4. Abduction was limited by: (*a*) The inferior ligaments and capsule; (*b*) Impact of the posterior part of the great trochanter upon the soft tissues just above the acetabulum. Both of these obstructions seemed to occur simultaneously.

5. The observations held true, regardless of the level at which the neck was divided.

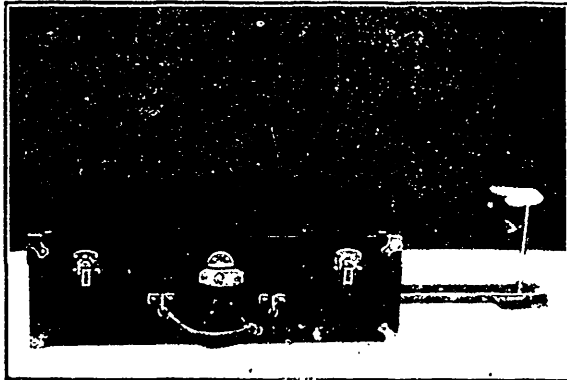
6. The outer fragment of the neck caught under the rim of the acetabulum and cotyloid ligament only when the line of division was close to the head of the femur. The head of the femur fills the cavity made by the cotyloid ligament and acetabulum.

7. Tension of the inferior capsule and its ligaments during abduction tended to cause spontaneous alignment of the fragments. This influence was more marked as the line of division of the neck approached the great trochanter.

8. Inasmuch as the fractured surfaces were rough, a slight amount of gentle rotatory manipulation, combined with some lifting forward of the distal fragment (see observation 2), gave best apposition.

9. Division of the capsule and ligaments inferiorly rendered reduction more difficult, inasmuch as there was a tendency to upward displacement of the distal fragment during abduction and the usual spontaneous limitation of abduction was largely absent.

From these observations the following deductions can be made:



Portable pelvic rest and plaster of Paris outfit for the application of spicas.

1. That in order that the most perfect apposition of the fragments may be obtained, the posterior displacement, resulting from gravity when the patient is in the recumbent attitude, must be remembered and provision made in the treatment by efficient antero-posterior support to prevent its occurrence.

2. That 45 to 55 deg. abduction is the best angle at which to produce and retain good apposition of the fragments.

3. That this method of procedure tends by the contact of the great trochanter with the soft tissues over the rim of the acetabulum and by the tension on the inferior part of the capsule to produce the most perfect apposition and alignment of the fragments and to retain them most securely in the proper attitude.

4. That in complete fractures more perfect apposition may be gained by a slight amount of gentle rotatory manipulation to allow the roughened fragments to adjust themselves.

The method of procedure is as follows:

The patient is anesthetized and elevated upon a pelvic rest of the type I have with me. The essential part of it is the steel sacral support which raises the pelvis from the table and does not interfere with the bandages as they are applied. The shoulders rest on a box or a pile of books, and the feet and legs are supported by assistants. The apparatus before you is a combination of conveniences which I was forced to devise because of the absence of hospital fixtures when one goes out into the city or country to apply a plaster spica. It consists of a box made like a suit-case, which is divided into two compartments by a partition. In one compartment is a canvas bag, which will hold about thirty four-inch plaster bandages. The other compartment is intended to carry flannelette bandages, silence cloth, cotton, scissors, strips of steel and basswood, plaster knives, seamless shirting and the pelvic rest. In the bottom of this compartment is a wooden slide, running the whole length of the box, which can be drawn out any required distance. On the end of this slide is a square steel plate, into the centre of which the upright bar of the pelvic rest is screwed. At the upper end, this upright bar is bored out to form a tube, and to fit this there are several sizes of sacral supports, made for the various sizes of patients. When the pelvic rest has been adjusted, the lid of the box is closed down and we are provided with an efficient support for the head and shoulders.

When the patient has been placed upon this pelvic rest, seamless shirting or stockinette is applied, extending from the foot to the axillæ. The operator then takes his stand beside the injured hip, with the object of adjusting the fragments. One assistant steadies the patient on the pelvic rest, and a second abducts the uninjured leg to the limit to demonstrate the normal range of mobility. A third assistant then grasps the injured leg and, if the fracture is impacted, gently but forcibly abducts the limb under moderate traction, breaking down the impaction and only stopping when an angle of 45 to 55 deg. with the normal has been reached. The operator in the meantime maintains a downward pressure on the trochanter with the palm of his hand to assist the capsular ligament in preventing upward displacement. He also gently lifts the trochanter forward and rotates the limb slightly inward to overcome the posterior displacement due to gravity when the impaction is reduced, and to correct the external rotation. The fragments are disturbed as little as possible, no attempt being made to elicit crepitus, for example, in order that the good apposition provided by the impaction may be retained. If the fracture be of the complete variety the third assistant first overcomes all shortening by strong traction, counter-traction being provided by a towel passed through the perineum, and then abducts the limb in the same way. The operator makes

every effort to adjust the fragments by lifting forward the trochanters and by rotating the limb gently to make the rough surfaces fit together. It is usually not difficult to know when the fragments are in good apposition, particularly if the fracture is near the head, as the reduction of the deformity can usually be distinctly felt. When the operator is satisfied with the result of the manipulations, the bony prominences are properly padded with silence cloth or flannelette bandages, an ample dinner pad is adjusted and a plaster spica is applied, extending from the toes to the mammary line. Care must be taken to mould the plaster well into the angle formed by the side of the pelvis and the abducted thigh, in order that upward displacement may be rendered impossible. Provision must be made also against posterior displacement of the outer fragment by moulding the plaster well in behind the trochanter, and by making it strong over the buttock by incorporating a pad of plaster about 6 in. square and 10 layers thick in this region. The spica may be reinforced at the points of greatest strain by strips of steel or basswood incorporated in the plaster. When the plaster has begun to set the edges are carefully cut and rounded off, so as to allow free movement in the uninjured leg and to prevent excoriation from the rough margins of the spica. The shirting is then drawn over the edges of the plaster and a covering of the same material is sewn over the spica. Thus a smooth, even surface is apposed to the body and pressure sores are altogether unlikely if the plaster has been carefully applied. An excellent plan for keeping the skin healthy is to thread the inside shirting with rough cotton bandages, after the suggestion of Lorenz, of Vienna. These bandages can be drawn over the skin daily in a see-saw fashion and the skin given the necessary stimulation to keep it in good condition.

This paper is not intended as a dissertation on the advantages of plaster-of-Paris as a dressing, for it is the main object of the writer to describe to you the mechanical principles involved in the treatment, without much reference to the retention apparatus. It may well be noted here, however, that no other splinting material presents so many advantages as the plaster. As a rule the support is comfortable if it is well applied. It permits the necessary movement of the patient and even transportation from one couch to another without fear of displacing the fragments. In fact, the use of the plaster spica in the treatment of children and adults is so common in orthopedic practice that further discussion of the subject is unnecessary. It is true that its proper application requires some care and skill, but not more than is demanded in any other surgical emergency.

Thus far the discussion has been confined to the treatment of children and adults up to middle-age. It seems reasonable to suppose, however, that if the treatment can be made tolerable, it

can be applied to a much greater age. Thus, in Mr. Cameron's service there occurred a case of an old man over 70 years of age treated by this method at the Toronto General Hospital by himself and Dr. C. L. Starr, in which firm union, with a good functional recovery, was obtained. Another case I was personally interested in in Brooklyn, that of an old lady of 200 lbs. weight and 65 years of age, and good function with firm union resulted.

In order that the treatment may be made applicable to the old, certain modifications must be introduced. It is not at all likely that an elderly person can be convinced that he is comfortable with a plaster extending up on the chest. He will complain bitterly of his inability to sit up, and of the sensation of restriction about the chest. To get over this difficulty it is a good plan to cut out that part of the plaster extending over the upper part of the abdomen and the chest. The long spica may, indeed, be wholly dispensed with, and the Lorenz short spica, which extends to just above the crests of the ilia and leaves practically three-quarters of the abdomen uncovered, may be substituted. This modification permits the patient to sit up in bed and largely overcomes the objection to the splint. In those cases in which the onset of hypostatic congestion of the lungs is a possibility the patient may be turned about and sat up in bed or a chair as was actually done in Mr. Cameron's case referred to above.

After the lapse of several days, by which time the plaster will have become perfectly hard, it is an excellent precaution if the patient is in the hospital to have an X-ray photograph taken through the plaster. In this way the exact attitude of the fragments can be ascertained, and in those cases in which the apposition is not satisfactory further procedures may be employed.

The best time for the application of the treatment is, of course, immediately after the injury, unless the bruising and laceration of the tissues are so great as to require local treatment preliminary to the application of a fixed dressing. In the latter case sandbags and traction might be employed until the swelling goes down. It is always better, however, to get the spica applied if possible before much swelling has taken place, as one may thus gain from ten days to two weeks in the length of time required for the treatment. The danger of constriction is extremely small, owing to the even pressure exerted on the tissues from the toes to the mammary line, and as a result the local effusion is rapidly diffused.

The after treatment is of considerable importance. If the long spica has been used, it may at the end of four weeks be shortened to allow free motion at the knee, and at the end of eight weeks the whole spica may be removed. At this time, if it is found that union is firm, massage and passive and voluntary motion may be employed.. The limb should not be used to support weight for at least four months. The ideal treatment at this time is to provide

a hip-brace, which will permit functional use and yet support a part or all of the body weight while the patient walks. Where this is not attainable, the best routine plan is to use a light short plaster spica, holding the limb in moderate abduction. At first the patient uses crutches and then gradually resumes weight bearing.

As Whitman puts it: "A new treatment must necessarily appeal to reason rather than to experience, and to forestall a pos-

X-ray Photograph No. 1, of recent fracture of the neck of the femur.

sible criticism it may be said that it is not claimed that perfect apposition of the fragments is always possible, any more than it is possible in the treatment of fractures elsewhere. Neither is it claimed that union can always be obtained, or that the treatment can be applied in all cases, or continued in all cases after it is applied.

"It is claimed, however, that improved functional results are far more likely to be obtained after this than after any other form of treatment at present in use. The treatment is undoubtedly theoretically sound, experience has shown it to be eminently prac-

ticable, and whatever may be the outcome, the surgeon will have had the satisfaction of having at least tried to fulfil under the most adverse circumstances the requirements that are acknowledged to be essential to success in the treatment of the simplest fracture."

The number of cases that have been treated by this method is as yet rather limited. In the *Medical Record* of March 19, 1904, Whitman reports two cases. The first was in a boy 8 years

X-ray Photograph No. 2, of the same case three months later, showing complete anatomical cure following the abduction treatment.

of age, with incomplete fracture of the neck, seen in October, 1901. The usual symptoms of shortening, elevation of the trochanter, external rotation and limitation of abduction, combined with a history of a fifteen-foot fall three weeks before, made the diagnosis evident. The final functional result was perfect, and a skiagraph showed restoration of the normal angle.

The other case was a girl of six, who had fallen from a second-story window. The result was equally good.

In the *Therapeutic Gazette* of May 15, 1906, he reports

another case in an older patient who now walks without a limp, although there is still a slight degree of limitation of motion. In the same paper he describes several other cases. One, a complete fracture in a woman 30 years of age, in which the fracture had been overlooked because of other disabling injuries. The treatment, although not applied until twelve weeks after the accident, was followed by a firm union without limitation of movement. At the present time she still limps slightly, but it is expected that this will soon disappear. Two cases of impacted fracture in adults, one treated three weeks and the other ten weeks after the injury, resulted successfully, but the final functional results cannot be stated. One patient was walking about with the aid of a cane when she left the country. The other was discharged from the hospital wearing a plaster bandage and has not been seen since. It is reported, however, that he is perfectly recovered.

A case of fracture of the neck of the femur in a man 42 years of age, in which perfect functional recovery followed treatment by this method, has been recently reported by Ashcroft (*Medical Record,* October 21, 1905).

At Bellevue Hospital practically all the cases on one surgical division are being treated after this method by Dr. John B. Walker, and I have been informed by him that the results are satisfactory. The cases have not as yet been reported.

Besides the Brooklyn case referred to above, I have one case which I wish to report to-night.

A girl about 14 years of age was admitted to the Hospital for Ruptured and Crippled in January of 1906, with a diagnosis of hip disease. The history stated that about three weeks before she had fallen heavily on the left hip and had been unable to rise. She remained in bed for a day or two and then began to walk. Since then she had had a marked limp, with considerable pain in the region of the left hip and knee. Examination showed outward rotation of the left leg, shortening and corresponding elevation of the trochanter to about three-quarters of an inch, and practically complete restraint of motion, particularly in abduction. The combined evidence of the history and physical examination led to a diagnosis of fracture of the neck of the femur, which was corroborated by X-ray photograph which I have with me. (No. 1.) The case was treated in the manner described and the skiagraph taken a few days later showed the direct apposition of the fragment. For two months she remained in the plaster spica and then the after treatment as rehearsed was employed. In four months she was walking again and an X-ray photograph showed complete anatomical cure. (No. 2.) For several months there was marked limitation of motion in the joint, but this has lately greatly improved. When seen last, in September of this year, eight months after the injury, she was a complete anatomical and practically a perfect functional cure.

169 College St., Toronto.

AN APPRECIATION OF THE WORK OF DR. HENRY J. GARRIGUES IN INTRODUCING ASEPSIS INTO OBSTETRIC PRACTICE.*

BY BROOKS H. WELLS, M.D., NEW YORK.
Professor of Gynecology at the New York Polyclinic Medical School and Hospital.

Mr. President and Fellows of the American Gynecological Society,—It is with the greatest diffidence and the greatest pleasure that I rise to speak before you to-day. Diffidence because of my unworthiness of the honor and pleasure that I may help to keep bright the laurel that gleams above a brow frosted and seamed by the snows of more than seventy winters.

In order that you may realize how great a thing was done when sepsis was driven by Garrigues from the New York Maternity Hospital in 1883, let me remind you that it is less in measure of years than the years of a strong man's life since Oliver Wendell Holmes, in his immortal essay on puerperal fever, said so bravely: "The time has come when the existence of a private pestilence in the sphere of a single physician should be looked upon not as a misfortune, but a crime." Five years later, Ignatz Semmelweis, a young assistant at the Vienna Maternity, was derided because he persistently held that every case of puerperal fever was caused by the absorption of putrid animal material.

These assertions of Holmes and Semmelweis marked the first gray gleaming of a dawn that, obscured then by the clouds of derision and apathy and the mists of imperfect knowledge, has gone on to the clear light of a glorious day. Now we know that puerperal fever is puerperal septic infection; we know how to prevent it, and we cannot shift the responsibility.

At the time of the epidemic at the New York Maternity conditions were different. The significance of the part played by the various bacteria was only beginning to be appreciated. It is true that Playfair in the fourth edition of his "Midwifery," issued in 1882, included all postpartum fevers under the head of puerperal septicemia; yet, he admitted, "there were facts difficult to reconcile with theory and for which we were unable to give a satisfactory explanation.

Gusserow, in the same year, in commenting on the factors influencing the mortality at the Maternity of the Charity Hospital in Berlin, admits that *locality* has not the absolute importance it was formerly supposed to have and that Semmelweis was correct

*An oration delivered before the American Gynecological Society at Washington, May 8, 1907. Published by courtesy of *Obstetrics*.

in defining puerperal fever as a wound infection. Thomas More Madden, at the meeting of the British Medical Association in August, 1883, held that it did not matter by what term we distinguish the malady, provided we recognize that there is "a specific infectious disease consequent on parturition," and that it is largely modified by the intensity of the septicemic condition, by the previous condition of the patient, and by the prevailing epidemic constitution of the atmosphere. He holds that large maternity hospitals would be desirable if they were only safe, but that in all hospitals where a number of women are confined together a "specific puerperal atmosphere" is necessarily created.

Kinkead, Professor of Obstetrics at the University of Dublin, taught that "such fever, from whatever sources arising, except septicemia, is a specific infectious disease," and that "it occurs epidemically and sporadically, like any other infectious disease."

In the winter of 1883-84, partly because of the dreadful conditions prevailing at the New York Maternity, the subject of puerperal fever was prominently before the profession. In a somewhat heated discussion before the New York Academy of Medicine in December of 1883, T. G. Thomas defined puerperal fever as "an infectious disease due, as a rule, to septic inoculation of wounds in the genital tract." He held that some toxic agent existed, but would not admit that the "round micrococci" could be important factors in its etiology. Polk thought Thomas should have planted himself squarely upon the view which regards puerperal fever as identical with septicemia. At a later meeting Fordyce Barker, who still clung to the old dogma of a specific disease, ridiculed these ideas. "Does every parturient woman," he asks, "in performing the function of maternity, like the scorpion that carries in its tail an agent for suicide if death be threatened by fire, physiologically generate an equally fatal poison in a corresponding locality?" If so, it seems to him evident that "the state should make childbearing a penal offense for families that did not have means enough to carry out elaborate antiseptic requirements."

It is seen by these references that while the bulk of the profession held more or less to the idea of a septic poison, there was much concerning the exact nature of this poison that was vague, for the science of bacteriology was yet young and the old idea of a specific puerperal fever was hard to kill. Stadfeld, at the Copenhagen Maternity, had used carbolic acid as a disinfectant in his wards since 1870 and similar measures were employed by most obstetricians. These early efforts, however, were but gropings toward the light and were only moderately successful. Outbreaks of puerperal fever still frequently occurred and there were still those who believed in the "epidemic influence of the air."

But the time and the opportunity were waiting for him who should have the clear insight and the courage to put aside the ancient dogmas of the established order and replace them by the new ideals of surgical cleanliness.

In 1881 the mortality at the New York Maternity Hospital was thought to be very low, as it was only 2.36 per cent. In 1882 it had risen to 3.25 per cent. In the first nine months of 1883, with 345 deliveries, 30 women died and the serious morbidity was enormous. In September the conditions were at their worst. Ten of the women delievered during the month died, about one in four, and the survivors escaped miserably with their lives.

At this time (October 1) the rotation of service brought Dr. Henry J. Garrigues again in charge. In the fulness of maturity, energetic, thoughtful, calm, he proved to be the man superior to the emergency. Appalled at the frightful conditions, he had already formulated and at once carried into effect a detailed plan for driving out the pestilence. This plan was original in its detail, showed a broad comprehension of the principles of asepsis, was brilliant in its achievement, and of far-reaching influence on the practice of obstetrics. In brief it was this:

Rapid alternation of wards was secured, so as to allow frequent fumigation with sulphur, followed by scrubbing with soap and water and by a 1-1,000 bichloride solution. Fresh bedding was furnished at each change. The floors were sprinkled four times daily with the bichloride solution. All visitors were rigorously excluded. Doctors and nurses employed in the maternity were not allowed to enter the other hospital wards or the dead house. The patient had a bath and clean linen beforehand and on entry to the delivery room the abdomen, genital region, buttocks, and thighs were washed with soap and water and then with bichloride solution. The vagina was irrigated with two quarts of the solution from a glass fountain syringe with glass nozzle. The rubber sheet on the delivery bed was frequently renewed and washed before each delivery with a 1-1,000 solution.

No vaginal examination was allowed except after the hands had been thoroughly scrubbed with soap, hot water and a stiff brush and soaked in a hot 1-1,000 bichloride solution.

When the head appeared at the vulva a piece of gauze soaked in the bichloride solution was applied and kept there. After the expulsion of the child the genitals were kept covered by a similar compress. The placenta was expressed by Credé's method, so that it might not be necessary to introduce the finger inside the vulva. If it was necessary to introduce the finger to remove placenta or membrane the vagina was washed out, otherwise not.

Intrauterine injections were used only when the hand or in-

struments were introduced into the cavity of the uterus, or after the birth of a macerated child. After the expulsion of the placenta the vulva and adjacent parts were washed out with the solution and the vulva covered with a huge gauze compress wet with the solution. Before each washing the nurses disinfected their hands as before labor. No vaginal injections were used except in fetid lochia. Every substance brought in contact with the genitals was soaked beforehand in the solution.

There are some of you who may remember the ridicule or skepticism that greeted the announcement of these measures; there are many more of you who remember how the pestilence gathered its terrors to itself and fled away in a night—and it has never returned.

On December 21, less than three months later, Garrigues, in reporting the result of his work, was able to say: "The effect of the treatment has been wonderful. As if by magic all trouble disappeared. Ninety-seven women have been delivered since its introduction and not only has none of them died, but there has scarcely been any disease among them—only three had any rise of temperature. The pavilions are scarcely recognizable. Where we used to have offensive odors, feverish, prostrated, or despairing patients, overworked nurses, and despondent doctors, the air is pure, the patients look well, their temperatures are normal, the nurses are cheerful, and the doctors happy."

Could there be a greater triumph than this? Was ever greater lesson taught more quietly? What battle of the greatest general of the world's red fields was ever fraught with consequences more momentous?

The lesson was taught to the world, and the world has heeded it well, for even to-day we acknowledge its influence. "Peace hath its victories far more than war," yet we do not beat the drums when lives are saved, or sound the bugles when disease is made to flee. The world has ever held him the hero who has led victorious armies in triumph across fields strewn with dead and dying men. Is he less worthy to be called a hero who has led victorious against the legions of death?

Garrigues, the man who saved and taught us how to save the mothers of men, lives to know we know the value of his deed; lives to know the place of honor he holds in the hearts of his fellows; lives in the pulsing blood of happy wives and mothers, and has an immortality in thousands yet unborn.

The Canadian Journal of Medicine and Surgery

J. J. CASSIDY, M.D.,
EDITOR,
43 BLOOR STREET EAST, TORONTO.

W. A. YOUNG, M.D., L.R.C.P.Lond.,
MANAGING EDITOR
145 COLLEGE STREET, TORONTO.

Surgery—F. N. G. STARR, M.B., Toronto, Associate Professor of Clinical Surgery, Toronto University; Surgeon to the Out-Door Department Toronto General Hospital and Hospital for Sick Children; N. A. POWELL, M.D., C.M., Prof. of Medical Jurisprudence, Toronto University, Surgeon Toronto General Hospital, etc.

Clinical Surgery—ALEX. PRIMROSE, M.B., C.M. Edinburgh University, Professor of Anatomy and Director of the Anatomical Department, Toronto University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University.

Orthopedic Surgery—B. E. MCKENZIE, B.A., M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Surgeon to the Out-Patient Department, Toronto General Hospital; Assistant Professor of Clinical Surgery, Ontario Medical College for Women; Ex-President of the American Orthopedic Association; and H. P. H. GALLOWAY, M.D., Winnipeg, Man.; Member of the American Orthopedic Association.

Gynecology and Obstetrics—GEO. T. MCKEOUGH, M.D., M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Toronto

Medical Jurisprudence and Toxicology—ARTHUR JUKES JOHNSON, M.B., M.R.C.S. Eng.; Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. YOUNG, M.D., L.R.C.P. Lond.; Associate Coroner, City of Toronto.

Physiotherapy—CHAS. R. DICKSON, M.D., C.M., Queen's University; M.D., University of the city of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S.Eng., Toronto.

Pediatrics—ALLEN BAINES, M.D., Toronto; A. R. GORDON M.D., Toronto; HELEN MACMURCHY, M.D., Toronto.

Medicine—J. J. CASSIDY, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.

Clinical Medicine—ALEXANDER MCPHEDRAN, M.D., Professor of Medicine and Clinical Medicine Toronto University; Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Mental and Nervous Diseases—N. H. BEEMER, M.D., Mimico Insane Asylum; CAMPBELL MEYERS, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Associate Demonstrator of Pathology Toronto University; Physician to Outdoor Department Toronto General Hospital; Surgeon Canadian Pacific R.R., Toronto; and J. J. MACKENZIE, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology—J. M. MACCALLUM, M.D., Toronto, Professor of Materia Medica Toronto University; Assistant Physician Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear—PERRY G. GOLDSMITH, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Laryngologist, National Sanitorium Association, Gravenhurst.

Dermatology—D. KING SMITH, M.B. Tor., Toronto

Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifth of the preceding month. London, Eng. Representative, W. Hamilton Miln, Thanet House, 231 Strand, WC. Agents for Germany, Saarbach's News Exchange, Mainz, Germany.

VOL. XXII. TORONTO, JULY, 1907. No. 1.

Editorials.

ANNUAL MEETING OF THE ONTARIO MEDICAL ASSOCIATION.

THE 27th annual meeting of the Ontario Medical Association was held in the Medical Building, Queen's Park, Toronto, May 28th, 29th and 30th. Two hundred and forty-four persons registered their names, forty-three being new members. A few general observations on the meeting will be made in this article. In

a Symposium—The Profession in Relation to the Public, the regulations as regards coroners were discussed by Dr. G. Silverthorn, Toronto, and several suggestions were made, though on the whole the present system was endorsed. The smallness of the fees which a coroner could pay for medical work was objected to. A coroner, he thought, should possess a certain amount of legal knowledge. Post-mortem examinations, should, in cases in which there was no suspicion of foul play, not be held.

In discussing "The Public Health Aspects of Medicine," Dr. McCullough, Alliston, advocated an amendment to the Ontario Public Health Act, providing fair salaries for medical health officers, who should be responsible to the Provincial Board of Health for their districts. His second point was a suggestion that fees should be paid to physicians for reporting cases of contagious disease. He favored compulsory vaccination and revaccination. He also advocated closer organization of the Ontario medical profession, who, at present, were unable to protect themselves against unjust prosecutions and suits.

By resolution of the Association, the Committee of Public Health was requested to take such steps as are deemed best suited to bring about a system of county medical officers.

Dr. C. K. Clarke dealt with "Ideals for Asylum Work in Ontario," referring to the new Psychiatric Clinic which is to be established at Toronto. He stated that in future medical qualifications would be considered in all appointments to the medical staffs of asylums.

A resolution was passed favoring the establishment of an institution to which inebriates could be legally committed. A committee was appointed to see that the suggestion was brought to the attention of the Provincial Government. This matter rose out of a paper read by Dr. Edward Ryan, Kingston, who was supported in the discussion by the Honorable W. R. Riddell, Toronto; W. C. Barber, Kingston, and A. T. Hobbs, Guelph. Dr. G. A. Bingham took as the subject of the Presidential address, "Goitre and Its Treatment," and was accorded a hearty vote of thanks for his paper. Dr. G. W. Crile, Cleveland, was also warmly thanked for his valuable paper on "Clinical and Experimental Observations on the Direct Transfusion of the Blood." Dr. Ravenel, Philadelphia, read a paper on "Methods of Infection in Pulmonary Tuberculosis," in which, in addition to infection through

the respiratory tract by sputum, he referred to tubercular infection conveyed through the digestive tract. He also mentioned the induction of immunity to tuberculosis through infection communicated, in small doses, at sufficiently spaced intervals.

Dr. A. J. Richer, Ste. Agathe, Quebec, advocated in a paper on "Immune Therapy in Tuberculosis" the use of tuberculin in incipient cases of the disease, as well as in those not too far advanced, while in healthy subjects the use of tuberculin conferred immunity to, or revealed the existence of, tubercular disease.

On the motion of Dr. Anglin, Kingston, seconded by Dr. Bruce Smith, Dr. J. Harrison, Selkirk, and Dr. J. H. Richardson, Toronto, were elected honorary members for life of the Association in recognition of their long and eminent service to the profession.

The following notice of motion was given by Dr. A. H. Wright, Toronto: "That the Ontario Medical Association desires to give expression to its hearty approval of the proposal by the Government of Ontario to establish psychiatric clinics to work in conjunction with hospitals for the insane in the Province; that the Association also respectfully requests the Government to establish a Lunacy Commission or Board of Alienists, who alone shall give expert evidence in the courts of law as to sanity and insanity, and also to institute reforms in the civil service whereby promotion for merit shall take place, and especially to make a rule that no one shall be appointed a superintendent of any hospital for the insane until he has had some years of training in the service."

The festivities of the gathering were of a quiet character. A smoking concert was held at St. George's Hall on the evening of May 28th. The programme included a lecture by Dr. J. F. W. R[illegible] on his trip to the Soudan, illustrated by lantern views from photographs. Musical selections were rendered by a male quartette.

The dinner of the Association took place at the King Edward Hotel on the evening of May 29th, the President, Dr. G. A. Bingham, occupied the chair. The invited guests were the Lieutenant-Governor of Ontario, Mr. Mortimer Clark, Major Macdonald, Aide-de-Camp; the Honorable W. R. Riddell, Toronto; Dr. G. W. Crile, Cleveland, and Dr. M. P. Ravenel, Philadelphia. One hundred and twenty-six gentlemen were present.

The next annual gathering is to be held at Hamilton.

The following officers were elected for the ensuing year: President, Dr. Ingersoll Olmsted, Hamilton; First Vice-President, Dr. H. J. Hamilton, Toronto; Second Vice-President, Dr. D. E. Mundell, Kingston; Third Vice-President, Dr. C. E. Casgrain, Windsor; Fourth Vice-President, Dr. T. S. T. Smellie, Fort William; General Secretary, Dr. C. P. Lusk; Assistant Secretary, Dr. S. Johnston; Treasurer, Dr. F. Fenton.

J. J. C.

AMERICAN MEDICAL ASSOCIATION AT ATLANTIC CITY.

The fifty-eighth annual session of the American Medical Association was held in Atlantic City, June 5th to 8th. Three times since the Association has turned hoary-headed with the dignity of years has it gaily hied itself to the City of Sunshine by day, and a million electric stars by night. Truly the City of Light down by the sea. And as children bring their smiles and find love awaiting them in this world, so the genial men who compose the American Medical Association bring not only their ideas and conclusions on matters of scientific interest, but their own splendid personality, making it a joy to meet and mingle with them. A few days previous to the larger Association's convening, the American Medical Editors' Association held one of its best annual meetings. Its president, Dr. Pilcher, Editor the *Military Surgeon,* held his audience charmed and convinced by his eloquent address. Its secretary, Dr. Joseph Macdonald, of New York, the personification of a spark from the anvil—we think the word graved on his family's ensign must be "Alacritas." The papers were all of great interest t medical editors and publishers, and many wished the hours longer for the discussion of many suggested topics. The new president, Dr. Charles Taylor, of Philadelphia, editor *The Medical Council,* was duly escorted to the chair at the close of the session. The quiet, gentlemanly bearing of Dr. Taylor should prove a wonderful "coat of mail" where the sharp thrusts of criticism of the Knights of the Quill (who see things so clearly) need occasionally the ruling of the editor-in-chief's blue pencil. The banquet was perfect in detail and the after dinner speech and story—well, "we were at the party, and we won't tell." Then dawned June fifth, with Atlan-

tic City at its best, a glorious day for the opening meeting of the American Medical Association, held in the big ball-room of the new million-dollar pier. The band, playing a medley of familiar airs, everybody meeting and greeting somebody with " delighted " —then a hush, and small but mighty Dr. Mayo, the Mayor of Atlantic City, and the " chosen " from the tribe of the elect physicians from up and down the land, ascended the stage. Stern Dr. Billings, to offset a sweet-faced child-man from Hamburg, Germany; Montreal doing herself proud in the person of Professor Adami; Dr. Philip Marvel, the man who " does things," of Atlantic City; Drs. Murphy and Ochsner, of Chicago; Dr. Reed, of Cincinnati; Dr. M. Wright; and beaming on all was Dr. Marcy's (Boston) smile, benign enough to be truly a song without words.

But upon the two, Dr. Mayo, the President, and Dr. Bryant, the President-elect, the interest was focussed. A great contrast, physically, but, in the medical world, great men both. Of such Ernest Renan has said: " Humanity moves onward like an army. Great men are the advance scouts; the bulk of the army follows, more or less near. This is why great men are not usually known in their century; they are ahead. The laggers are not known either . . . for the opposite reason."

Dr. Mayo's name is known by his work far and near. In person he is tense, like a piece of tempered steel, with his active brain packed in ice, a man of nerve and fortitude; in short, a surgeon, chiselled from marble-clay by the hand of the great Artist of Life.

Dr. Bryant, large, strong, forceful, of commanding presence, betraying a touch of Irish origin, we would venture to surmise from the fine oratorical style that has braved the battle and the breeze, in which he delivered his eloquent yet carefully worded address. He urged the elevation of the standard of medical education; his comparison between the Chairs of Theology endowed in the universities and those endowed in the interest of medical education was indeed pointed. If our memory serves us, " eighty-three for the souls of men in the hope of Celestial expectation, and only five for the bodies of men and the outcome of terrestrial reality."

The value of medical journalism was spoken of and the great lay journalism should be " the voice of the multitude proclaiming its will. It is, or it should be." The general tone of the physician's life and the sphere he moves in, the courtesy due from one

to another was dwelt upon. Dr. Bryant said: "Where all are selfish, the sage is no better than the fool, nor more dangerous." The pure food law, the medical inspection of school children, the appalling number of those afflicted with eye trouble, 13 per cent., and the number of mentally defective, the requirements of a National Board of Health and the great white plague, are a few of the salient points dealt with in a convincing way by Dr. Bryant. In his appeal for the co-operation of the powers that be, he said: "In this glorious country the will of the people is the law of the land, eighty-four millions of people—in their eyes how are we and our cause regarded?"

Every one of the sections were well attended. A few of the Toronto men who were humming birds gathering honey from section to section were Dr. N. A. Powell, Dr. G. W. Ross, Dr. Treble, Dr. Wishart, Dr. Trow, and another, an ex-Canadian and old McGill man, who delights in memories of Canada, Dr. Lane, now of Syracuse, N.Y. A unique party were the young ladies who are the medical librarians in the various large cities in the United States. They plied Dr. Powell with a hundred questions as to our medical library in Queen's Park, knowing that he was one of its founders. Nothing dismayed, the sage of our bookshop answered them all, and, on good authority, we learned he illustrated his answers by song and story, so they might be remembered as valuable data.

Chicago has been chosen as the meeting place of the American Medical Association next year. We are already bound by many a kind invitation to "come next year, sure." To miss the inspiration of that large community of mind we feel would indeed be a hardship. We might scribble paragraphs telling our Canadian confreres of the privilege and pleasure of a visit to the American Medical Association, but, to put it in a nutshell, as a shrewd old Yankee said to his son who was trying to study his geography lessons from a map, he said, "Hiram, just you listen unto me; that's all very good, but the best way to learn geography is to go thar."

W. A. Y.

A SUCCESSFUL TREATMENT OF GLANDERS.

In the *International Medical Annual*, 1906, Dr. E. W. Goodall shows the difficulty of diagnosing glanders, the diseases for which it is most likely to be mistaken being pyemia, acute rheumatism, typhoid fever, acute pneumonia, cellulitis, influenza, and smallpox. One of the most suspicious clinical signs is intramuscular suppuration; another is the formation of pustules on the skin; a third is a purulent discharge from the nose. A bacteriological examination of pus from the abscesses should be made in a suspected case in order to ascertain if the bacillus mallei is present.

In the *Lancet*, February 3rd, 1906, p. 288, Louis Woodcock published an account of a case of glanders. The patient was a man aged thirty-seven years, a porter in the meat market. The illness began on December 1st with pleurisy, which lasted ten days. The man then resumed work, but, on December 16th, while out walking, was suddenly seized with severe pain in the left leg, for which he was treated for three weeks as a case of acute rheumatism. He was then sent to a hospital, where he was found to have subcutaneous and intramuscular swellings. Other joints became affected and cellulitis and pustules appeared in different places. The patient died comatose on January 24th. From fluid obtained from the right knee joint on January 23rd the bacillus mallei was obtained.

In reference to treatment, Dr. Goodall says that little can be done except to relieve symptoms. The patient should be isolated, and great care should be taken that his attendants do not contract the disease.

In *La Presse Médicale*, 1902, 11 Octobre, No. 82, MM. Nicolle and Dubos published an account of a case of human glanders, ending in real or apparent recovery. Since the date of the publication of their first paper, up to March, 1907, when they published a second one, relating to the same case, this patient has been under their observation. As the cure has been complete and positive, they now feel justified in claiming it as a genuine and lasting cure of glanders.

A resumé of their case is as follows: July 4th, 1901, H. L., aged seventeen years, good constitution. When working in the

fields he felt that there was a foreign body in his left eye, and rubbed the part smartly with his hand. His father, who was present, examined the eye, but could find nothing wrong. On getting up the next day the patient noticed a small, painless, subcutaneous nodule in front of his left ear. Two days afterwards a large mass appeared beneath and behind his left jaw. The patient's general condition was excellent. After twelve days a swelling appeared in the deeper part of the calf of the left leg. All these swellings rapidly increased in size without being accompanied by inflammation and without causing any general reaction. As two horses on the farm were sick, their cases not having been fully diagnosed, the attending physician thought that H. L. might have caught glanders. Experimental inoculation into a male guinea pig of pus drawn by puncture from the swellings in the leg and neck, cultures of the same and microscopic examination confirmed the diagnosis of glanders. The farcy buds were destroyed August 7th by Professor A. Martin, of Rouen; the operation gave a temporary improvement; but was followed by a relapse in the same places. The medical treatment: over-feeding, rest, life in the open air, cacodylate of sodium only caused an arrest in the course of the disease. At the beginning of the third month, without waiting for an appreciable result from the medical treatment, we decided to inoculate the patient with the serum of a heifer (bovines being refractory to glanders). An injection of heifer serum was given every six days, the dose being at first 5 and afterwards 10 cubic centimetres. Altogether 190 cubic centimetres were injected in two and a half months, from September 11th to December 27th. The symptoms improved rapidly after the first inoculation; the farcy buds were absorbed, one after the other; the consecutive ulcerations healed; small lymphatic masses, which had developed at different parts of the organism (both sides of the neck, prethyroid region, etc.), disappeared. The cure was completed before the end of the third month, six months after the beginning of the attack. During the duration of the infection the patient exhibited only occasionally a fibrile movement (100 2-5—101 deg. F), and his general condition remained excellent."

A resumé is given of the published cases of cures of human glanders recorded in French and Swiss medical literature dur-

ing the last seventy years (1837-1907). Twenty-nine cases are mentioned, the majority being of doubtful value, as experimental studies were only made in seven cases, and the cases were not observed or followed up for a sufficient time after the disappearance of the lesions of glanders. According to Drs. Jeanselme and Hollopeau a relapse, not caused by a new infection, may occur in a case of glanders, after a complete remission of three years. Admitting, say Drs. Nicolle and Dubos, that all the cases of glanders, claimed as cures, were really cases of glanders, which has not been proved, we can only accept, as indisputable cures, cases which did not relapse for over three years after the beginning of the infection. There are six of them, which, with our case, makes a total of seven cases during the last seventy years. Brief memoranda of the six other cures are given. The conclusions of Drs. Nicolle and Dubos are as follows:

(1) Glanders in man, though the cures are exceptional, is not absolutely fatal, and this fact should be weighed in making a prognosis or arranging for treatment.

(2) Farcy, up to the present time, is the only curable form of glanders; internal glanders appears to be always fatal.

(3) In treating a proven case of glanders a physician should recall to mind the agents employed heretofore in the few successful cases—arsenic, mercury, over-feeding, open-air life, cauterization of the nodules, and particularly early and complete excision of the nodules. The smallest bit of glandered tissue should be excised.

(4) In addition we advise the injection of bovine serum. We do not contend that our patient owed his positive recovery to this agency, but we cannot regard the injection of bovine serum and his recovery as mere coincidences. The disease is most fatal; the cure is simple, harmless and should always be tried.

J. J. C.

EDITORIAL NOTES

Purity of Canadian Butter.—Bulletin No. 133 Butter, 1907, Laboratory of the Inland Revenue Department, Ottawa, Canada, shows that, with few exceptions, and these confined to Quebec, Canadian butter is free from sophistication. The following is the official report of Dr. Thomas Macfarlane, Chief Analyst:

Name of District.	Genuine.	Doubtful.	Containing Foreign fat.	Total Number collected.
Nova Scotia	50	0	0	50
Prince Edwar Island	50	0	0	50
New Brunswick	50	0	0	50
Quebec	106	0	6	112
St. Hyacinthe	150	0	0	150
Montreal	198	0	2	200
Ottawa	49	1	0	50
Kingston	46	4	0	50
Toronto	100	0	0	100
London	50	0	0	50
Manitoba	7	0	0	7
British Columbia	12	0	0	15
Total	868	5	8	881

Analyses made by Dr. J. T. Donald, Montreal, showed that the eight adulterated samples of butter contained little, if any, butter fat.

Opium Smoking in the East.—Japan and China have instituted repressive measures against opium-smoking. In China the habit is to be broken gradually; Japan is more radical in her methods, and inveterate opium-smokers will be obliged to pay heavy fines or suffer imprisonment with hard labor. The United States Government has begun a repressive campaign against it in the Philippine Islands. Great Britain and France are considering this question; but, so far, neither of these Governments has adopted repressive measures. Opium-smoking produces in the races of the East effects even more destructive to life and health than those noted among the white races from the abuse of alcohol. E. Jeanselme gives a vivid description of the psychology of the confirmed opium-smoker in Révue Générale des Sciences, 1907, No. 1, p p. 19-36, a translation of which is herewith given: "You can recognize him at a glance—silent, sullen, nerveless, chary of movement, his pale face and puffed features spell sadness and suffering. Heavy, drooping, rheumy eyelids

shadow his expressionless eyes. He is troubled with an itching of the skin, and tortured with insomnia. With lessened sensitiveness to pain, his muscular strength is diminished and he breaks into a perspiration at the slightest exertion. Slow and uncertain of movement, he walks in a hesitating fashion. His pulse and breathing are slow and irregular in rhythm. The salivary, biliary and urinary secretions are diminished in quantity. The bladder acts hesitatingly and is only partially emptied. Add to these conditions a dry throat, a burning thirst, a coated tongue, a lost appetite, and obstinate constipation. In spite of the erotic dreams excited by opium, virility declines rapidly and the lamentable agony ends in death." Jeanselme sums up his article by saying: "Brutishness and precocious senility in the individual, poverty and dishonor in the family, lowered vitality and degeneracy in the race, an increase of crime in society, impoverishment and famine in the State are the consequences of opium-smoking." It is said that several resorts for opium-smoking are in operation in Paris, France.

Applications of Iodine to the Endometrium in Puerperal Affections.—At the eleventh congress of Obstetrics, Gynecology, and Pediatrics, held at Algiers, April 1-16, 1907, Dr. E. Cabanés gave his treatment of puerperal sepsis (35 cases). After doing curetment, or not doing it, according to the case, the iodine dressing consists in introducing into the womb of the patient a strip of gauze, which has been soaked in tr. idodine, or preferably a 4 per cent. solution of iodine. This dressing is renewed twice a day. It quite dries up the lochia, and drainage of the womb becomes, so to speak, useless. All the bad cases of puerperal sepsis recovered in six days. In most of the cases he had treated sepsis had existed for several days; in some of them for twenty or even sixty days. Dr. Cabanés' conclusions were: (1) The iodine dressing of the septic uterus produces no ill effects; (2) it is a sure and effective method of controlling puerperal infection; (3) it should be applied twice a day; (4) puerperal metritis yields to it in a few days; (5) it stops the evolution of septicemia at the very beginning; (6) it is useful in generalized septicemia, by suppressing the focus of infection; (7) this treatment may be useful in certain cases of plastic pelvi-peritonitis with subacute tendencies by suppressing the uterine centre of bacterial and toxic products; but, a proiri, in such

cases, the necessary manœuvres must be made by the surgeon with the greatest circumspection.

Hysterical Myoclonus Cured By Suggestion and Milk-Isolation Treatment.—In Clinical Studies, Vol. 5, Part 3, Dr. Byrom Bramwell publishes a clinical lecture detailing the history, symptoms and treatment of a case of hysterical myoclonus in an unmarried woman, thirty years of age. She had suffered from this condition, more or less continuously, for two and a half years. It began in South Africa, and was, she said, the result of nervous shock and fright. The jerking movements affected all parts of the body—muscles of the face, neck, limbs and back, and were very violent in character. They were irregular in rythm, quick in time, and caused violent jerkings and jactitation of the different parts of the body. They occurred when she was lying at rest in bed, when she was sitting up, and when she walked. She was hardly able to walk without support, because of the violence of the jerkings. The movements ceased during sleep and were intensified by mental excitement and agitation—coming before the doctor, etc. On examination no evidence of organic disease, either in the nervous system or elsewhere, was detected. As she did not improve at home she was advised to enter an hospital. After entering the hospital she was emphatically told that there was no organic or serious disease, that the condition was curable, that the doctor would and could cure her in the course of a short time. Her bed, in a large ward, was surrounded with screens, and she was not allowed to hold communication with anyone, except the nurse and the doctor (isolation). She was fed on large quantities of milk. Massage was employed and hypodermic injections of H2O were administered. After three weeks of this treatment the spasmodic jerkings subsided. The patient was made to walk up and down the room before the students; she did so steadily and well. In discussing the exceptionally fine result obtained in this case, Dr. Bramwell stated that isolation and milk diet did not constitute the treatment, they are only means to an end. The real and essential basis of the whole treatment is to impress the patient with the confident belief that you can and will cure her, and to continue to keep up the impression until a permanent cure, not merely a temporary improvement, is effected.

Amputation of the Thigh Under Hyoscin-Morphin-Cactin Anesthesia.—Henry G. Ebert, Marine Hospital Service, U.S.A. in *The Military Surgeon*, May, 1907. The following clipping, which we take from *The American Journal of Surgery*, June, 1907, is deserving of the attention of surgeons, who in a time of emergency may be short-handed: Ebert reports the successful use of the Abbott hyoscin-morphin-cactin combination as a general anesthetic in an amputation of the thigh in the upper one-third. The tablets used contained hyoscin, gr. 1-100; morphin, gr. 1-4, and cactin, gr. 1-67. Injections were given two hours, one hour, and half an hour before operation. Anesthesia was ideal and complete throughout operation and for several hours afterward. No ill effects whatever were noticed at any time. Muscular relaxation was not so complete as in ether or chloroform anesthesia so that after the operation no subsequent contraction of flaps took place and there was no more tension on the stitches afterward than at the time they were put in. Ebert thinks this may prove to be the ideal anesthetic for field use and emergency work where one may be short handed, as it does away entirely with the anesthetist and the space and care necessary in the transportation of ether or chloroform. The absence of inconvenient after-effects is a most valuable feature of this preparation in field work. Of equal utility in active service is the possibility of securing complete rest and anesthesia in cases of injuries too extensive to permit of immediate operative attentions, such as in visceral injuries of the abdomen, chest or head.

Enforcement of Vaccination Among the Employes of Business Houses in Chicago.—In Chicago, the large down-town business houses are requiring vaccination certificates from their employes, as a condition of employment; the smaller places are less careful in this respect. Two moderately large business houses in the down-town district came near to the closing point, May 18th, 1907, because of smallpox among their clerks. The Chief Medical Inspector of the Chicago Health Department remarks on this subject: "It is not good business sense for a firm to take the risk of having their business place closed on account of smallpox, when it can be avoided by requiring that all their employes furnish a certificate of vaccination. As already said, certificates of vaccination are required as a condition of employment in all the larger places in the city, and it would be wise for the smaller houses to follow their example.

If it becomes necessary to close a few places of business on account of the presence of smallpox, no one can be blamed but the responsible head of the firm, who has failed to require the vaccination of his employes." This paragraph should be read by all the employers of labor in Toronto, who should demand vaccination certificates from their employes.

The Opsonins of New Sera, According to MM. Levaditi and Inmann.—MM. Levaditi and Inmann sustain, in a thesis, the opinion that the opsonins of normal sera (Wright and Douglas) are identical with complements, the discovery being confirmed by researches on the aqueous humor, the liquids of experimental edema and leucocytic extracts. From their researches it results that the complemental power and opsonic force of the liquids they employed varied in a parallel fashion. The aqueous humor of a rabbit deprived of bacteriolytic complement exhibited equal inactivity, from the opsonic point of view, and it was the same in transudation liquids. Opsonin is, therefore, identical with complement. As complement does not circulate in blood plasma, in a free state, being enclosed in blood cells, it is evident that its opsonizing properties cannot play an active part in the defensive process of natural immunity.

Considerations on the Frequency of Appendicular Lesions.—In discussing unusual terminations of appendicitis at the Paris Academy of Medicine (May 7th, 1907), Dr. Richelot stated that appendicitis assumes various forms: attacks of hyperchlorhydria, abdominal pains, volvulus, etc.; it may also be the exciting cause of attacks of the most varied nature. Suppurations underlying the iliac fossa, v.g., psoitis. This probably accounts for the apparent rarity of appendicitis formerly. Everything relating to acute appendicitis is nowadays well known; the question of chronic appendicitis is a much more difficult one to resolve. Dr. Richelot thinks that the relations between the diseases of the colon and appendicitis seem to be, as yet, insufficiently understood. The coincidence of appendicitis and muco-membranous entero-colitis has been proved to exist in numerous instances. Drs. Potain and Dieulafoy have denied it, because they have looked for acute or subacute appendicitis, with the assemblage of symptoms peculiar to each of these diseases. However, chronic appendicitis, which is hidden,

is so truly the cause of rebellious intestinal disorders, comprising, among others, muco-membranous colopothy, that these disorders are often cured radically by the removal of an appendix in which the lesions discovered appear to be of a doubtful character.

Insanity a Disease and Insanity an Infirmity.—At a meeting of the Societé de Biologie, Paris, May 4th, 1907, Dr. L. Marchand drew a distinction between insanity considered as a disease and insanity considered as an infirmity. In acute cases of mental alienation there are diffuse brain lesions, involving the brain cells on the meninges and the brain cells. Such cases when properly treated at the commencement of an attack often recover. In a certain number of cases the brain lesions pass into a chronic stage; they may even cease to progress; but all the same, the brain is spoiled. Patients affected with lesions of this kind become weak in the brain rather than positively insane. Finally, there are insane patients who have no lesion of the brain, but who have always been abnormal; whose brains have developed in a vicious manner, who were born with weak brains. J. J. C.

OBITUARY.

The many friends in this city of Mr. Thomas Macfarlane, F.R.S.C., Chief Analyst of the Inland Revenue Department, Ottawa, will be grieved to hear of his sudden death in Ottawa a few weeks ago. Mr. Macfarlane had been at Rockliffe, and had run a short distance to catch a train, when he stopped and suddenly expired.

The deceased, who was seventy-three years of age, had been with the Department for twenty-one years, and had only recently been granted six months' leave of absence, with the understanding that superannuation would follow. He leaves a widow and six daughters, one of the latter being Mrs. J. M. R. Fairbairn, 115 Bernard Avenue.

News of the Month.

THE ONTARIO SOCIETY FOR THE REFORMATION OF INEBRIATES.

The Board of Managers of the Ontario Society for the Reformation of Inebriates begs to announce that the Society is now prepared to undertake the care and treatment of inebriates, more particularly of the indigent class. Arrangements have been made for giving home treatment in suitable cases, and with one of the hospitals of Toronto to receive, for a period of from one to three weeks, such cases as require hospital care. A medical officer administers treatment, and there is a Medical Consulting Committee, the functions of which are of an executive character; a Probation Officer takes the supervision of inebriates subsequent to treatment. Dr. A. M. Rosebrugh is the medical officer; Drs. Wm. Oldright, E. J. Barrick and W. Harley Smith constitute the Consulting Committee; while W. J. K. Bellamy, Esq., is the Probation Officer.

Arrangements have also been made with the Toronto police authorities whereby persons arrested for drunkenness (when not hardened offenders) may be committed to the care of the probation officer instead of being sent to gaol and forced to associate with the vicious and the degraded.

The treatment extends over a period of three weeks; in many cases it may be conducted at the home of the inebriate, while in others, hospital treatment may be required, but not usually for more than one week. No secret remedies are used and the treatment is conducted on strictly ethical lines. It has the endorsation of the medical profession, and the scheme has been recommended by the Medical Associations of Canada as the basis for legislative action.

The probation officer gives a helping hand subsequent to treatment, and acts in the capacity of a friendy Christian visitor and adviser, assisting in obtaining employment, etc.; he endeavors to place the inebriate on a higher plane of life and living, and also, if possible, in touch with the church of his choice.

For the purpose of husbanding the limited resources of the Society, and also with a view to the encouragement of self-respect and ambition on the part of the inebriate, the cost of treatment, when not met at once, is to be understood as a loan to be repaid as

soon as convenient after treatment. The cost of home treatment does not exceed $12.00 in all, while hospital treatment is from $4.00 to $6.00 a week extra.

At the quarterly meeting of the Board of Managers held on June 20th last, the report of the officers of the Society was of a most gratifying character. The hospital accommodation at present is somewhat restricted, but larger accommodation will be available in a few weeks. The facilities for the prosecution of the work at the Police Court is all that could be desired. By the kind permission of the police authorities the probation officer visits the cells and interviews the prisoners in the morning before the opening of the court. Upon his recommendation persons charged with drunkenness whom he considers really desirous of reformation are remanded so that they may come under the care of the Society instead of being committed to gaol. The report of the result of treatment was also quite satisfactory; 75 per cent. of the cases were much improved and 60 per cent. were doing remarkably well.

In view of the satisfactory character of the report it was decided that the Board would be more than justified in making an appeal to the benevolent public for financial help to carry on the work efficiently.

It is not taken for granted from the report of the results of treatment thus far that 60 per cent. or 75 per cent. will be reformed. That percentage of cases will receive a temporary uplift, but if 30 per cent. or only 15 per cent. remain permanently reformed the Society will not consider the effort in vain.

A bill to promote the reformation of inebriates, based upon the probation system, combined with medical treatment, has been prepared for the Ontario Government, and the Society is very desirous of being able to demonstrate, as an object lesson, before the next session of the Legislature, that much good may be accomplished and at comparatively small cost by the unique economic system referred to. This is an additional reason for making an appeal for funds at the present time.

Subscriptions may be sent to the Hon. S. C. Biggs, M.A., the Treasurer, Rooms 95-96 Confederation Life Building; or to Dr. A. M. Rosebrugh, Secretary, 76 Prince Arthur Avenue, Toronto.

DR. R. A. FALCONER, THE NEW PRESIDENT OF THE UNIVERSITY OF TORONTO.

The Board of Governors of the University of Toronto met with Dr. R. A. Falconer on June 14th and received from him his formal acceptance of the appointment to the office of President of the University. On invitation of Dr. John Hoskin, K.C., chairman

or the Board, the Governors were entertained at luncheon with Hon. Mr. Whitney, Hon. Col. Matheson, Mr. A. H. Colquhoun, Deputy Minister of Education, and the deans of the various faculties in the University. In the afternoon a formal meeting of the Board was held, when Principal Hutton, who has been acting-President during the past year, formally resigned and the new President was introduced. On taking his leave Dr. Hutton spoke gratefully of the consideration and support he had received from the Board, and gave the strongest assurance on his own behalf and on behalf of the faculties of the University that his successor in office, Dr. Falconer, would be welcomed with the utmost cordiality. The chairman of the Board expressed to Dr. Hutton the very sincere gratitude felt towards him by all the members of the Board for his valuable services during the critical time since the resignation of Dr. Loudon, and a committee, consisting of Sir Wm. Meredith, Dr. Hoskin, Dr. Goldwin Smith and Dr. B. E. Walker, was appointed to prepare a suitable expression of the sentiments of the Governors towards Dr. Hutton.

Dr. Falconer, on being introduced and on having the position of President formally offered to him, accepted the appointment with expressions of gratitude for the kindly way in which he had been received by the members of the Board of the Governors and the Provincial Government, and also by the members of the various faculties of the University with whom he had been in conference during the forenoon. He proposed no new plans, but expressed himself as prepared to study the whole situation, not only in the University, but throughout the Province, and to devote to the duties of his office all the strength and ability at his command. At the close of the meeting expressions of great satisfaction were made by the members of the Board of Governors, who now look forward to a new era of prosperity for the University.

NEW PROFESSOR OF ANATOMY FOR THE UNIVERSITY OF TORONTO.

The Chair of Anatomy in the Department of Medicine, which was made vacant by the resignation of Dr. Primrose, was filled by the appointment of Prof. J. P. McMurrich, Professor of Anatomy in the University of Michigan. Dr. McMurrich is a son of the late Hon. John McMurrich and a brother of Mr. W. B. McMurrich, K.C., of this city. He is a graduate of the University of Toronto, and ever since graduation has been on the staff of the University at Ann Arbor. He has won great distinction, especially in the Department of Anatomy, and his coming to Toronto will add greatly to the strength of the medical faculty.

A committee of the Governors was appointed to co-operate with other committees in arranging for the ceremonies in connec-

tion with the installation and the opening of the new Physics Building. It is expected that the new building will be completed in time for the formal opening during the last week of September. If so, Dr. Falconer will be installed during the same week.

ITEMS OF INTEREST.

Meeting of Canadian Medical Association at Montreal, Sept. 11, 12, and 13, 1907.—The Committee on papers and business desire intimation of papers or other matters to be presented at the forthcoming meeting. Papers will be limited to fifteen minutes and are to be submitted to the committee three weeks before the meeting. Ridley Mackenzie, Local Secretary, 192 Peel Street, Montreal.

Dr. Walter M. English, of London, Appointed Successor of Dr. James Russell.—Dr. Walter Murray English, of London, Ont., has been appointed to succeed Dr. James Russell as superintendent of the Hamilton Asylum for the Insane. Dr. Russell resigned January 19th last, but remained on at the request of the department. The salary attached is $2,600, with free house, fuel, and light. Dr. English is a lecturer at the Western Medical School, and was at one time a member of the London City Council.

Fatal Vaccination on Board a Vessel.—Vaccination on shipboard, which developed tetanus, or lock-jaw, is given as the cause of the death of George Harold Meads, aged seven, son of Geo. Meads, who is staying at 219 Lisgar Street. The death was registered at the office of the City Clerk on June 11th. Little George died two days before, after an illness of only thirty-six hours. Dr. J. W. Smuck was called in shortly before death, but the disease had gone too far. The parents, with the boy, came out from Nottingham, England, recently, and the son was vaccinated in accordance with the ship's rules. Such results from vaccination are very infrequent.

Oxford Medicos Dine.—The first annual banquet of the Oxford Medical Association was held on May 17th, and was attended by representative men from all parts of the county. This association was but recently organized, and the success that has attended its career thus far has been of a reassuring character to its promoters. Dr. McPhedran, of Toronto, was the guest of the evening, and at the business meeting prior to the banquet he read a paper dealing with questions of importance to the profes-

sion. The banquet, which was held in the Hotel Oxford, was an elaborate function.

Canadian Medical Exchange.—Physicians desiring to sell their practices can always find a central depot for consummating same at the Canadian Medical Exchange, conducted for the past twelve years by the well-known medical broker, Dr. W. E. Hamill. A very large percentage of all the medical deals in Canada are conducted through his hands, and it is a short cut either for buyer or seller to be placed in touch with the medical opportunities and medical openings and medical buyers in Canada. We advise those of our readers who are in need of such services to drop a post-card to Dr. Hamill for further particulars.

Dr. Arthur Small, Late of Toronto, Appointed Medical Expert for Chicago.—Word was received in the city recently from Chicago that Dr. Arthur A. Small, brother of Mr. Sidney Small, has been appointed one of the four medical legal experts of that city. There were several hundred applicants for these positions, and for Dr. Small to be one of the four successful applicants is no small credit to him. Dr. Small is a graduate of Toronto University, and is a member of the Royal College of Surgeons, London, England. He has been in Chicago a little over three years. Besides practising his profession, he is a lecturer in Rush Medical College. At the age of 34 he has made much progress in life, and adds no little honor to Canada, his birthplace.

Nurses' Club House Will Cost $15,000.—At a largely attended meeting of the Toronto Graduate Nurses' Club a few weeks ago in the theatre of the Normal School the plans for the new club house to be erected at a cost of $15,000 were discussed, as well as ways and means for raising the money. The intention is to erect a club house sufficiently large to accommodate all branches of nurse work, such as the nurses' registry, nurses' social club and other organizations, and also to provide an auditorium with a seating capacity of 200, which can be utilized for many women's societies for social or educational improvement. The upper stories will be used as apartments for resident nurses, or for transient members of the profession in the city, and in connection will be a dining-room in charge of a competent house-keeper. It was proposed to raise funds for this undertaking by means of socials, concerts, bazars and similar entertainments in the near future.

The Physician's Library.

BOOK REVIEWS.

International Clinics. A Quarterly of Illustrated Clinical Lectures, and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by W. T. Longcope, M.D., Philadelphia, U.S.A. Vol. I., Seventeenth Series. 1907. Philadelphia and London: J. B. Lippincott Company. 1907.

One may derive much satisfaction from the perusal of these lectures. There are articles on Medicine, Surgery and the Specialties, and the reader may be sure of finding some favorite topic treated by an author who has the knack of presenting it in an instructive and entertaining manner. The quarterly is indexed.

J. J. C.

Green's Encyclopedia and Dictionary of Medicine and Surgery. Vol. IV. Gum-Resins to Intussusception. Edinburgh and London: William Green & Sons.

Volume four contains 872 subject headings. The most lengthy article is that dealing with "The Heart and Its Diseases," occupying 98 pages. This is, perhaps, one of the most thorough dissertations on the most vital organ in the human make-up that we have read outside of the ordinary text-book devoted entirely to this subject. This section is divided into several subsections. That devoted to Comparative Anatomy and Physiology is written by Dr. Alex. Morrison; Affections of the Myocardium and Endocardium, by Drs. T. N. Kelynack and Graham Steele; Heart Block, by Dr. J. S. Fowler; Congenital Malformations, by Dr. John Thomson; Neuroses, by Dr. Alex. Morrison, and Surgery, by Dr. Stephen Paget. The Various Aspects of Insanity covers nearly 80 pages, being also worthy of careful study. This section is contributed by Drs. A. R. Urquhart, W. Ford Robertson, G. R. Wilson, and C. A. Mercier. Volume 4 is one of the best of the series so far issued.

Atlas of Applied (Typographical) Human Anatomy, for Students and Practitioners. By DR. KARL VON BARDELEBEN and PROF. DR. HEINR. HAECKEL, in collaboration with Dr. Fritz Frohse and Prof. Dr. Theodore Ziehen. Only authorized English adaptation from the third German edition, containing 204 wood-cuts in several colors, and descriptive text by J. Howell Evans, M.A., M.B., M.Ch. Oxon., F.R.C.S. England, late Senior Demonstrator of Human Anatomy at St. George's Hospital, London; Demonstrator of Operative Surgery, St. George's Hospital, London; Assistant Surgeon to the Cancer Hospital, London. London: Rebman, Limited, 129 Shaftesbury Avenue. New York: Rebman Company, 1123 Broadway. 1906.

We have not examined any book recently which appeals to us as being more valuable as a supplement to dissection as J. H. Evan's Atlas of Applied Anatomy. The plates are certainly beautiful, though, perhaps, in one or two instances a trifle highly colored to be perfectly true to life. Perhaps the best criticism we might offer is that any practitioner who wishes to brush up his knowledge of human anatomy without taking another course in dissection, cannot do better than buy this book, as he will find it universally valuable, especially if engaged in surgical practice.

Sir Nigel. By A. CONAN DOYLE, author of "The White Company," "Adventures of Sherlock Holmes," etc. With illustrations. Toronto: William Briggs. 1906.

When reading "Sir Nigel" one feels that the gifted author has absorbed a long draught of the spirit of the Middle Ages—the rudeness, the energy, the sense of honor—and these he paints well; the religious spirit of these ages of faith not so well. The Middle Ages were redolent of intense belief in the religion of Christ, of unfeigned reverence for the ministers of religion. In "Sir Nigel" the priests are worldly, scheming courtiers, heartless officials or sordid knaves. Again, the Middle Ages resounded with homely laughter—reeking fun—something we do not find in "Sir Nigel," unless it be the ponderous gambolling of Samkin Aylward and his fellow archers.

The tale of the Battle of Poictiers is told in spirited fashion. It makes one's blood tingle to read of an English prince and a French king facing the rough chances of war on "a stricken field"—a grander position, surely than that which falls to the lot of a king in our day, dodging the bullets of Socialists or the bombs of terrorists. J. J. C.

NIAGARA-ON-THE-LAKE FROM A HEALTH STANDPOINT.

PERHAPS the most prevalent ailment of the town dweller is brain fag, and the most frequent prescription given by physicians at this time of the year is change of scene and recreation in its truest sense. A hotel, not a sanitarium, is so often preferred by nervous people, yet it is necessary that pure food, good milk and farm products, clean rooms filled with cool air, and plenty of amusement should be supplied. A rest for the body, good nourishment for the inner man and diversion from household or business cares. A place where, also, a convalescent patient may be sent, leaving home so ethereal that his inmost thoughts can be read, and returning opaque and cheerful. Such a place is old Niagara, the scene of battle, now a peaceful camp for the soldier boy, and the trysting place of old Lake Ontario's breezes, and such a hotel is the old yet ever new Queen's Royal, proved by its household name among the families of Toronto, Buffalo, and New Orleans, many of whom are still going "where grandma always went to spend her summers."

So it goes almost without the saying that Niagara-on-the-Lake has for many years now been noted as a health resort, being situated at the mouth of the famous Niagara River, less than two hours' sail by steamer from our city. This resort is an exceedingly healthful and at the same time restful place, and any patient referred there can be guaranteed not only quiet by night but by day also. The management are very anxious to bring their hotel under the immediate notice of the medical profession all over Canada, as they feel that physicians are in a position to benefit their patients and themselves and be able almost to guarantee their complete recovery. The rooms of the Queen's Royal are bright and airy. The cuisine has earned for itself quite a notable reputation, all that can be procured from both the Canadian and American markets being served on the table, as the season permits.

In order to convince medical practitioners that the management are anxious to receive their endorsement, they have recently built for those desiring more quietude than is usually obtainable in hotel life, several beautiful little cottages in the grounds of the hotel, each fitted with a bathroom, hot and cold water, and electric light. These cottages can be rented at very reasonable figures, and arrangements made for meals at the hotel at special rates. Physicians may rest assured that any patients referred to the Queen's Royal will be much in the gardens during their stay, as the management have paid particular attention to providing out-door recreation of almost every kind. The tennis courts are too well known to require more than a passing mention,

they having been used for some years for both the Canadian and International Championships. Golf links have also recently been made, so that lovers of this silent, serious game will find ready for them the pasture field of meditation, a nine hole course adjoining the property of the hotel. The bowling green in connection with the hotel is also well known over the Dominion, having been the scene of many famous matches, not only between Canadian clubs, but those also from across the Atlantic. The Queen's Royal has been for years the favorite rendezvous of the Royal Canadian Yacht Club of Toronto, and any Saturday during the season it is a beautiful sight to see at anchor the different yachts whose owners come over to spend the Sunday at the Queen's Royal, returning in time for business on Monday morning. Special provision has been made by the hotel management for the ..ring of automobiles.

The Queen's Royal is within a few miles of access by rail, boat or trolley car to Niagara Falls, that nature wonder, situated in the garden of Canada with its wealth of vineyards, orchards and maple clad hills, on the most historic ground in America, where Britisher and Frenchman met again and again in that half-century of conflict "When the world was a battlefield and the prize a continent." Guests of the Queen's Royal can leave every half-hour by trolley and reach Niagara Falls within sixty minutes, viewing all the way what is undoubtedly the most wonderful scenery in the world. The trolley cars run for the entire distance along the Niagara River and the edge of the cliff, so that the traveller is able to view the whirlpool and eddies of that famous body of water. Reaching Niagara Falls, carriages can be procured, so that the guest can drive across Suspension Bridge and visit the American side, or, if so desired, go to the different power houses recently built for the distribution of electric energy all over the province.

The management of the hotel arrange impromptu dances, amateur theatricals, etc., one or two evenings each week during the season, so that the evenings can be spent just as enjoyably as the daytime. The annual military camp takes place for two weeks within walking distance of the hotel, when the scene is enlivened by the presence under canvas in the immediate vicinity of several thousand of our regular militia.

It will, therefore, be seen that medical men cannot make any mistake in referring patients to this beautiful resort on Lake Ontario during the months of June, July and August, as the seeker of rest and quietude cannot but be satisfied with Niagara-on-the-Lake, and return ready and anxious to take up work again. For those anxious just to rest, the view from the verandahs surrounding the hotel is beautiful, the lake oftentimes white-capped, stretching off on one side suggesting a sea picture, then narrowing into the Niagara River, with its beautiful shadow coloring, and banks of fresh green foliage and wild flower—a country-side of restfulness and for day dreams.